

**Sanitation in Mumbai's Informal Settlements:
Governance, Infrastructure and Cost-Recovery**

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Urban Planet: Collective Identities, Governance and Empowerment in Megacities

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Introduction

In Bhabrekar Nagar, in the northwest suburb of Malad in Mumbai, three small toilet blocks of ten seats each, constructed through the welfare fund of a local MP, provide for 4000 people. Local people are frustrated at the lack of state maintenance - the toilets are not connected to the sewer, and the aqua-privy system blocks regularly. There is no water connection (water is collected from a bore well) or electricity connection, so the blocks are not used at night. The poor condition of the blocks, combined with frequently long queues, means that half the people in the area, especially women, routinely use the nearby *jangal*

(uncultivated land), among fields and trees. Many of the woman said that they preferred to be in an open space than to use an unclean toilet, even though this makes them more vulnerable to harassment. The toilets are maintained at Rs 10 per month per household, which funds one *dalit* caretaker. The blocks are a source of tension with an adjacent informal settlement that has appeared in the last few years. The settlement - Ambuj Dadi - is using the blocks, leading to increased waiting time and further uncleanliness. The local committee that maintains the blocks tried putting locks on the doors, but they were broken. The toilet block is located on the dividing line between Bhabrekar Nagar and Ambuj Dadi.

Ambuj Dadi is striking in its contrast to Bhabrekar Nagar. There are no toilets, no water supply, no garbage collection, no electricity, less space, and higher levels of gastro-intestinal infection. Housing is sackcloth. The area around Bhabrekar Nagar reveals the extent of variation in living conditions in Mumbai. In the space of 1 km, housing and infrastructure vary from sackcloth, to tin, to brick, to multistory apartments. People are located next to infrastructures that they cannot use, and the use of these infrastructures (especially toilets and water) has become a contentious issue. Informal settlements can be intensely territorial, divided along lines of ethnicity, religion, economic functioning, and time of and place of migration (Benjamin, 2004; Verma, 2002). This can lead to a competition for resources that politicians often exploit for electoral gain. These contrasting spaces at Malad point to both the inequalities in sanitation across Mumbai and the inadequacy of sanitation in informal settlements. Globally, less than one third of people in most urban centres in Africa, Asia, and Latin America are provided by what the UN has referred to as 'good-quality sanitation', and as many as 100 million urban dwellers worldwide are forced to defecate in the open or into wastepaper or plastic bags because public toilets are not available, too distant, or too expensive (UN Habitat, 2003, page xvii).

While India has made improvements in urban and rural sanitation, it is second only to China in terms of the number of people lacking access to sanitation (728 million people, Water Aid, 2007). This is particularly pronounced in urban areas. In Mumbai, the pressures of sanitation are most starkly posed for the 6 million people living in informal settlements, constituting 54% of the population and crammed into 1959 settlements occupying 8% of the land (MW-YUVA, 2001). Most of these settlements lack systems for disposal of excreta, sewage, sullage (water from washing and bathing), and solid wastes, constituting significant health and environmental dangers. Specifically, the disposal of human waste is a major problem (Swaminathan, 2003, page 94; Bapat and Agarwal, 2003).

The UN has identified 2008 as the *International Year of Sanitation* in an attempt to raise the profile of a critical set of issues often neglected by international organisations, governments, and researchers. While sanitation has attracted some interest from the academic community, people's everyday access to and use of sanitation is currently poorly understood, partly because of an under-estimation of the extent of the problem and partly because of insufficient detailed research (UN Habitat, 2003; UN Millennium Project, 2005). This is a critical absence which limits our ability to conceptualise the nature of urban sanitation and its implications for people's lives, urban and national development, and local, national and global policy frameworks. My ongoing research in Mumbai explores the contemporary and historical conditions through which different people in informal

settlements get access to sanitation. The essay draws upon recent research that I have conducted on the Slum Sanitation Programme (SSP) - the most ambitious urban sanitation intervention in Indian history. It reflects on the progress of the SSP by considering three key features of the programme and argues for greater flexibility in each area: first, its policy infrastructure; second, its technical infrastructure, and third, its use of user charges as a basis for cost recovery. The SSP provides an opportunity to explore a growing consensus on sanitation provision among mainstream development agencies to focus on partnership, participation, and cost recovery (Davis, 2006; Hobson, 2000; UN Habitat, 2003; World Bank, 2003).

