



Policy Options for Improving Toilet Access among the urban poor¹

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Introduction

India Urban Poverty Report 2009 indicates that the pace of urbanisation in India is increasing along with the increase in urban poverty and urban slums, despite 62 percent of GDP contribution from towns and cities. Urban poverty in India is more than 25 percent and around 81 million people live in urban areas on incomes below the poverty line. It is projected that by 2030, urbanisation in India will reach 50 percent. The increasing urban poverty has posed challenges for housing, water, sanitation, health, education, social security and livelihood, specially affecting vulnerable groups. 54 percent of urban slums do not have toilets; public facilities are unusable due to a lack of maintenance. Availability of safe sanitation is a major challenge for the urban poor.

The Urban Poverty Report, Agenda 2030 has emphasised 'Water and Sanitation' as an important component by devoting Sustainable Development Goal (SDG) 6 for water and sanitation besides linking it to other Goals on health, food security, climate change and many others. Goal 6 of SDG emphasises on ensuring availability and sustainable management of water and sanitation for all by 2030. The sub goal 2 aims to achieve access to adequate and equitable sanitation and hygiene for all, and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situations by 2030. The goal 6.b calls for the need for support and strengthening the participation of local communities for improving waste and sanitation management. There is an obvious inter-linkage between water, sanitation, health, nutrition and human well being. Hence, lack of required standards in any of these aspects has serious implications for society. In fact this has been the situation in most of the developing countries including India, which have witnessed substantial urban expansion over the last few decades.

48 per cent of the total Indian population defecates in the open and India ranks among the first 12 countries practicing open defecation (Krishna Prasad, 2014). Despite significant public investment in urban sanitation, over 37 million people in Indian cities resort to open defecation. As per the 2011 Census of India nearly 12% of urban households resort to open defecation. Sewerage systems, if present, suffer from a very poor maintenance. Wastewater treatment facilities are highly inadequate, causing water contamination. Among the

countries included in the WHO's epidemiological sub-regions, India falls under D category, indicating high adult and child mortality. Although several interventions have been made to eradicate open defecation, it prevails. With this backdrop, the policy brief discusses challenges of toilet access of the urban poor in Bengaluru city based on the research study and suggests policy options for improving sustainable toilet access.

Urban Poor and Sanitation challenges in Bengaluru city

Bengaluru is one of the fastest growing cities in India with more than 8 million population. Like other Indian metropolitan cities, increased urbanization and associated challenges prevail in providing infrastructural facilities. The negative consequences of urban pull have led to the emergence of slums characterized by housing shortage and inadequacies in public utilities, overcrowding, unhygienic conditions etc. (Ahluwalia, 2011; Bhagat, 2011; Kundu, 2011, Kulkarni and Ramachandra, 2006).

Karnataka Slum Development Board indicates that there are 597 slums, of which 388 are notified and 209 are non-notified, 3,21,296 slum households with a slum population of 13,86,583. Several studies have highlighted sanitation concerns faced by the urban poor in Bengaluru city. Benjamin (2000) while dealing with the issues pertaining to women across slums of Bengaluru, observes that women use open fields for defecation, face harassment from drunken men making it unsafe. Women prefer to invest in individual toilets, but lack of access to underground sewage system is a constraint. Kala Sridhar and Venu Reddy (2011) observe that there is a potential for policy to incentivize and influence the entry of private service providers into slums. Study by Mythri Sarva Seva Samithi (2012), highlighted that 40 percent of slums did not have access to toilets indicating that urban poor suffer the most in terms of accessing toilets.

Methodology

We collected qualitative and quantitative data, reviewed studies on sanitation, secondary data was collected from departments Bruhat Bengaluru Mahanagara Palike, Bengaluru Water Supply and Sewerage Board (BWSSB), Karnataka Slum Development Board (KSDB), Corporate initiated schemes, NGO initiated Sulabh Shauchalaya Schemes and case studies. Discussions were held with government officials, senior corporate officials and

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NGOs. Both structured and semi-structured survey instruments were used. A comprehensive field survey was carried out, questionnaire was designed to cover socio-economic, physical, financial, user satisfaction and environmental aspects. 20 slums (10 notified and 10 non-notified) slums were identified across the all zones of the city representing varied locations - ownership of land, access to toilets –public/ individual/shared, slums with migrant population only and slums that are benefited with housing schemes. Twenty respondents covering a total sample of 400 respondents across 400 households were surveyed, representative of age groups, women, and elderly population. Focused group discussions were held along with the survey.

