





# **SQUATTING RIGHTS**

Access to Toilets in Urban India



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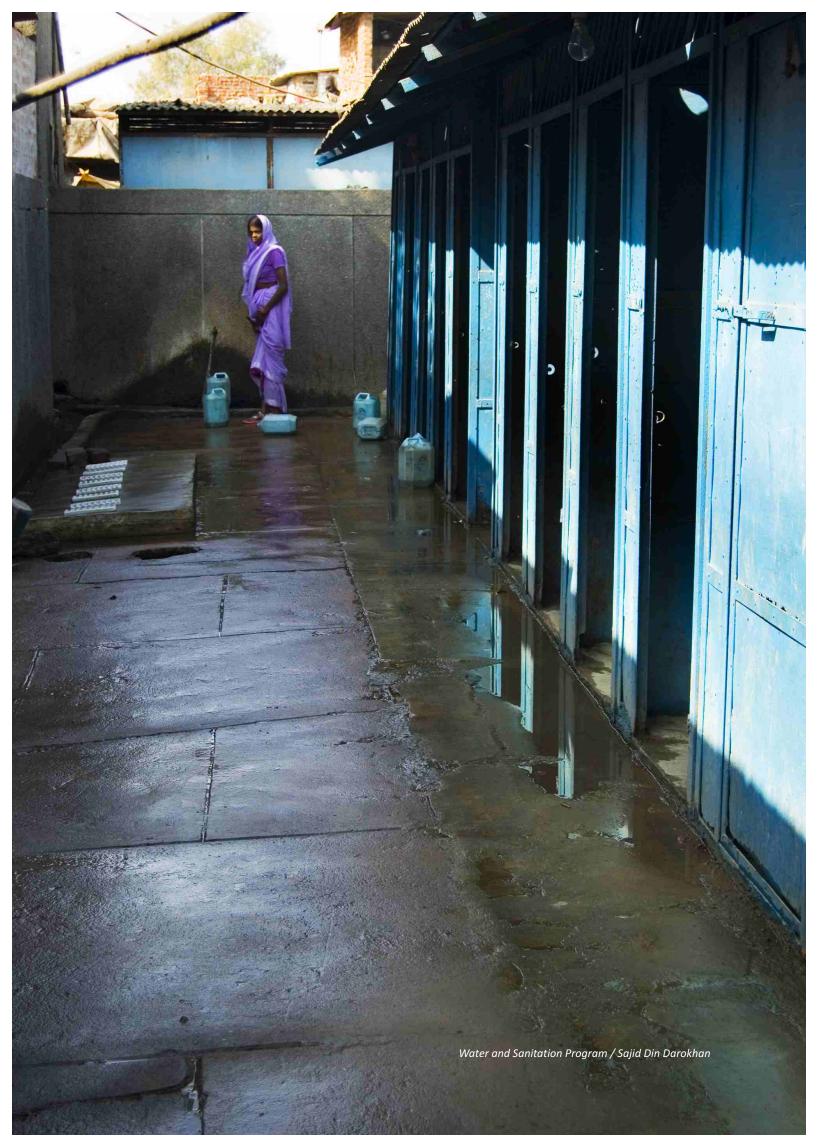
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# Table of Contents

Fore	eword	1				
Exec	cutive Summary	2				
I.	Urban Sanitation: Tackling the Silent Killer  An Overview of Issues and Challenges in Providing Urban Sanitation	4				
II.	The Sanitation Ecosystem  The Role of Non Profits and other Stakeholders in Urban Sanitation	11				
III.	Moving up the Sanitation Ladder  Cornerstones and Non Profit Interventions					
IV.	Mapping Non Profits with High Impact Interventions for Improving Sanitation	36				
	Bharat Integrated Social Welfare Association (BISWA)	37				
	Center for Environmental Planning and Technology (CEPT)	38				
	Consortium for DEWATS Dissemination (CDD) Society	39				
	Ecosan Services Foundation	40				
	Mahila Housing SEWA Trust	41				
	Nidan	42				
	Shelter Associates	43				
	Society for Promotion of Area Resource Centres (SPARC)	44				
	WASH Institute	45				
Concluding Thoughts						
Арр	endices					
	A. Dasra's Research Process	48				
	B. Glossary	50				
	C. Acknowledgments and Organization Database	51				
	D. Endnotes	53				

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USAID / Health of the Urban Poor



Foreword

I was the proverbial child born with a silver spoon.

Growing up in a prosperous family, I lived in a sprawling house with a large compound and nine rooms including one for worship, a special one to ground flour and a well to draw water from. But, no toilet. Every morning at 4 am there was chaos in the house. Someone picking up a bucket, someone filling water... women of the household rushing to do their 'business' before sunrise. Many of them had headaches because they had to control the call of nature throughout the day. Even as a child, I was acutely aware of all this activity. I studied in four different schools - none of them had a toilet. Or girl students. This was a long time ago and yet this issue of lack of basic sanitation in our country is *not* ancient history.

The challenges that the urban sanitation sector faces mainly relate to the low priority accorded to it — whether by the bureaucracy, the municipalities or the households themselves. There exists a blatant lack of awareness amongst people—I have come across numerous people that actually prefer defecating in the open than within the four walls of their home. These mental blocks against sanitation are a feature unique to India.

What we really need to do to improve this situation is to spread education and awareness, change mind-sets and provide more funds. We have to provide people with toilets but more importantly, we have to mobilize communities to own a toilet and witness its positive impact on their lives. 'We' includes non profits, government, municipalities and by no small measure, philanthropists. Traditional philanthropy has always shied away from funding this cause.

Sanitation goals are hard to attain especially when they involve altering deeply entrenched habits. But I am optimistic. I say this because, at Sulabh International, in the past few decades, we have achieved significant success in providing access to marginalized communities across the country. But there is a lot more that needs to be done. Girls are dropping out of school, children are dying and people are being subjected to indignity every day for want of a basic facility. Sanitation might not be a glamorous issue, but it is an indisputable one that needs your help.

If we want to make progress as a nation, investment in sanitation is essential.

Dr. Bindeshwar Pathak

Bindelwa Galhan

Founder, Sulabh International

### **Executive Summary**

Sanitation brings the single greatest return on investment of any development intervention—for every \$1 spent on sanitation at least \$9 is saved in health, education and economic development. Despite this well established fact, in India this sector has remained neglected for most of its post-Independence history.

Even today, millions of Indians are subjected to grave ill health, increasing threats to safety, lower spending on education and nutrition, reduced productivity and lower income earning potential resulting into a deepening cycle of poverty – all for want of a basic sanitation facility.

This is especially true for urban India. Growing slum population and lack of adequate sanitation force over 50 million men, women and children to defecate in the open every day. The poor bear the worst consequences of inadequate sanitation in the form of ailing children, uneducated girls and unproductive people, making these populations even more vulnerable and costing India 6.4% of its GDP.

The fact that even nations with lower per capita income such as Bangladesh and Pakistan are scoring far better than India on various sanitation indicators serves as a wakeup call. The need for improved urban sanitation in India is pressing and warrants public and philanthropic investment. Increasing levels of urbanization, rising densities of slums and historical lack of attention to urban sanitation only make this need more urgent.