Partnership, participation, and toilet blocks

The BMC and the large NGO involved in the programme - the Society for Promotion of Area Resource Centres (SPARC) - often describe the SSP as an example of community empowerment and revival. BMC officials speak of a "sense of ownership" and "belonging that toilet belongs to me". One BMC report claims that there is a "high level of satisfaction among the users" and that there is a "sense of community ownership among user community groups" (BMC, no date, page 23). To be sure, many people talk with pride about a well-run toilet block, and involvement with the SSP can be a spur for other public health activities. There are cases where toilet blocks have become community centres, where upstairs meeting areas or caretakers' rooms have become spaces to teach children who work as child labourers and do not attend school, to hold nursery schools or computer classes, or to have CBO meetings. However, it appears that in practice very few people within settlements are involved in design and maintenance.

Although there were originally plans for several contractors, there are now just three contractors involved. Two of these are engineering firms - Babul Uttamchand (BU), and B Narayan and Associates (BNA) - who by October 2004 had been allocated 18% and 13% of the work orders issued by the BMC for toilet blocks. The remaining 69% of the work orders were issued to the only NGO on the programme, SPARC, awarded both because SPARC's bid was the lowest and because of the high profile of the NGO in the city and among international donors. The NGO has developed a strong presence in urban politics in Mumbai and has expanded nationally and internationally (Appadurai, 2002; McFarlane, 2004, 2008; Patel and Mitlin, 2001; Sharma and Bhide, 2005).

However, SPARC faced the uphill task of motivating such a large number of households, six months. Through the course of the SSP, community participation has been translated into well-connected individuals or groups. In place of local involvement, plans move along quickly often without consultation of local people. There has been insufficient emphasis in the SSP on working with communities at the grassroots, rather than just local leaders. In addition, participation in CBOs is often low, and activities are often run through a small CBO that is not representative of the community and that may make important decisions without consulting others in the local area. Working with local or political leaders has the effect of marginalising those whom they do not represent, particularly given that informal settlements are often deeply divided around ethnic, religious, class, and economic lines.

Attention to the power relations within communities, and a more detailed understanding of people's sanitation needs and desires, is important if sanitation delivery is to be participatory in practice. In this respect, the SSP raises a question about the dominance of large NGOs in urban development. SPARC's presence on the political map of the city leaves little space for smaller organisations who may have demonstrated capacities for specific aspects of development, from publicity to construction to working with communities.

Technical infrastructure: design and construction

By October 2004, according to BMC figures, 318 work orders had been given, 274 of which were complete (86%). The results have indicated marked improvements in sanitation provision, but beyond the delays there are significant technical shortcomings: 70 (25%) of the new blocks lacked a water connection and 81 (30%) lacked an electricity connection. SPARC appears to have struggled to have performed as effectively as the two engineering firms. Of those blocks lacking a water or electricity connection the majority were SPARC built. Table 1, taken from unpublished BMC data, compares the performance of the three agents up to October 2004, and compares the figures for water and electricity connection with the situation in 2001 (the 2001 figures are from MW-YUVA, 2001, page 35).