Results and Discussions Access to Toilets

While the latest Census 2011 data indicate that 5.2 percent of households lack toilet facility and 94.8 percent have access to toilet facility in Bengaluru, the absolute numbers of households that lack toilets are still high, majority of which comprise the large segment of the population living in poorer pockets of the city. This also has been evidenced by our study, in that 67 percent (i.e. 268 households) have access to individual toilets (in-house toilets), while a significant percentage of the households (19.5 percent, 78 households) are dependent on shared/ pay-and-use public toilets. Another 13.5 percent of the households (54 households) remain denied of toilet facility of any kind and use open spaces/lands for defecation. However, if we look at the trends in toilet access over the last few years in Bengaluru, it becomes evident that the city has achieved a better coverage lately due to two contributing factors – an increase in the level of awareness and the lack of open spaces for open defecation.

We have observed that a majority of the surveyed households have access to individual toilets. This is a positive sign in which households with individual toilets feel less hassled as compared to those that use public or shared toilets. Households with no access to individual toilets depend on community toilets/public toilets, shared toilets. Around 7 percent of the households use public toilets.

Toilet infrastructure across the slums highlights an important aspect indicating the prevalence of open defecation in spite of having toilets. Of the 20 slums surveyed, 10 slums practice open defecation. So, it brings to the fore that, a mere provision of the physical infrastructure, does not necessarily ensure accessibility to toilets. There are issues concerning water scarcity, technical aspects etc which force people in to open defecation.

Individual Toilets – Interestingly, there are some slums (Gangondanahalli, Govindarajnaragar, Swanthatrapalya, Yarabnagar, Sarvagnanagar, Deshiyanagar) completely free from open defecation. This was observed in slums where all the dwellings have individual toilets and were built under JnNURM scheme. All family members use toilets and expressed relief to having own toilets.

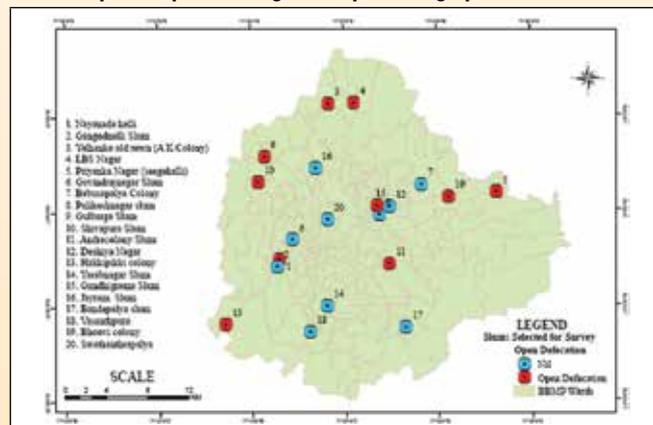
Shared Toilets – 12.2 per cent of households were using shared toilets, across 10 slums. The dependency on shared toilets was more in non-notified slums compared to notified slums. In 2 percent of the HHs, two families shared a single toilet and in 6 percent of the HHs, three families shared a single toilet and 3 percent of the HHs, 4 families shared single toilet. Shared toilets caused a lot of inconvenience due to long queues. Since shared toilets generally lack maintenance and accessibility on time, men tend to defecate in the open.

Public Toilets - Among the surveyed slums, public toilets are present in seven slums and around 7 percent of the total surveyed households (29 households) are dependent on public toilets. Public toilets constructed operate on pay-and-use basis, however, usage varied across families/ slums. Respondents complained about lack of maintenance in public toilets and inconvenience caused due to long queues during rush hours. Public toilets are an alternative option, not a preferable choice. Reasons for dependency on public toilets are (a) Lack of space for construct own

toilets (b) Individual toilets are too small to use (c) Financial constraints to have their own toilet (d) Water scarcity.

Open Defecation – Open defecation prevailed for varied reasons. For instance, in Hakki pikki colony with a population of around 2000, all 208 households (except 3 or 4 households) defecate in the open areas as they do not have toilets. Similarly, in Shivapura slum, LBS nagar slum, Yelahanka A K colony slum, around 50 per cent of the households do not have access to any kind of toilets facility (Map 1). Some of the reasons are lack of space, inadequate number of public toilets, poorly maintained toilets etc. People suffered as they traverse long distances in search of open spaces causing stress, safety concerns for women, inconvenience for children and the aged.