This report highlights that recent policy developments focusing on urban sanitation coupled with strategic philanthropic funding, can go a long way in providing urban poor with access to improved sanitation and ensuring healthy, prosperous cities.

Dasra recommends five **cornerstones** that are crucial in providing universal urban sanitation in India:

#### 1. Developing a Gendered Approach



Sanitation projects designed with full participation from women are five to seven times more successful than those that focus only on men. It is vital to acknowledge the distinct role of men and women and involve them both as important actors, stakeholders and change agents for improved sanitation.

#### 2. Improving Hygiene



Diarrhea alone kills one child every minute in India. The most affordable, accessible and effective way to prevent this is to promote hygiene in marginalized communities. It is essential to educate communities about the life saving potential of simple hygiene and its key role in helping populations realize the full return on infrastructure investments.

#### 3. Fostering Champions within Government



Government's involvement in the sanitation sector is one of the most important factors behind sustainable and large scale sanitation outcomes not only in India but also other countries such as the United Kingdom, South Africa and Ethiopia. It is important to identify and foster champions for sanitation within all levels of the government – central, state and local – who will enable favorable policy environments, cut through red tape and drive the sanitation agenda to ensure long term, large scale impact.

#### 4. Nurturing Community Ownership



Universal sanitation in India remains elusive due to the government's traditional approach that often neglects the requirements of the communities being served. There is a need to move away from this top – down method to a community led approach. Endorsed by the United Nations, it encourages communities to confront the consequences of their sanitation practices and take ownership to improve their situation.

#### 5. Customizing Solutions and Creating Standards

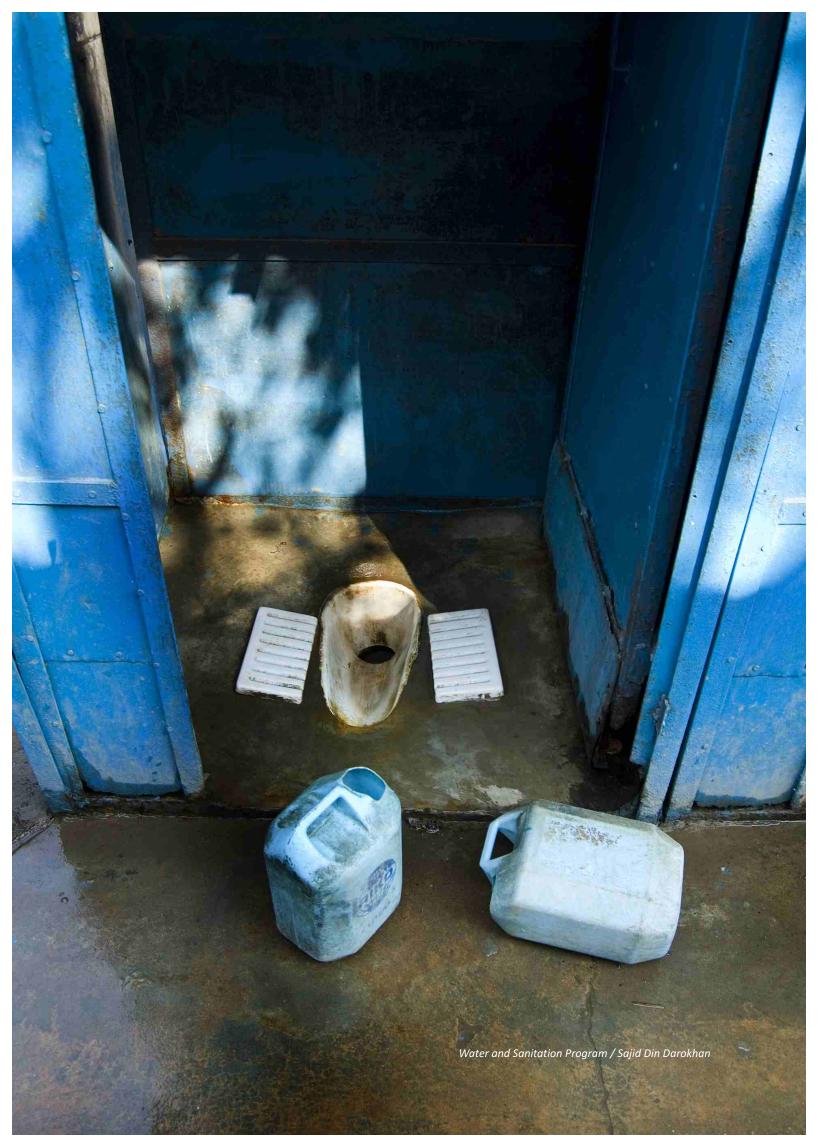


It is crucial to consider the unique features of different communities that may hinder progress, and customize interventions accordingly. It is equally important, to standardize scalable aspects of the sanitation chain and leverage existing sector knowledge to avoid duplication of effort, save time and contribute to scale.

Dasra recognizes that in India, urban sanitation cannot be provided by any one stakeholder. While the size of investment underscores the critical role of the Government of India, equally important is the role of the communities that will be ultimately responsible for making sanitation a sustained reality. Along with the government and communities, non profits play a pivotal role in the sanitation framework. Non profits are best placed to demonstrate innovative, impactful models due to their proximity to communities and have the potential to scale those initiatives by facilitating partnerships among various key stakeholders.

Dasra recommends that philanthropists fund non profits that are training stakeholders, enabling behavior change for hygiene education and influencing government as these are the three most scalable and high — impact interventions undertaken currently to provide access to sanitation in urban India. After evaluating over 160 organizations across India, Dasra has highlighted nine high potential non profits within this report: BISWA, CDD Society, CEPT, Ecosan Services Foundation, Mahila Housing SEWA Trust, Nidan, Shelter Associates, SPARC and WASH Institute.

By 2030, 590 million people will live in Indian cities, twice the population of United States today. This urban expansion will happen at a speed quite unlike anything India has seen before. It is now clearly proven that poor sanitation links to various drivers of economic growth such as health, education and productivity. If this evidence is not urgently acted upon, India will continue to lose millions of children, countless school days and valuable productive working hours further cementing the cycle of chronic poverty.





## Urban Sanitation: Tackling the Silent Killer

Inadequate sanitation is much more than just an inconvenience-lt costs lives, dignity and productivity. Poor sanitation means dying children, uneducated girls, vulnerable women, unhealthy living conditions and ultimately unproductive and poor populations. In India, 1,600 children die every day before reaching their fifth birthday<sup>1</sup>, 24% of girls drop out of school<sup>2</sup> and more than 30% of marginalized women are violently assaulted every year<sup>3</sup> as the lack of basic sanitation forces them to travel long distances to meet their needs. Above all, lack of sanitation is not a symptom of poverty but a major contributing factor.<sup>4</sup>

Adequate sanitation is a basic human right. Its lack is related to, and exacerbates, other burdens of inequity experienced by marginalized urban households, deepening the cycle of poverty. The lack of sanitation increases living costs, decreases spend on education and nutrition, lowers income earning potential, and threatens safety and welfare. This is especially true for urban India.

