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India's Worlds of Waste - III

Urgency of Understanding Sanitation Drivers in 'Smaller Cities' in India: National and International Relevance[1]

The paper emphasises the fact that the fastest growth in India's urban population is occurring in its smaller cities and towns. They have glaringly inadequate sewerage and public sanitation infrastructure. But there is still time, before they grow too large, to begin to provide some of the requirements for a healthy urban life.

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Urbanisation and Modern Sanitation

Many scholars have identified and recognised the benefits of the urban situation wherein large numbers of people live in close proximity under conditions of relative density and diversity

[1] This paper arises from a workshop on "India's Worlds of Waste", organised in Singapore by the Institute of South Asian Studies (ISAS), an autonomous research institute at the National University of Singapore, on 27 and 28 July 2015. An executive summary of the dialogue at the workshop has been published as ISAS Special Report No. 28 on 17 September 2015.

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(Henderson 2003; Venables 2005; others). Urbanisation does not only provide benefits, it also poses challenges, especially in social and environmental terms. "The concentration of millions of people in a small mass creates challenges for public policy, especially in the areas of basic infrastructure, public health, traffic congestion…." (Glaeser 2012). However urbanisation also provides opportunities for social and technological innovation and its rapid dispersion. Modern sanitation has been one of the critical innovations in addressing environmental and public health issues in urban areas, since the "sanitary revolution" in mid-19th century in England. As argued by (Fox 2012), "Before the nineteenth century, urban settlements with rudimentary water and sanitation infrastructure were especially conducive to the spread of infectious and parasitic diseases. As a consequence, death rates tended to exceed birth rates, turning cities into "demographic sinks". The underlying conditions of the urban transition were the advent of technologies and institutions that facilitate disease control and surplus energy availability, these factors stimulate mortality decline in both rural and urban areas. Mortality decline facilitates urban population growth directly by raising the rate of urban natural increase and indirectly by raising the rate of rural-to-urban migration". Sanitation improvements benefited public health and contributed to furthering urbanisation during the era of rapid urbanisation and industrialisation in Europe.

Urbanisation in India

South Asia, in contrast has had low levels of urbanisation when compared to other regions of the world (Mohan, Dasgupta 2005). South Asia and Africa will be the locations where most growth in urbanisation will be witnessed in the future. India's urban population is only projected to touch the 50% mark in 2050 as per UN estimates (UNDESA 2014). This would mean that an additional 430 million people in India would be living in urban areas. Within this large growth of urban population the proportion of people living in mega-cities with population above 10 million will rise, essentially due to new cities entering the mega-cities bracket, not because these cities are growing faster. There has been a slowing of rates of population growth in larger cities in India: for the fourth consecutive decade there has been a decline in the decadal growth rates. Moreover, during the last decade, growth rates in smaller cities have been significantly higher than in the recent past. Hence, most of India's new urban population and

therefore urban growth can be expected to take place in smaller cities with populations less than a million (Nijman 2012; Mukhopadayay 2013).

Urban Sanitation and the 'Swachh Bharat' Objective

Over the last year, India's Prime Minister Narendra Modi has repeatedly spoken about the importance and need to improve sanitation (Victor Mallet 2014; Kavita Iyer 2014). The national government has accorded the subject the highest policy attention. The Minster of Housing and Urban Development and Parliamentary Affairs was also recently quoted as calling the sanitation program of the government the "Mother of all new Missions" (Dipak Dash 2015). While like in the past, the focus is strongly improving access (and use) in rural area, some attention is also being paid to urban sanitation, with a new urban program called the 'Swachh Bharat' Mission (Urban) now under implementation. The focus on rural sanitation is not surprising and builds on efforts of previous governments. The first rural sanitation program was initiated by the government of India back in 1986 called the Central Rural Sanitation Program, at a time when only 1 % of rural households had adopted toilets for everyday sanitation. The urban program is significant given that it is the first national program in urban areas which universalises toilet incentives from governments. The earlier urban sanitation program called the Integrated Low Cost Sanitation Scheme (ILCS) focused on conversion of manually scavenged toilets to pit toilets and new toilets only for the economically weaker sections.