Map 1: Map indicating slums practicing open defecation



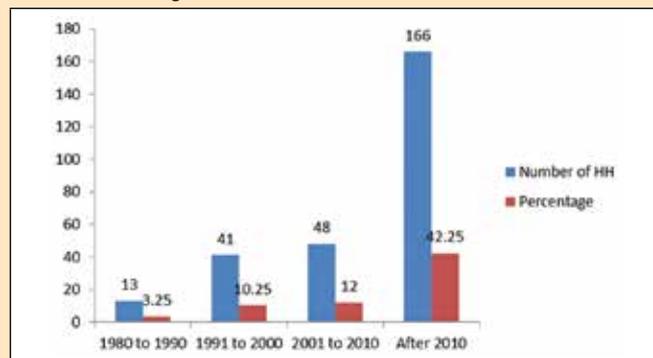
Source: Primary Survey, 2015

Schemes promoting Toilet Construction and Awareness

Various schemes have been implemented by the State/Central governments to provide toilet access. Under these schemes, financial assistance is given to households for constructing toilets or houses with toilets. The total number of individual toilets constructed in the study area has increased after 2010 (Figure 1). Data from our survey indicates that 42 percent of individual toilets were constructed after 2010 which is due to the implementation of various housing and sanitation schemes viz Basic Services for the Urban Poor (BSUP) and Integrated Housing and Slum Development Scheme (IHSD) under Jawahar Lal Nehru Urban Renewal Mission (JnNURM). In addition, under the World Bank sponsored project Karnataka Municipal Reforms Project (KMRP) implemented by BWSSB, only toilets are constructed in various slums of Bengaluru.

Another reason may be the non-availability of space for open defecation due to an enormous growth of the real estate sector in Bengaluru which has resulted in opting for individual toilet construction by the slum dwellers. In addition, various initiatives by the government and NGOs in creating awareness regarding the importance of toilets - Nirmal Bharat Abhiyaan, Swachha Bharat Mission etc have motivated people to construct toilets.

Figure 1: Toilet Construction over Time



Source: Primary Survey, 2015

In 45.5 percent of the households with individual toilets, toilets were constructed on their own and 21.5 percent have received financial support either from the State or Central government under various schemes (only in notified slums). In non notified slums, majority of the toilets are self constructed, excepting a few constructed by BWSSB.

Usage of toilets by all the members of the households is the key factor in achieving Bengaluru, an open defecation free city. We observed that just providing toilet infrastructure for the slum households does not ensures usage. There are several factors that influence toilet usage and are discussed below.

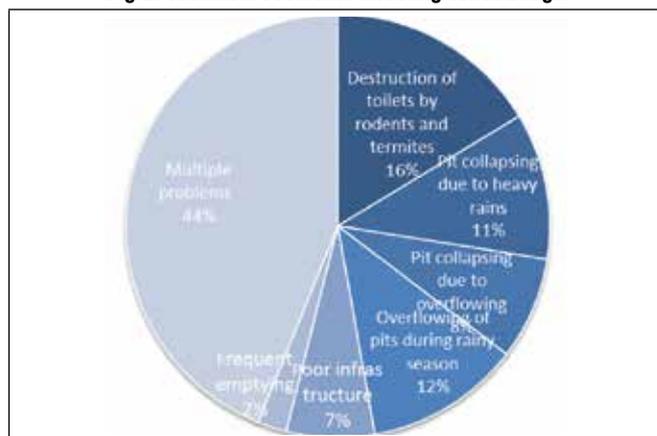
Toilet Usage

Individual toilets are largely used by households owning them. However, some members of the family, particularly men, are comfortable with open defecation. Factors that cause open defecation despite the presence of toilet infrastructure are technical problems, poor maintenance, water scarcity etc.

Technical troubles

Technical problems restrict usage of toilets. 44 percent reported a combination of problems followed by damaging of toilets by rodents and termites (16 percent), over flowing of pits during rainy season (12 percent) and pit collapsing due to heavy rains (Fig 2).

Fig 2: Technical Problems affecting Toilet Usage



Source: Primary Survey, 2015

Insufficient number of toilets

Inadequate numbers of toilets force people to openly defecate. 9 slums have partial access to toilets i.e., few households have access to individual toilets or shared toilets and not for public toilets. They are forced to opt for open defecation due to water shortage and drainage problems.