#### **Expanding Cities, Growing Slums**

The 2011 census estimates reveal that, for the first time since independence, the absolute increase in the urban population was higher than that of the rural population. As the urban population increases, demand for every key service including water and sewage treatment will increase five-to seven-fold. Current urban infrastructure, however, is woefully short of what is needed to sustain prosperous cities. A parliamentary panel set up by the Ministry of Urban Development recently revealed that cities across India severely lack accessible sanitation facilities and necessary connections across the sanitation chain. Several gaps within the chain (as shown in Figure 1, on the next page) have led to dismal sanitation standards across the country. As a result, not a single Indian city can boast of being clean and healthy.

#### Sanitation:

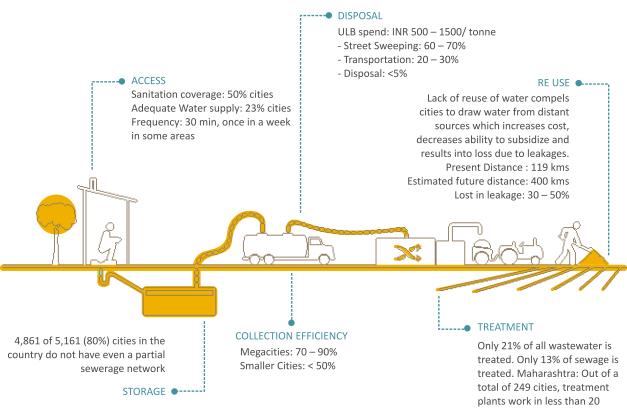
Sanitation is *access* to, and use of, excreta and wastewater facilities and services that ensure *privacy* and dignity, ensuring a clean and healthy living environment for all.

Facilities and services should include the collection, transport, treatment and *disposal* of human excreta, domestic wastewater and solid waste, and associated *hygiene* promotion.

Source: UN Habitat & Water Aid

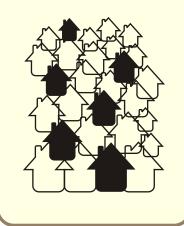


Figure 1: Gaps in India's Urban Sanitation Chain



#### Slum:

The Census of India defines a slum as 'a compact area of at least 300 in population or about 60-70 households of poorly built, congested tenements in an unhygienic environment usually with inadequate infrastructure and *lacking* proper sanitary and drinking water facilities'.



India's cities are not only increasing in number, they are also expanding, and so are the slums within them. Census data suggest that slum population has tripled in the last three decades, intensifying the strain on already insufficient urban resources. Moreover, 7 million people continue to migrate to urban India every year<sup>8</sup> with most of them finding their way to slums within and on the fringes of cities. Slums are typically overcrowded, lack basic services and facilities, and hence are unhygienic and unsafe. In fact, the very definition of slums (see box on the left) points at the severe sanitation and water crisis for its dwellers.

Illustration Source: Gates Foundation

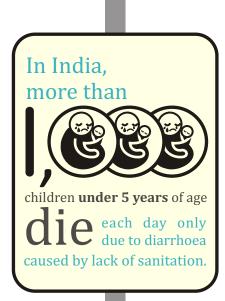
In India, only half of nearly 50,000 slums are notified or recognized by the government. Until recently, local municipal bodies were not mandated to provide non-notified slums with any services. Neglected and practically nonexistent to the authorities, these communities bear the worst consequences of inadequate sanitation facilities. A recent survey by the Municipal Corporation of Mumbai reveals that there is not a single toilet in nearly 200 Mumbai slums, compelling a million slum dwellers to defecate into overflowing drains, filthy dump yards and railway tracks. Similar issues across urban India cause over 50 million men, women and children to defecate in the open every day.<sup>10</sup>

#### **Sanitation in Slums**

Sanitation in urban slums is a complex and pressing issue. Existing unhygienic standards, crowded conditions and poor sanitation contribute to frequent and rapid outbreaks of disease. Lack of access to healthcare facilities compounds health problems. This negatively impacts gender parity, education and livelihoods, making slum populations even more vulnerable.

**EFFECTS OUTCOMES IMPACT** Risk of assault, Practice Open Pollutes land Defecation and water LACK OF TOILETS Travel far Increases time spent, to access risk of assault open spaces Intensifies Girls miss Increases school drop out Gender Inequality rates for girls days Prioritize Leads to drinking diarrheal over hygiene diseases Increases Decreases Use Consume water Economic LACK OF WATER Productivity polluted due to ground Burden water open defecation Buy water Pay higher from private price for vendors water Collect water Increases Increases from distant time spent, Healthcare places risk of assault Expenditure Absence of Leads to LACK OF HYGIENE hygienic diarrheal practices diseases such as hand washing

Figure 2: Lack of Sanitation Intensifies Poverty



#### Sanitation and Health

Children often use spaces nearer the settlement to defecate open gutters right outside their own houses, nearby parks and playgrounds, open spaces adjacent to streams and water sources, thereby contaminating their surroundings and drinking water sources. For the most part, open spaces used for defecation are also the only open spaces for children to play in. Regular exposure to and direct contact with fecal matter and drinking contaminated water induces transmission of fatal diseases such as diarrhea, parasitic infections, and worm infections, killing people, especially children. In India, more than 1,600 children under five years of age die each day only due to diarrhea caused by lack of sanitation. Moreover, recent research is now linking poor sanitation to other causes of death, suggesting that its contribution to child mortality is far greater than previously appreciated. Each of the settlement of the settlement

Even when diarrhea does not kill, it severely debilitates, making children more susceptible to a host of conditions such as acute respiratory infection and chronic under nutrition. The cost of treating diarrheal disease drains family finances, and denies them resources for other development objectives such as education and nutrition. Furthermore, according to a survey by UNICEF, decreasing immunity suffered by children in their early years as a result of sanitation-linked diseases significantly hampers their cognitive development, with a lifelong impact on their growth and progress.

#### Sanitation and Women

For women the daily struggle begins well before dawn. Without water supplies and toilets within their homes, and unable to openly defecate during the day due to lack of privacy and for fear of harassment, they wait for nightfall and to find a secluded spot to defecate, a practice which has serious side effects. Waiting so long to relieve themselves increases chances of contracting urinary tract infections, chronic constipation, and psychological stress. That apart, it creates irreparable complications during pregnancy and postnatal recovery. Also, travelling long distances to access public facilities makes them potentially vulnerable to physical and sexual assault. A United Nations survey suggests that it is not uncommon for girls and women in such conditions to be harassed, physically assaulted and raped and that in Delhi slums, up to 70% of girls experience humiliation every day in terms of verbal harassment and half of them have been victims of grave physical assaults.

#### Sanitation and Education

Lack of sanitation is detrimental not only to women's health and their dignity but also to their education. Girls are reluctant to attend school, and parents are disinclined to send them, if there are no safe, private toilets for them to use. Forty percent of schools in India do not even have a common functional toilet. <sup>14</sup> Many girls are forced to miss class during their menstrual cycle, and eventually one in four girls drops out simply because there are no facilities or supplies that they can safely access. The difficulty women and girls face every day and at every stage in their lives due to lack of a simple toilet is unimaginable.