Table 1. SSP progress until October 2004

	Work orders complete (%)	Water connection at site of completed work orders (%)	Electricity connection at site of completed work orders (%)
BU	96	95	96
BNA	92	89	89
SPARC	82	65	59
TOTAL	86	75	70
2001 Total	--	14	39

Clearly, there is a significant improvement on the rate of blocks with water and electricity connections (now more than two thirds). However, the questions around water, electricity, and sewer connections (estimated at just 28% with the new blocks) led numerous concerned groups to question the sustainability of the blocks during the research. The technical difficulties with the toilet blocks encourage reflection on the universal 'one-size-fits-all' approach, and a more flexible approach through which sanitation is planned

specifically for each settlement could be more effective. While the original SSP plans envisaged a variety of sanitation options that would vary according to the contingencies of local geographies - from two-floor toilet blocks and twin toilets, to individual toilets and shared toilets, where two or three families share toilets through a lock-and-key system and mutual maintainance - the programme has become rigidly based around large two-floor or even three-floor structures. There are successful examples of this elsewhere in South Asia, such as in the work of Orangi Pilot Project, an NGO in Karachi, through which latrines and connecting pipes to sewers were installed in homes and lanes (Alimuddin *et al*, 2004). During my research, some commentators suggested that the focus on large blocks was due not simply to space restrictions but to potential political and economic gain associated with larger projects.

Toilets as cash points?

The SSP focus on cost recovery means that sanitation is often provided not according to those who need it most, but according to how many people can pay a contribution (Davis, 2006). In some of the areas where I have conducted research, such as the relatively well-off and legalised settlement of Khotiwadi in Santa Cruz, local people are happy to pay monthly contributions of Rs 20 per family in order to support a thriving community organisation that actively maintains the block. However, any temptation to conclude that cost recovery is a workable solution for cash-strapped municipal governments must take into account the nature of cost recovery as it operates in a variety of different urban contexts.

For example, Rafi Nagar in Govandi is one of the poorest unauthorised informal settlements in the city. People in this settlement suffer major health problems - the settlement is severely unhygienic, and the dumping ground is literally on their doorstep. TB, HIV/AIDS, malaria, anemia, malnutrition, asthma and bronchitis in part due to fumes from the dumping ground, and intestinal illnesses are very common. There are two SSP blocks in the area. Each has twelve male and twelve female seats. People who pay maintenance have a 'family pass' and pay Rs 10 per adult per month, otherwise it is Rs 1 per use. These are the only blocks in an area of 20 000 people, and there are no plans for new blocks.

Most of the relatively wealthier individuals in the area use the blocks, and they are well maintained by local caretakers despite the pressure of use. Water and sanitation constitute the biggest monthly outlays for many people, not to mention the money spent on health problems caused by the inadequacy of these basic requirements. In practice, the combination of cost and long queues means that most people do not use the blocks and instead use the nearby dumping ground. In this context, we are forced to ask whether it constitutes a logical developmental strategy for people who can barely afford sanitation, but yet desperately seek it, to not just 'demand' it, as the SSP guidelines insist, but demand to pay for it. Just as difficulties with the policy and technical infrastructures in the SSP suggest that greater flexibility is required in order to reflect the plurality of the informal settlements in the city, the case of Rafi Nagar suggests that flexibility in the administration of costs and subsidies may be necessary.

Conclusion

Without being prescriptive, the issues raised here tentatively suggest that a greater flexibility in the SSP may be required in order to reflect the varied geographies of informal settlements. It is hoped that these reflections contribute to debate on the programme. First, the discussion of partnership and participation indicates that flexibility could allow a more plural policy infrastructure. The SSP could usefully make its tendering process more flexible to enable smaller NGOs to bid for smaller contracts, rather than simply favouring large contracts and NGOs. This could make space for smaller organisations with a greater familiarity with particular settlements, and that are not divisively associated with particular groups, to use their local expertise to extend participation and maximise the sanitation needs of these settlements. The presence of large 'super NGOs' on the political map of the city leaves little space for smaller organisations that may have demonstrated capacities for specific aspects of development, from publicity to construction to working with communities.

Second, the discussion of technical infrastructure production indicates that the programme could usefully be more driven around the needs, constitution, and geography of specific settlements. This could result in more effective results over the long term, including individual, twin, and shared toilets rather than simply large common blocks. Third, the discussion of cost recovery suggests caution. In particular, there may be a requirement for full subsidies in areas that clearly cannot afford to spare money (as in the case of Rafi Nagar) if sanitation delivery is to reach poorer groups.

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