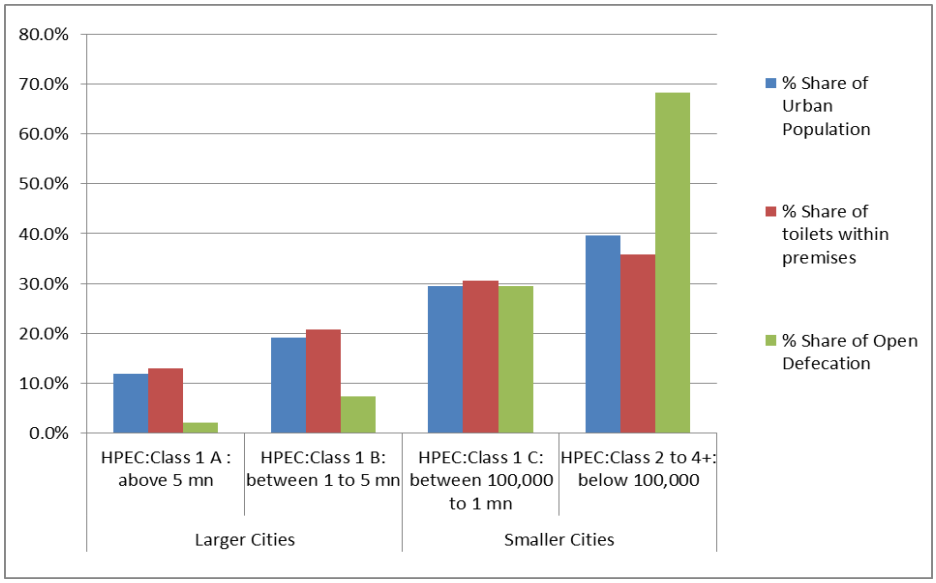
Sanitation in India is a global concern. While India is home to 17.5 percent of the world's population, close to 60% of the people globally who do not have toilets and defecate in the open, live in India (Joint Monitoring Program 2014). The scale of the problem is reflected within India too where more than fifty percent of the population as a whole doesn't have access to toilets or don't use them. Solving India's sanitation problem therefore is both a national and global priority. These massive numbers of people not using, or not having access to, adequate sanitation has led to India, as well as the world as a whole, not meeting the sanitation targets it set itself, as part of the Millennium Development Goal (MDGs). It is for this reason that the new sanitation efforts by the government are being are internationally lauded (Arul Louis, 2014; PTI, 2015).

Given the magnitude and scale of this issue in India's rural areas, the urban sanitation question has been relatively neglected in research and by policy makers. Research on sanitation and related public health in India has been either in rural areas (Spears 2013, 2014; Alok 2010) or in a few larger cities (Chaplin 2011, Dasgupta 2011, McFarlane 2012, McFarlane, Desai, Graham 2014). Urban sanitation as a whole in India however remains a topic of importance as when compared internationally even with only 11 percent of the world's urban population, India houses 52 percent of the world's urban population that does not have access to sanitation facilities and defecates in the open (Joint Monitoring Program 2014).

The critical development stages of sanitation coincide with the moment when density and populations increase, when villages become towns, towns become small cities, and small cities witness rapid growth. It is at these junctures, with the rapid urban build-up and densification that sanitation infrastructure must be developed from an efficiency point of view but also because it becomes more necessary as environmental pressures rapidly increase. Since India's urban growth today seems concentrated at the lower echelons of the urban system, there is all the more urgency to better understand urban sanitation issues in smaller towns.

Analysis of some key indicators of the urban sanitation scenario in India reinforces this urgency. As per Census 2011 figures smaller cities house 69 percent of the urban population, and 90.5 percent of the urban population who defecate in the open (Figure 1).