Even in communities where toilets exist, an evaluation by the Government of India shows that a significant number of people do not use them. This stems from an array of issues such as substandard construction leading to disrepair, poor maintenance causing scarcity of water and electricity and the government's past emphasis on expensive standardized latrine designs that don't always work in different urban topographies.

Urban slums face not only an acute shortage of accessible toilets but also of water, a crucial requirement for hygienic practices. While most localities in Indian cities receive between three to five hours of water per day, certain communities receive as little as 30 minutes of water supply per week. 15 This compels poor urban households to buy water from private vendors and slum mafia at exorbitant prices. In fact, the poorest 20% of urban households bear the highest per capita economic impact of inadequate sanitation, at times paying 75% more than the average Indian household <sup>16</sup> for what more often than not turns out to be a suboptimal facility. For instance, a kiloliter of water costs the Bangalore Water Supply and Sewerage Board '34, but the consumer pays, on average, just `18. However, when the poor or people living on the fringe of the city buy water by pot or tanker, the price goes up to '300 per kiloliter.17 Inflated prices force marginalized households to prioritize drinking water needs over sanitation and hygienic practices such as hand washing that help break the link between feces - fingers - food. In absence of these practices, the urban poor continue to come in contact with human waste in some way which gravely harms their health.



## Sanitation and Productivity

Illnesses caused by lack of sanitation compel adults, especially women, to take care of ailing members of the household. This means they either forego productive labor, or risk their own health to fully realize their productive potential. Also, where clean, safe facilities are not available at/near home, the time taken to walk to facilities reduces time at work, entrenching income poverty. The economic deprivation of the urban poor increases manifold when healthcare expenses and the cost of lost potential due to sickness arising from inadequate sanitation is added.

Underlying each of these issues is the extreme lack of awareness about the impact of inadequate sanitation. With little knowledge of how sanitation links to health and productivity and misconceptions about the high costs of building a toilet, marginalized households are unwilling to invest in sanitation. On the other hand, urban local bodies such as city municipalities are unmindful of the harmful effects not only on the poor but on society as a whole, resulting in low priority for the issue at both the household and city level. Even when there is latent demand for facilities among the poor they often lack the political voice needed to claim their basic right to sanitation.

Tackling the problem of inadequate sanitation not only requires building infrastructure but creating greater awareness of the issue, its magnitude and its real costs – not just to poor people, but to societies as a whole.

According to a WHO report,
"While **China** has
contributed to more than
95 % of the progress in
Eastern Asia, the same is not
true for India in
Southern Asia."

#### Sanitation - A Blue Chip Investment

The rationale for sanitation investments is clear – for every \$1 spent on sanitation at least \$9 is saved in health, education and economic development. <sup>19</sup> This happens to be the single greatest return on investment of any development intervention. Investing in sanitation has the potential to greatly enhance other development outcomes; yet this sector in India remains largely neglected.

The cost of not paying attention to sanitation is enormous. Inadequate sanitation costs India a staggering `2.4 trillion each year – equivalent to 6.4% of its GDP and more than the annual income of Gujarat, one of its most prosperous states.<sup>20</sup> Implementing comprehensive sanitation and hygiene interventions, on the other hand, will avert 45% of health effects, enable 11% more girls to attend school and avoid other adverse impacts related to water, welfare, and tourism losses, gaining nearly `1.5 trillion in the process.<sup>21</sup> As a country, we cannot afford to neglect this issue anymore.

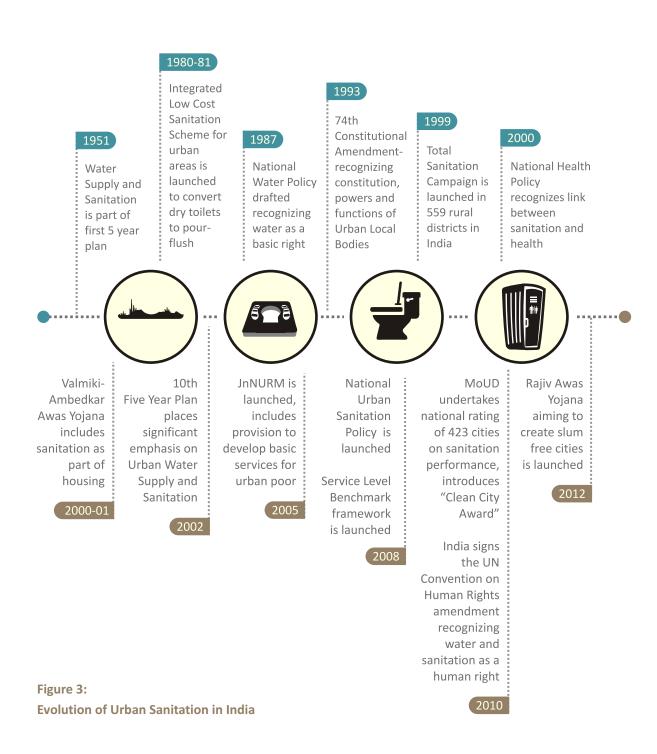




# The S

## The Sanitation Ecosystem

Sanitation, particularly for urban areas, remained a neglected subject in India for a long time, becoming an important policy concern only around 2008. Policy created since then provides a role for all stakeholders, including non profits, involved in providing sanitation to India's urban residents.



11



#### Service Level Benchmarking framework:

In 2008, the Ministry of Urban Development formalized a common minimum Service Level Benchmarking (SLB) framework for monitoring and reporting on service level indicators for key service sectors.

A benchmark of 100% coverage of toilets is included as one of the Sewerage performance indicators. Cities are being supported to improve their urban services including sanitation, using the benchmarking framework as an indicator of performance.

# **Evolution of India's Institutional Framework for Urban Sanitation**

Water supply and sanitation were added to India's national agenda during its first five-year plan period. Yet until 1979, relatively negligible investment was made within the sector. Since 1980 – which also marked the start of the International Drinking Water Supply and Sanitation Decade – the government substantially increased its financial commitment to the sector, but mainly to rural sanitation. Urban sanitation remained the poor cousin to urban water supply both on paper – where it was generally subsumed under water supply – and also in practice where the bulk of investment was allocated towards and spent on large infrastructure projects for water. One reason was that while water was already recognized as a 'public good', safe sanitation was not yet given the same status.

It is only in 2007, that urban sanitation and water got significant emphasis, as part of a strong urban reform agenda. This agenda was reflected through the launch of the flagship Jawaharlal Nehru National Urban Mission (JnNURM) with an outlay of US\$ 20 billion, and the Urban Infrastructure Development Scheme for Small & Medium Towns (UIDSSMT). Originally scheduled from 2005-12, JnNURM will now extend until 2014, primarily due to the poor progress of implementation.

A comprehensive policy framework for sanitation provision emerged in 2008, when the Ministry of Urban Development launched the National Urban Sanitation Policy (NUSP) to guide the provision of urban sanitation in the country.

