

# Learning from Sustained Success: How Community-Driven Initiatives to Improve Urban Sanitation Can Meet the Challenges

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**Summary.** — Past research by one of the authors of this paper has identified four key institutional challenges that community-driven initiatives to improve sanitation in deprived urban settlements face: the collective action challenge of improving community sanitation; the coproduction challenge of working with formal service providers to dispose of the sanitary waste safely; the affordability challenge of reconciling the affordable with what is acceptable to both users and local authorities; and the tenure challenge of preventing housing insecurity from undermining residents' willingness to commit to sanitary improvement.

In this article we examine how two well-documented, relatively successful and longstanding initiatives, the Orangi Pilot Project and an Alliance of Indian partners, met these challenges. They were met through social innovation, but also through the choice and development of sanitation technologies (simplified sewers for OPP and community toilet blocks for the Indian Alliance) that provided traction for the social innovations. We also explore more recent efforts by civil society partnerships in four African cities, demonstrating some of the difficulties they have faced in trying to overcome these challenges. No equivalent models have emerged, though there has been considerable progress against particular challenges in particular places.

These findings confirm the importance of the challenges, and indicate that these are not just challenges for social organization, but also for technology design and choice. For example, the problem with household pit latrines is not that they cannot physically be improved to sufficiently, but that they are not well-suited to the social, economic and political challenges of sanitary improvement at scale. The findings also indicate that a low economic status and a tendency to treat sanitation as a private good not suitable for public support also makes the sanitation challenges difficult to overcome.

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*Key words* — sanitation, coproduction, community organization

## 1. INTRODUCTION

Recent research by [McGranahan \(2015\)](#) describes four institutional challenges to low-cost sanitation: a collective action challenge, a coproduction challenge, an affordability challenge, and a housing tenure challenge. These challenges are held to make it difficult for the conventional institutions of the “modern” economy—private property and markets on the one hand, and the state and bureaucratic processes on the other—to provide sufficient low-cost sanitation. McGranahan argues that these challenges help to explain why sanitation often lags behind many other services and commodities. This paper explores this proposition through analyzing how two community-driven efforts have managed to achieve considerable success and sustainability by addressing these challenges. Drawing on a recent action-research project it also explores the difficulties other community-driven efforts have faced in their attempts to improve sanitation provision through addressing these challenges. Based on this research, we argue that while the challenges are fundamentally institutional in nature, overcoming the challenges depends not just on social and institutional innovation, but also finding or developing technologies that match the institutional challenges as they are manifested locally.

### (a) *Simplified summaries of four institutional challenges commonly facing sanitation-deprived urban communities*

This short summary of the challenges is based on [McGranahan \(2015\)](#), which also situates these challenges within the relevant literature.

### (i) *The local collective action challenge*

A person's sanitation problems depend in large part on the sanitation facilities and behaviors of others, and if everyone behaves in narrowly self-interested ways, sanitation will be far worse than what would emerge from efficient and effective cooperation or collective action. Suppose you live in a settlement where there is open defecation, where latrines flood onto the pathways in the rainy season or contaminate local wells, and where people do not wash their hand after defecating. If you act alone it makes little difference to the sanitation problems you face. If those exposed to local sanitation deficiencies act collectively, rather than pursuing individual self-interest independently, all can benefit. But orchestrating this is a challenge. Markets will not supply adequate sanitation, and this is often taken as evidence of the need for state regulation or provision (to avoid what was described in [Winters, Karim, & Martawardaya, 2014](#), as a “tragedy of the commons”). More local collective action can also make a difference, and is especially important where state-based solutions are not available

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or are too expensive. As Ostrom (2000) describes in her pioneering work on collective action and the emergence of social norms, the challenge of collective action can take many forms, and even for sanitation it varies with the technology as well as the social, economic, and political context.

(ii) *The coproduction challenge*

The coproduction challenge is especially evident with low-cost on-site sanitation. The state (or a utility) and the residents (or their organizations) need to collaborate in producing better sanitation, partly because neither can do it alone and partly because collaboration enhances mutual accountability. By coproduction we mean “a process through which inputs from individuals who are not ‘in’ the same organization are transformed into goods and services” (Ostrom quoted in McGranahan, 2015, p. 245). In this paper the specific focus is on collaboration between the residents of informal settlements and public agencies. Local residents cannot be expected to take responsibility for the ultimate treatment of the fecal sludge, and even if working collectively they have little incentive to do so beyond the borders of their neighborhood. In effect, even if neighborhoods address their own collective action problem, in the absence of onsite recycling the temptation will be to dump or drain the waste out of the neighborhood creating a second order collective action problem. A more centralized public organization is critical for managing the ultimate disposal or recycling of the waste. But such an organization cannot be expected to manage individual latrines, and experience suggests they cannot manage toilet blocks or other low-cost facilities at a reasonable cost. The use of regulations to enforce improvements in low-income settlements is also problematic (as described under affordability below). This leaves coproduction as the obvious, but by no means easy, option.