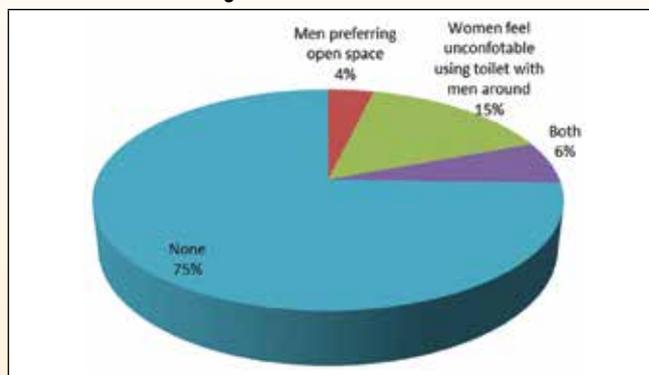
Space Constraints to construct toilets

The landscape of a given slum is an important factor that determines toilet construction. Slums are not developed in a planned manner, congested, hence, difficult to construct toilets. Also shortages of space within dwelling units constrain construction of individual toilets. 18.2 percent lived in households with an area of 10*15 feet, while 29.8 percent in 10*10 and even less, hence, construction of toilets is a problem.

Behavioral Issues

Small percentage of men preferred to defecate in the open as they do not feel comfortable to use toilets, a cultural factor as migrants preferred open spaces for defecation. 15 per cent of women respondents expressed inconvenience to use toilets when men are around (Fig 3). Education made a difference. Although brought up under poor sanitary conditions with no access to toilets, with education, the younger generation felt the need for investing in own toilets.

Fig 3: Behavioral Problems



Source: Primary Survey, 2015

Scarcity of Water impinge on Toilet Usage

Inadequate water availability affects toilet usage. Although the slum dwellers have access to water, it is not sufficient to meet their requirements completely; 32.75 per cent respondents reported water insufficiency. In rehabilitated slums constructed as vertical structures, access is affected due to frequent smoldering of motors. Purchasing of water is a common feature across slums affecting toilet usage significantly. People feel the pinch of spending on water for toilet usage.



Plate 1: Water Scarcity - Nayandahalli Slum, Water Storage at Households and Purchasing water from Tanker

Poor maintenance of Public toilets and persistence of open defecation

People are not satisfied with public toilets mainly due to their poor maintenance and hygiene (76 per cent) and water scarcity (24 per cent) and hence, resort to open defecation (Table 5). Besides, respondents especially find it inconvenient to use public toilets because their usage is subject to strict timings and are closed by 9 pm, leaving people with no choice other than defecating in the open. Other inconveniences include poor lighting facilities and lack of sufficient water/no water (Gandhi grama slum).

Policy Options for improving Governance

There is need for a sanitation plan with clear goals and strategies with targets. There is a necessity for understanding of the ground realities and involving stakeholders in the plan. This should cut across departments, institutions, experts, community to gather views and options to make it a comprehensive document. Another pressing need is for improving data and information systems. Maintaining transparency and accountability by streamlining processes with checks for quality assurance is relevant. Rewards and recognition approach will support sustainable toilet usage.

Promoting Stakeholder Participation

Stakeholders must be part of the programme from the inception of interventions, an important learning from all the successful cases we reviewed⁵. Involvement of stakeholders at all the stages with clearly defined roles and responsibilities provide a platform for negotiation and sorting problems. Community involvement, particularly women is important as they play a significant role in promoting and maintaining hygienic practices. Success case studies across cities have indicated NGOs positive role in awareness creation and community motivation. Political will at the ward level have improved sanitation services. Also, there are several volunteer groups and institutions working on improving sanitary conditions in slums. To ensure that their efforts sustain after intervention, education is the key.

⁵ 17 case studies representing states and cities were reviewed and lessons drawn.

Education, Awareness and Communication

Promoting awareness effectively is important for sustainability of any programme. This was observed across all the success stories we reviewed during the study. Effective dissemination of knowledge and information has to be innovative. Interesting approaches suggested by Jack Sim, a leading social entrepreneur and Founder of the World Toilet Organisation (WTO) can be attempted. Jack Sim believes that toilets have to be made fashionable and made desirable, like, having television/cell phones perceived as status, pride, and convenience. Also, toilets have to be made desirable in design, colour and aesthetics, so that people pick their choice. Also, examples of health implications should be displayed for easy understanding.