As the government itself notes, the NUSP signified a watershed in India's urban development since it not only accorded national recognition separately to urban sanitation (separate from water), but also signaled to states and cities the urgency needed in planning and implementing measures for improving urban sanitation in a targeted manner.<sup>22</sup>

A National Urban Sanitation Task Force was constituted to draft the NUSP, a set of clear, comprehensive guidelines for providing sanitation. This marked the first time that the provision of sanitation facilities to the urban poor and residents of informal settlements became a clear policy goal.

**Deconstructing the National Urban Sanitation Policy** All Indian cities and towns become totally sanitized, healthy and liveable; and ensure and sustain good public health and environmental outcomes for all their citizens with a special vision focus on hygienic and affordable sanitation facilities for the urban poor and women. Awareness generation on linkages between poor sanitation. goals Open defecation free cities. Integrated city-wide approach to sanitation. Each state is to prepare a State Sanitation Strategy to achieve the policy goals set out in the NUSP. Cities are then to operationalize the State Strategy through preparing and implementing City Sanitation Plans (CSP), that are to adopt a holistic approach to addressing the total sanitation needs of the city in a sustainable manner. CSP implementation is to be driven by a City Sanitation Task Force, comprised of government agencies, key experts, businesses, Non Profits working in the sector, workers unions, elected representatives, ULB, officials, amongst others. how it is Support from the Ministry of Urban Development for to be national-level awareness generation, exploration and implemented facilitation of avenues for financing, monitoring and evaluation, knowledge management, and capacity building. NUSP is not a financed mission (unlike JnNURM) and therefore there are no dedicated funding sources available under it for urban sanitation plans. However MoUD is to assist states and cities to source financial assistance from public, donor and private sources.

Figure 4:

Another landmark in urban slum sanitation was the launch of the Rajiv Awas Yojana scheme in 2012, aiming to create a slum-free India during the Twelfth Plan period (2013-17) by providing basic civic and social services, and decent shelter, to every Indian. The scheme includes bringing all existing slums, notified and non-notified, within the formal system so that they can secure the same level of basic amenities as other city dwellers.

#### Role of and Opportunity for Urban Sanitation Stakeholders

Currently various stakeholders are playing distinct roles in providing sanitation to urban India. The stakeholders include the Central and State government, Urban Local Bodies (ULBs) such as municipalities and municipal corporations, development agencies and foundations, social businesses, corporates, Microfinance Institutions (MFIs) and non profits.

current role		Figure 5: India's Urban Sanitation Stakeholders				
stake- holders		service delivery	funding	technical assistance	capacity building & training	research & devpt
<u>ia</u>	city	<b>√</b>	<b>√</b>			
govt. of India	state		<b>√</b>			
<u> </u>	central			<b>√</b>		
social business		<b>√</b>	<b>√</b>			<b>✓</b>
corporates			<b>√</b>			
development agencies & foundations			<b>√</b>	<b>√</b>	<b>√</b>	<b>✓</b>
	MFIs		<b>√</b>	<b>√</b>		
non-profits		<b>√</b>	<b>√</b>	<b>√</b>	<b>√</b>	<b>✓</b>

#### 1. Role of Government

Sanitation in India is a State subject. State-level steering committees and urban departments play the role of guidance and support to Urban Local Bodies (ULBs) which are responsible for final implementation of sanitation at the local level. ULBs are mandated to undertake planning, design, implementation, operation and maintenance of water supply and sanitation services in cities and towns. Currently, 29 states and union territories, out of a total of 35, are engaged in preparing State Sanitation Plans and 158 cities have taken the initiative to make City Sanitation Plans.

At the central level, the nodal Ministry of Urban Development (MoUD) is tasked with supporting implementation of the NUSP on various fronts including designing and implementing national-level strategies on linkages between public health and sanitation, clarifying institutional roles, capacity-building and training support to states and ULBs, providing financial assistance for City Sanitation Plans through existing government schemes, monitoring and evaluating projects, and mainstreaming sanitation into relevant programs on urban infrastructure and housing across various central ministries. Besides the MoUD, institutional responsibility for the full water supply and sanitation chain at the ministerial level falls between a number of ministries, commissions, and boards. This complexity also contributes at times to the failure to implement programs in the sector.

14

#### 2. Role of Development Agencies and Foundations

Development agencies – the bilateral and multilateral agencies including the World Bank, UK DFID, USAID, GIZ, Asian Development Bank – as well as international foundations and non-profits play various roles in urban sanitation including assistance to government in the development and implementation of urban sanitation policies and programs at the national, state and city level, funding non profits and conducting research and development, primarily on techno-managerial issues. Examples of their interventions are as follows:

- The **Bill & Melinda Gates Foundation** has prioritized the issues of water, sanitation and hygiene in making grants, focusing primarily on expanding the use of sanitation not connected to a sewer. Of particular note is the "Reinventing the Toilet" project, a global research initiative to find a cheaper alternative to the conventional flush toilet, during 2012. In India, the Gates Foundation is funding an initiative to develop an innovative, sustainable, scalable urban community sanitation model in the cities of Bhubaneswar and Cuttack in the state of Odisha.
- WaterAid is an international non-profit with a mission to transform lives by improving access to safe water, hygiene and sanitation in the world's poorest communities. With a 25-year presence in India, WaterAid works through local non profits and ULBs to provide them with the skills and support to help communities set up and manage sustainable sanitation systems.
- GIZ, the Government of Germany's international development agency has been
  involved in preparing the City Sanitation Plan in six cities in India. Working
  through consultants, GIZ has supported cities in baseline data collection and
  mapping (which is often lacking or inadequate) at city ward level and below to
  prepare status reports, as well as the CSP itself.

#### 3. Role of Social Business

Urban sanitation presents a viable business opportunity. Yet it remains a mostly neglected market in India. The stigma attached to working in the sanitation sector appears as a major barrier to opportunity conversion, as does finding the 'right model' to ensure profitability.

An EU study published in 2012 shows that small-scale water and sanitation providers serve a substantial portion of the market, particularly for the poor.<sup>24</sup> The World Bank estimates that entrepreneurs/independent providers often service a high percentage of the population—up to 90% in some cases.<sup>25</sup>

In contrast to India's (drinking) water sector that has witnessed a significant growth of social business over the last decade, urban sanitation has seen few such scalable businesses to date. A notable one is **3S Shramik**, a Pune-based private limited company, which has recently expanded its portable sanitation service provision to slum settlements, as described in the box on page 16.

3S Shramik specializes in providing quality portable toilet facilities primarily at construction, pilgrimage and festival sites. Last year it piloted its portable toilet solution in a non-notified Delhi slum in conjunction with the Michael and Susan Dell Foundation and the Mahila Housing SEWA Trust. Households paid a monthly fee for Shramik's service. While the pilot had its issues, it showed that people are willing to pay for toilet facilities and portable toilets is a workable solution in slums which are not recognized or notified by government, or are otherwise illegal.

Shramik now intends to launch a slum program across five cities in the country, and has already started work in Pune and Bangalore.

#### 4. Role of Corporates

Very few corporates deploy their Corporate Social Responsibility (CSR) funds towards sanitation programs. While some are doing so as part of village development initiatives, little is granted towards urban sanitation. The perception that sanitation delivery is a government responsibility may account for part of the reluctance, and the lack of awareness of the link between improved access to sanitation and improved health outcomes may be another.