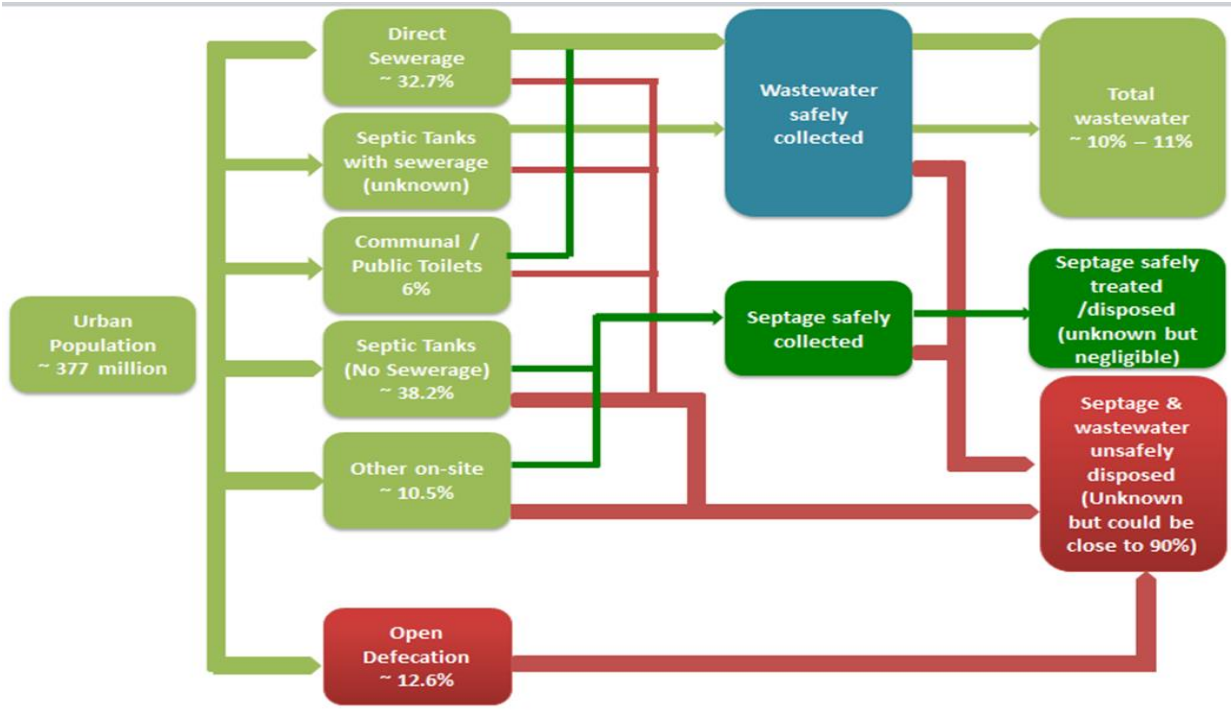
Figure 1: Urban Open defecation in India is most prevalent in smaller towns



Source: Census 2011.

At other parts of the sanitation chain, which includes the toilet, the conveyance or transportation system of the waste and the final treatment disposal or reuse of the waste, there is also a severe lack of sanitation infrastructure, as shown in Figure 2. This figure shows that though close to 33 percent of the urban population has reported connections to a sewerage system in the Census 2011, as per the Central Pollution Control Board there is only 10-11 percent capacity installed for waste water treatment. While some of the septage from septic tanks owned by households is collected, there is anecdotal evidence to show that a very small part of this is treated. This result is that close to 90 percent of the waste from households is discharged untreated to pollute the environment. When these data are disaggregated by city size, they shows that while larger cities with more than a million population have about 52 % installed capacity for waste water treatment in smaller cities of the size of 100,000 to 1 million the total installed capacity is lower at 32 % and in the rest of the smaller towns the installed capacity is a meagre 7% of the requirement.

Figure 2: Waste water and septage flow in urban India



Source: Dasgupta, Jain, 2014

Limited Understanding Limits Progress

As is evident from the discussion above, smaller cities are significantly lagging behind larger cities (above a million population) in access to everyday sanitation infrastructure as well as infrastructure provided by the state, such as sewerage and waste water disposal. Why is this the case? Given the nature of urbanisation in India, which is slower than most other continents at comparable stages, and which has higher population growth rates in smaller towns as compared to larger towns, researchers and policy makers need to pay more attention to understand the special circumstances faced by residents in these geographies. This is especially important if sanitation outcomes for smaller-city residents are to be ensured and national and global targets for sanitation improvements are to be met.