Design is crucial

There is need for improved toilet designs – low cost lighting, ventilation, and user friendly options. Toilets must be designed in ways as to shape positive user behaviour. Understanding the dynamics, ergonomics and all the behavioural issues is important prior to designing. Designs should be context-specific – landscape, topography and soil conditions are to be considered prior to construction. There is need for innovation in equipments to improve cleaning efficiency to avoid people from cleaning toilets with flimsy equipments/bare hands. Alternate options/preferences like e-toilets, bamboo toilets, eco-toilets are desirable so that installing newer designs/options toilet types where people are more proactive to see its applicability. Delhi Urban Arts Commission organized a competition with respect to public toilets where designs and prototypes of ergonomically designed on-site assembled high tech toilets were shortlisted for installation in slums. These toilets are pre fabricated, easily installable and can be maintained easily, besides being economical.

Community Empowerment elemental

It is crucial to develop leadership qualities across gender and age to promote various activities, of which sanitation can be one among them. However, understanding the community's psyche before undertaking the leadership programme and designing it accordingly is important, while keeping the larger approaches of leadership same. Using existing networks for upgrading water and sanitation systems viz, religious organizations, women SHGs groups, youth organizations would help. Training people to operate systems and handling simple technical problem will empower them to resolve issues without depending on external help or delays.

Community's Choice matter

It is of utmost importance to involve the community during the construction of toilets. People have strong views which have to be taken into account while implementing programmes, else, toilets do not get used, defeating the very purpose. For instance, in some slums people felt that the size of the toilets were small, similarly, in another slum, people were not comfortable with toilet cum bathing facility in one unit etc. Also identifying the location of individual/public toilets should be undertaken by involving the community. For instance, culturally, majority of the people living in slums have been used to open defecation for a long time, more so because, they happen to be migrants, hence prefer public toilets compared to individual toilets. In some cases, people from different communities are reluctant to using common toilets.

Improving Finances

Innovative ways of improving finances will aid in toilet usage. Financial assistance may be provided for the construction of individual toilets by agencies, Banks or any other financial institutions with proper tie-ups. The success stories depict positive outcome with women involvement supported by options for contributions either in cash or kind. Employment opportunities for monitoring the maintenance of toilets promote usage and a successful model in Tamil Nadu. To avoid evasion of user charges scope for collecting funds through token system has worked well mostly. For construction, tapping CSR Funds would help improving toilet

access. There are various initiatives in water and sanitation sector, viz, Housing and Urban Development Corporation Limited is undertaking sanitation relevant works. Several corporate institutions TCS, Toyota Kirloskar, Bharti Foundation and Ambuja Cements are into constructing toilets. Specific to Bengaluru, Wipro Limited has constructed toilet complexes in the Viveknagar government school.

Innovative ideas in Value Addition

There is good scope for innovative value added services that benefit the slum residents as is evident from our reviewed case studies. Wealth from waste - Biogas for common cooking has been a success in Tamilnadu. While designing public toilets, installing innovative structures as adopted by Triratna Prerana Mandal, Mumbai is interesting where they have installed solar panels on rooftop of toilet complex reducing power costs by 40 percent. Similarly, implementation of rain water harvesting has aided water usage in toilets.

Rewards Approach or Social Capital Credits Approach can be promoted as it has interesting features viz, - partnering with municipal agencies and leveraging public infrastructure for creating community, tapping hub of commerce with scope for creating job opportunities, habit formation focusing on key rational and emotional behaviour, promoting workable reward initiatives, maintenance through human-centered bottom-up design, deconstruction of decision making process. Another interesting approach is the 'Social Capital Credits' (SoCCs), constituting a new medium of exchange to reward socially relevant tasks undertaken by individuals and the community, redeemed for critical products and services. Communities or individuals can earn SoCCs for various tasks like managing waste, planting trees etc, where SoCCs earned can be redeemed for products and services like water filters, health checkups, etc. The above approaches have not been tried in Bengaluru slums and would be an apt way to involve community. SOCCs approach has been used successfully in some cities in India, Costa Rica, Ghana, Kenya.

Conclusion

Several institutions and interventions are involved in providing improved sanitation facilities; however, complete sanitation access is lacking in Bengaluru city. In order to achieve the social development goal 6 for water and sanitation of 2030 agenda, vision is to ensure access to sanitation with special focus on adequacy, equity and marginalized to eradicate open defecation. The findings highlight the complexities involved in providing toilet access and the challenges in Bengaluru and suitable policy options.

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