In 2011, **Standard Chartered India** launched its flagship sustainability initiative in collaboration with WaterAid, called WASHE (Water Sanitation Hygiene Education). WASHE's aim is to provide easy access to safe water and improved toilet facilities as well as education on hygiene and financial literacy to 800 municipal school girls in Mumbai. The program is expected to expand further across Mumbai and Delhi.

**Hindustan Unilever** is one corporate that has invested heavily in sanitation through its rural hygiene program – Swasthya Chetna – outlined in the box 'Social Marketing through Soap'.

#### 5. Role of Microfinance Institutions

Microfinance is being used to fund sanitation by those who would otherwise be excluded, such as households, CBOs and non profits. Examples include loans for building an on-site toilet facility or for upgrading such a facility. Although microfinance for sanitation is growing, its application remains limited. As noted in a 2012 report on the sector, "...even though microfinance as a financing model is now well established with a solid track record, its application to the financing of [water and sanitation projects] has remained somewhat limited and MFIs rarely offer tailored products for [such projects]". <sup>26</sup> However, more local MFIs in India are now offering micro loans for building toilets as a result of both demand and supply factors. These loans are typically not income generating in traditional MFI terms, but are income enhancing.

#### 6. Role of Non Profits

The NUSP recognizes the 'special role' of Non Profits as mobilizing communities, raising awareness and working with poor and un-served communities to assist them in finding affordable, community-managed solutions to sanitation. Non Profits are expected to partner with ULBs and participate or even lead the City Sanitation Task Force that formulates the City

Sanitation Plan.

Dasra research highlights that, for several years, non profits have been playing a similar role in practice to that envisaged by the NUSP. Their current role encompasses:

- a. Mobilizing communities: The key strength of non profits in this sector as with many sectors is engagement with communities in order to build awareness, mobilize and organize community members around urban sanitation. In particular, non profits are working to build peoples' awareness on the link between poor health and sanitation, mobilize people around toilet construction, to demand sanitation and relevant government entitlements and build community capacity to construct toilets and maintain them.
- b. Building Capacity: Non profits are providing training organizations in various techno-managerial aspects of urban sanitation delivery to sector stakeholders such as ULB personnel, elected representatives, other non profits and community based training of state level, ULB personnel and elected representatives
- c. Research and Development: Non profits have been instrumental in taking forward research and development of technological options, piloting and implementing sanitation solutions and models for marginalized urban communities.
- d. Partnering with ULBs: Non profits participate in the City Sanitation Task Force that implements the CSP and also assist in monitoring and evaluating ULB performance in service delivery.

Dasra's research also highlights that, although the link between poor sanitation and poor health is clear, many non profits working on community health in Indian slums are not as involved in the issue of sanitation as might be expected. Dasra's initial discussions with health non profits in Mumbai indicated that whilst it would be a sector they would ideally like to work on, many are unable to do so due to lack of resources needed to tackle sanitation specific issues such as creating demand for toilets and land tenure for community toilets.

While there is a clear and pressing need and role for non profits in delivering urban slum sanitation in India, there are surprisingly few non profits operating in the sector. This is in contrast to rural sanitation, where a much larger number of social organizations have flourished.

# Social Marketing through Soap:



Hindustan Unilever's Swasthya Chetna program



"Visibly clean is not really clean"

The Lifebuoy Swasthya Chetna (Health Awakening) program is a rural health and hygiene education social marketing initiative, undertaken by Hindustan Unilever across 44,000 villages and more than 100 million people in rural India. Launched in 2002, the program's aim is to increase awareness on the importance of hand washing with soap, as well as promote general hygiene in villages, using the Lifebuoy brand of soap as part of the initiative. School children are the "change initiators" in the program, the objective being for children to take the messages home and into their communities.





## Moving up the Sanitation Ladder

Dasra recognizes that in India, urban sanitation cannot be provided by any one stakeholder. While the size of the investment and the nature of infrastructure required today and in the future underscores the critical role of the Government of India, equally important is the role of the communities that will be ultimately responsible for making sanitation a sustained reality. Along with the government and communities, non profits play a pivotal role in the sanitation framework to nurture communities through the process of acquiring sanitation and facilitate partnerships among various stakeholders. This chapter highlights the cornerstones of providing sustainable sanitation and describes seven high impact, scalable non profit interventions being implemented at the grassroots currently to reinforce these cornerstones.

#### **Cornerstones of Effective Sanitation Provision**

Sanitation programs are highly likely to succeed if five key factors are adhered to, as described below:

- 1. Developing a Gendered Approach
- 2. Improving Hygiene
- 3. Fostering Champions within Government
- 4. Nurturing Community Ownership
- 5. Customizing Solutions and Creating Standards





# Women's Participation:

A World Bank evaluation of 122 projects found that the effectiveness of a project was *six to seven times higher* where women were involved than where they were not.



Source: Water Supply and Sanitation Collaborative Council (WSSCC), For Her: It's the Big Issue, Putting Women at the centre of water supply, sanitation and hygiene, 2006

#### **Developing a Gendered Approach**

An inclusive approach to sanitation is essential to ensure that the unique needs of all stakeholders are addressed. In India, this mainly involves acknowledging women as well as men as important actors, stakeholders and change-agents<sup>27</sup> for improved sanitation in households and communities. Sanitation programs, as with many other development initiatives, are often built around assumptions of gender-neutrality.<sup>28</sup> The specific needs of men and women are neglected in terms of the design, location and construction of sanitation facilities. This results in gender-specific failures such as toilets with doors facing the street in which women feel insecure, facilities in far off locations that are difficult to access, school urinals that are too high for boys, absence of disposal for sanitary materials for women and pour-flush toilets that require considerably more work for women in transporting water.<sup>29</sup>

In addition to distinct needs, men and women play different roles in sanitation and hygiene within their families and communities. Women play a crucial role in collecting water for sanitation and ensuring clean toilets as well as raising awareness about sanitation issues and influencing hygiene behaviors of children. On the other hand, men usually pay for sanitation facilities and are responsible for their construction and maintenance.

Given their role in sanitation, women tend to be aware about current facilities and their quality, can identify barriers to accessibility, and provide insights on how to improve hygiene behaviors. Yet, historically there has been a tendency to leave them out of planning, designing and construction in initial stages, and operation and maintenance for income generation later. There is evidence that water and sanitation services are generally more effective if women take an active role in setting them up, from design and planning, to the operations and maintenance required to make any initiative sustainable.<sup>30</sup> Evidence also shows that their role in educating their families and the community about hygienic practices makes these ventures more likely to succeed.

However, in order to bring about gender parity, it is imperative to also involve men, enable them to share their views on gender issues and promote gender sensitivity. As stated before, an inclusive approach to providing sanitation is essential.

? what

A major initiative launched by the non profit Gramalaya in 2000, mobilizing women in the slums in Self Help Groups (SHGs) and launching an awareness campaign on sanitation through training.

? why

Tiruchirapally (Trichy), the famous temple town of the South, is the fourth-largest city in Tamil Nadu with a population of just over a million, 25% of which live in slums. Until the end of the 1990s the slums of Trichy, with their sanitation and toilet facilities in an appalling state, were no different from the rest of the country. But things began to change about 10 years ago, and Trichy has not looked back since.