(iii) *The affordability challenge*

There is a simple economic affordability challenge: for those with unacceptably low incomes, acceptable sanitation is unaffordable. But this applies to almost all commodities, and this paper is concerned with how the affordability of sanitation becomes a social and institutional challenge (for an insightful review of the difficulties even with estimating the value of sanitation improvements see Whittington, Jeuland, Barker, & Yuen, 2012). In low-income settings is that neither the state nor the market is in a good position to decide what is affordable to whom, and even community organizations have difficulty eliciting this. The state is almost inevitably involved in setting standards for sanitation (whether these are followed or not), and often partially subsidizes some forms of sanitation. Unfortunately, where poverty is pervasive, efforts to enforce standards of sanitation that everyone can agree are acceptable can lead to the authorized sanitation options being unaffordable to many, even with any subsidies made available. Low-income households can face disheartening difficulties if their efforts at improved sanitation are penalized because they contravene standards. The challenge is to negotiate costs down without sacrificing unnecessarily on quality, in a context where the collective action and coproduction challenges combine with the house tenure challenge to complicate such negotiation.

(iv) *The house tenure challenge*

House tenure relates to a complex set of challenges whose resolution lies beyond the normal responsibilities of the water and sanitation sector, but which can undermine efforts to improve sanitation. Many low-income urban dwellers live in settlements where land ownership, or at least the way it is being used, is disputed. Fear of being displaced is a disincentive to investing

in things like sanitation facilities that will have to be left behind. Utilities, whether privately or publically run, often avoid significant investments such as sewage networks in settlements with insecure tenure; hence the costs of household solutions may rise. Moreover, tenants have little reason to invest in sanitation facilities, and sanitation can easily become a matter of dispute between owners and tenants. Residents may have an incentive to invest if this will enable the settlement to be regularized, but taking advantage of such opportunities is complicated. . .

(b) *Overview of the main body of this article*

Through the lenses of the four institutional challenges, the main body of this article examines three community-led efforts to improve sanitation. The first, misleadingly named the Orangi Pilot Project (OPP), started out in the 1980s as an exploratory engagement with the residents of one of the world’s biggest informal settlements, and has since transformed the sanitation situation in Karachi, and still operates today. The second is the work of the Indian Alliance that brought together the Indian National Slum Dwellers’ Federation (NSDF), a women’s network initiated by pavement dwellers (Mahila Milan) and an NGO called the Society for the Promotion of Resource Centres (SPARC). Their sanitation work began in Mumbai in the late 1980s, and also persists to this day, having spread to other cities and become closely integrated with large-scale government programs.

The third example is more recent and involves the work of Alliances of Federations of the Urban Poor and their support NGOs in the urban centers of Blantyre (Malawi), Chinhoyi (Zimbabwe), Dar es Salaam (Tanzania) and Kitwe (Zambia). These Alliances, all of which are affiliates of Shack/Slum Dweller International (SDI), have been involved in a three-year program of action-research supported by the SHARE consortium (<http://www.sharesearch.org/>), referred to here as the Four Cities Sanitation Project (FCSP). All had previously been involved in efforts to improve sanitation in informal settlements, but the action-research gave them the opportunities to think and act on sanitation more strategically and at the city-scale. These Alliances have learned from the work of both the OPP and the Indian Alliance, which was itself a founding member of SDI (described in more detail below). The action-research project has used the four challenges as a learning framework to advance improved access to sanitation.

For OPP and the Indian Alliance, we show how their success in addressing the four challenges helped them to sustain the work over a long period and assist more than 100,000 households to secure sanitation improvements, and to achieve an influence at the city and national levels. Both efforts involved concerted attempts to organize community members so that their common demands could be articulated and acted on collectively. Both eventually managed to secure political and practical support from local authorities, leading to the effective coproduction of sanitary improvement. Both adopted technologies that not only matched their approaches to collective action and coproduction, but were more affordable, if officially less acceptable, than conventional sanitation technologies. And both used sanitation to achieve greater legitimacy and tenure security for the residents. Their successes were not complete and this article is not meant to be an evaluation of institutional performance generally, but an attempt to demonstrate that their ability to meet these challenges helps to explain the success in the field of sanitation. Through this analysis we demonstrate the value of the framework presented in McGranahan (2015).

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