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References

Alok, K., 2010, *Squatting with dignity - Lessons from India*, Sage Publications, New Delhi.

Chaplin, S, 2011, *The Politics of urban sanitation in India*, Orient Longman, New Delhi.

Desai, R., McFarlane, C. & Graham, S., 2014. The Politics of Open Defecation: Informality, Body, and Infrastructure in Mumbai. *Antipode*, 00(0), p.n/a–n/a. Available at: http://doi.wiley.com/10.1111/anti.12117 [Accessed August 27, 2014].

Dipak Dash, 2015. 89 lakh toilets built in rural India in 1 year, govt says. The Times of India. Retrieved from http://timesofindia.indiatimes.com/india/89-lakh-toilets-built-in-rural-India-in-1-year-govt-says/articleshow/49190269.cms

Dasgupta, Jain 2014. Indonesia's approach to urban sanitation: lessons for India, www.cprindia/sanitation, Centre for Policy Research New Delhi.

Fox S, 2012, *Urbanization as a Global Historical Process: Theory and Evidence from sub-Saharan Africa*, Population and Development Review 38(2): 285–310

Glaeser EL, 2012. The challenge of urban policy. Journal of Policy Analysis and Management, Volume 31, Issue 1, pp 111–122.

Henderson V, 2003. The Urbanization Process and Economic Growth: The So-What Question, Journal of Economic Growth, Volume 8, Issue 1, pp 47-71.

Kavita Iyer, 2014. PM Modi's maiden I-Day: 5 reasons why he bowled over the nation. *The First Post*. Retrieved from http://www.firstpost.com/politics/pm-modis-maiden-i-day-5-reasons-why-he-bowled-over-the-nation-1665541.html

Louis A, 2014. PM Modi's sanitation campaign gets lauded by United Nations. One India. Retrieved from http://www.oneindia.com/international/pm-modi-s-sanitation-campaign-gets-lauded-by-united-nations-1567134.html

McFarlane, C., 2008. Governing the Contaminated City: Infrastructure and Sanitation in Colonial and Post-Colonial Bombay. *International Journal of Urban and Regional Research*, 32(2), pp.415–435. Available at: http://doi.wiley.com/10.1111/j.1468-2427.2008.00793.x [Accessed May 2, 2014].

McFarlane, C., Desai, R. & Graham, S., 2014. Informal Urban Sanitation: Everyday Life, Poverty, and Comparison. *Annals of the Association of American Geographers*, (July 2014), pp.1–23. Available at: http://www.tandfonline.com/doi/abs/10.1080/00045608.2014.923718 [Accessed August 6, 2014].

Mohan R and Dasgupta S, 2005. The 21st Century : Asia Becomes Urban, Economic and Political Weekly, pp.213–223.

Mukhopadayay P, 2013, The 'Other' Urban India, *Agenda: Urban Transformation*, pp 22, Centre for Communication and Development Studies, Pune

Nijman J, 2012, India's Urban Challenge, in Eurasian Geography and Economics, 53, No. 1, pp. 7–20, Bellwether Publishing, Ltd. Colombia, MD

PTI, 2015. PM lauded for making sanitation a national priority. *The Hindu*. Retrieved from http://www.thehindu.com/todays-paper/tp-in-school/pm-lauded-for-making-sanitation-a-national-priority/article7660139.ece

Spears, D, 2013, Policy lessons from the implementation of India's Total Sanitation Campaign, in Shah, Bosworth, Panagaraya ed. *India Policy Forum 2012/13*, Sage Publications, New Delhi.

United Nations Department of Economic and Social Affairs, 2014. World Urbanization Prospects The 2014 Revision. United Nations.

Venables, A. J. (2005), 'Spatial disparities in developing countries: cities, regions, and international trade' Journal of Economic Geography 5: 3-21

Victor M, 2013. Modi prioritises factories and toilets in Independence Day speech. *The Financial Times*. Retrieved from http://www.ft.com/intl/cms/s/0/16335128-2438-11e4-be8e-00144feabdc0.html#axzz3ptcQvjtx

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