? how

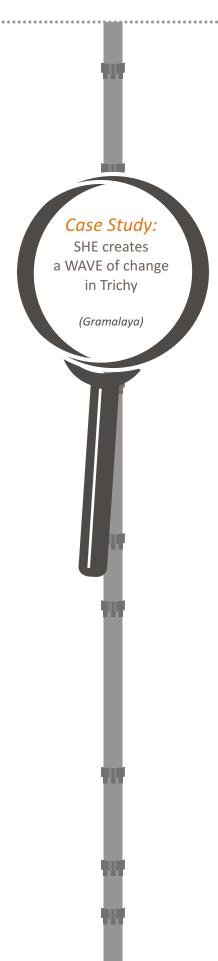
With Water-Aid's support, Gramalaya built and renovated 25 slum community toilets which would be managed by the women of the community on a pay-and-use basis. SHE (Sanitation Health Education) teams were set up by the SHGs to propagate the message of sanitation, monitor the behaviour of residents, and supervise the maintenance of the toilets. All SHE teams eventually came together to form Women's Action for Village Empowerment (WAVE), a registered society.

It is clear from the systems they have put in place to manage and maintain these toilets that these women understand the economics of it all. The accounts are meticulously-kept and are audited by the Trichy City Corporation (TCC). In fact, the success of the women in managing and maintaining the community toilets encouraged the TCC to build more toilets so that all the 211 approved slums now have community toilets.

After initial resistance to their cause, men wanted to have a part of the action when the women seemed to be succeeding in making their slums clean. That is when AWASH (Association for Water, Sanitation and Hygiene) was created so that men and women could together contribute to improving the water and sanitation scenario of their joint habitat. It is common today to see both, men and women from AWASH monitoring the progress of toilet blocks together in the slums of Trichy.

Source:

Dr. Ahluwalia, I. http://www.indianexpress.com/news/she-creates-a-wave-of-change-in-trichy/782016/0, accessed on 17th July, 2012.



# The simple act of washing hands with soap at critical times can reduce incidence of diarrhea by more than 40% and respiratory tract infection by 23%. Curtis, V., and S. Cairncross, Effect of Washing Hands with Soap on Diarrhea Risk in the Community: A Infectious Diseases 3, 2003, p. 275–81 Medicine and International Health, Handwashing and risk of respiratory infections: a quantitative systematic review, 2006, p. 258-267.

#### **Improving Hygiene**

Access to improved water and sanitation facilities does not, on its own, necessarily lead to improved health. Experience in water and sanitation projects indicate that without a comprehensive health and hygiene education component, projects stand little chance of achieving the basic reason for which they are established – health promotion. It is now well accepted that key behaviors such as better menstrual hygiene management and hand washing must accompany infrastructure investments. Accompany infrastructure investments.

Menstrual hygiene management is a critical component of sanitation that has been largely neglected and remains absent from much of the policy and practice in the sector. While there is a need for robust scientific research in order to better understand the impact of poor menstrual hygiene on health, respondents in a survey by WaterAid in Bangladesh reported health problems such as vaginal scabies, abnormal discharge, and urinary infections, and associated these with lack of menstrual hygiene. There is a need to incorporate menstrual hygiene within the sector by raising awareness, providing affordable and accessible products and facilities, linking menstrual waste to the waste management system, and the integration of these approaches into mainstream policies and programs.

Another essential hygiene element that is typically de prioritized in water and sanitation interventions is the importance of hand washing. There is very clear evidence showing the significance of hand-washing with soap at critical times: after defecating and before eating or preparing food. Handwashing with soap breaks the feces – finger – food link, significantly reducing the incidence of diarrhea. In fact, recent studies suggest that regular handwashing with soap at critical times can reduce the number of diarrhea bouts by almost 50%.

Realizing this, various international donor agencies such as CARE, the Water Supply and Sanitation Collaborative Council (WSSCC), UNICEF and WHO have designed and implemented successful hygiene programs around the world focusing on explanations of disease transmissions and the effective solution of hand washing. The programs developed have had multiple benefits for the communities that have adopted them – reductions in infant and child mortality as results of diarrhea—related diseases like cholera and dysentery and the incidence of other diseases, notably pneumonia, trachoma, scabies, skin and eye infections.<sup>34</sup>

Poor hygiene practices within households are often a major source for contamination of safe drinking water causing life threatening diseases.

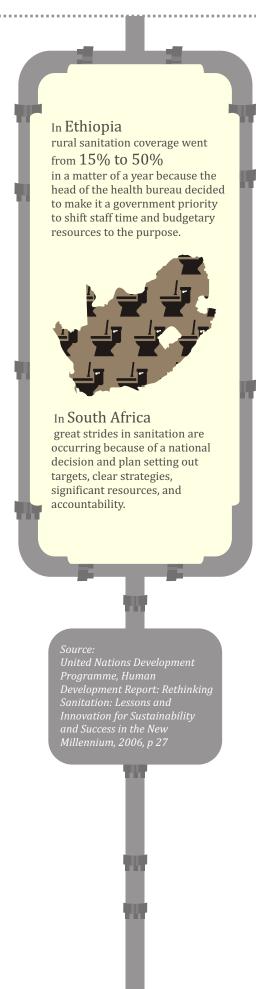
Diarrhea alone kills one child every minute in India.<sup>35</sup> It is now proven that the most affordable, accessible and effective way to prevent this is by washing hands at critical times. Communities need to be educated about the benefits of maintaining hygiene and the fact that simple techniques such as handwashing and maintaining menstrual hygiene have lifesaving potential.

#### **Fostering Champions within Government**

Building and engaging champions within different sectors and at different levels of government, especially at the local level, is now recognized as a critical element for large-scale sustainable changes in sanitation.<sup>36</sup>

Champions at the national and state level enable policy and institutional arrangements ensuring that sanitation is included in poverty reduction strategies, allocate explicit long-term budgets to the sector and undertake the necessary reforms within and outside government to improve performance. For instance, during the 1980s, the government in Bangladesh decided to tackle sanitation as a priority. This leadership and political will was used to drive every level of government and engage all sectors of society in a massive social mobilization campaign coupled with development of sanitation facilities that reached some of the most remote areas of the country. It is therefore important to promote critical thinking and awareness at the highest levels since people in official positions can often cut through red tape, overcome constraints, and drive the sanitation agenda to create impact at the local level.

Urban local bodies in India such as Municipal Corporations and Municipalities have been given the mandate for urban sanitation under the National Urban Sanitation Policy. Their involvement is a key determinant of success as ward councilors and their political parties have a strong influence over communities. <sup>38</sup> A dynamic leader at the helm can provide the impetus to scale up urban sanitation by engaging various stakeholders such as non profits, consultants, citizen groups and slum representatives, formulating a practical City Sanitation Plan, triggering sustainable behavior change and building capacity within the government to ensure sanitation becomes a sustained reality. The work of Dr. Nipun Vinayak, former Municipal Commissioner of Nanded has clearly demonstrated how champions at the local level can positively influence the city wide sanitation scenario (see 'Championing Sanitation in Nanded, India' on page 23).





#### what

In February 2011, former Municipal Commissioner of Nanded-Waghala Municipal Corporation, Dr. Nipun Vinayak, along with his team decided to use the opportunity offered by the National Urban Sanitation Policy which requires all cities to prepare a City Sanitation Plan, to confront the sanitation challenge head-on.



Championing Sanitation in Nanded, India

(Dr. Nipun Vinayak, former Municipal Commissioner, Nanded) ? why

In addition to the half million residents, each year Nanded hosts about three million pilgrims. Whereas most city managers would have focused on the supply of sanitation services and infrastructure, Vinayak's prior experience in the rural Total Sanitation Campaign and exposure to Community Led Total Sanitation (CLTS) led him to believe that investments in community-owned and community-led efforts to stop open defecation, alongside investments in infrastructure and services would deliver better results for the city.

? how

As part of his work in facilitating a City Sanitation Plan, he collaborated with the mayor and other local elected leaders such as the corporators and ward councillors and invited two non profits, Feedback Foundation and Knowledge Links, with experience in rural CLTS (Community Led Total Sanitation) to adapt and lead the process in Nanded. Together, they facilitated pilots in several locations around the city, which, over several months began to scale up to 28 different areas of the city due to increased citizen participation.

The efforts resulted into 238 empowered communities that took on the agenda of sanitation and 157 communities forming sanitation committees more than half of which were declared open defecation free—all in a short span of a year.

Recognizing Dr. Vinayak's role in this transformation, one of the local political leaders said, "In spite of apprehensions from political and media segments Dr. Vinayak moved on the sanitation drive undeterred, often visiting slum areas himself, mixing with the communities, understanding their issues, and supporting them. Now people are inspired. They believe (sanitation) is their work and they shouldn't wait for someone else to do it."

Source:

Knowledge Links, Urban Community Led Total Sanitation: Learning from Action in Nanded, March 2012 Vinayak N., Nanded Sanitation Story, March 2012 Gupta S., Insights from Urban CLTS in Nanded, 2012

#### **Nurturing Community Ownership**

Sanitation strategy in India has been historically characterized by a supply – driven, subsidy – based approach, often neglecting the needs of the communities being served. This is why, despite significant expenditures by donors and government over many years, total sanitation is yet a distant goal. For instance, DFID, UK's international agency had previously provided toilets free of cost (worth US\$ 220 a piece) to some slums in Kolkata.<sup>39</sup> The result was that, on one hand, the toilets remained unused due to lack of demand, and lay in a dilapidated state, and, on the other hand, there was a queue of slums waiting to receive these handouts rather than undertake their own initiative.

Such instances across nations led the United Nations to recognize community participation as one of the key factors for sustainable sanitation in 2008, the International Year of Sanitation. 40 In the years following, urban projects in Indian cities such as Kalyani, Nanded and Tiruchirapalli (Trichy) have demonstrated that whilst community mobilization may be triggered by external stakeholders such as non profits or government, in order to ensure sustainability of sanitation solutions, a sense of ownership and responsibility among users is most crucial. This is achieved by the 'Community Led Total Sanitation' approach that involves communities in every phase of the project. These phases include planning and design, resource allocation, construction, administration and maintenance, and quality control of the services. Typically, communities have a vested interest in ensuring that work is carried out properly and are hence best placed to monitor progress and quality of work. This increased level of participation from the community members not only leads to good quality control but also greater ownership from the community. If projects take into account the varied needs of the communities and involve them through the process, people will be committed to their success and long-term maintenance.

There is a need to move away from this traditional top-down approach to critical reflection in communities that pushes them to confront the consequences of their sanitation practices – such as open defecation – and then catalyzes communities to change their own behavior and living conditions.<sup>41</sup> This behavior change leads to greater responsibility, more willingness to pay and ultimately long-term sustainability.

"We learned that dirt doesn't just smell and look bad, it causes sickness. That's when we got it into our heads that we have to change our surroundings... earlier we said the Municipal Corporation should be doing all the work. Now we feel we have to act -it's our lives..."

- A community leader from Nanded's numerous slum sanitation committees

Source.

Knowledge Links, Urban Community Led Total Sanitation: Learning from Action in Nanded, March 2012



? what

Kalyani in West Bengal is the first town in India to be officially declared Open Defecation Free (ODF). Dr. Shantanu Jha, the chairman of Kalyani Municipality Council spearheaded a community campaign in 2006 that mobilized slum dwellers to build their own toilets. This eliminated open defecation in all 52 slums across the city.

? why

According to Dr. Jha, "Prior studies undertaken in slum communities show that even when toilets have been built for them through external intervention open defecation still goes on. So we realized that it is not money, it is not any hardware issue, it is basically the community - the community should understand the effects of open defecation. So we took the decision to involve the community in the issue."

? how

Not only did Dr. Jha refuse funding from a British development agency, he also declined government funding (through the BSUP scheme) to build toilets for slum dwellers in Kalyani.

In the next two years, the Municipality initiated a Community Led Health Initiative that created awareness about the link between open defecation, sickness and their ever increasing health expenditure. Once the communities understood this link they took it upon themselves to build toilets for themselves and ensure that the entire community did too.

"We used to live in very dirty conditions. We never knew what cleanliness is, until it was explained to us" recalled Kailash Basfore, who rose as a young natural leader from the community. "We had a meeting and decided that we must stop open toilets (defecation) and we decided to build our own toilets and bathrooms. Now the concept of cleanliness has inspired us so much that we are spreading this idea to other communities and have started addressing their meetings and even producing a drama".

Source:

http://www.communityledtotalsanitation.org/resource/kalyani-clts-urban-context, accessed on August 8th, 2012

#### **Customizing Solutions and Creating Standards**

For interventions to succeed, organizations must consider the unique features of different communities that may hinder progress, and customize interventions accordingly. Experts believe that in addition to customization, creating scale is crucial.

Sanitation arrangements and requirements in slum settlements in India tend to differ significantly from each other, as described below, and therefore warrant a customized solution.

- Physical Differentials: World Bank and Government of India statistics suggest that existing sanitation services vary across slums. For instance, some settlements have no toilets at all while others do but these are inconvenient to use due to inappropriate design or poor construction. There might be an existing sewer but often slum dwellers cannot afford to connect facilities to it. In other slums, facilities may be in place but not maintained well.
- Sociocultural Differentials: A recent study on India's sanitation status by the Asian Development Bank revealed that certain population groups have greater resistance to adopting sanitation facilities than others. Cultural and religion—based attitudes toward the concept of defecation within the house explain why Hindu households have the lowest percentage of household toilets (41%) as compared to Muslims (60%), Christians (70%) and Sikhs (74%). It is evident then that the time taken and the methods undertaken to communicate with, convince and mobilize the community would depend on the sociocultural make-up of the community.

On the other hand, scale can be achieved, to a certain extent, by standardizing aspects of the sanitation chain such as construction benchmarks and awareness material. Currently, unlike countries such as the United States or United Kingdom, the government does not have any minimum standards for constructing sanitation facilities. Standards for quality of material to be used, minimum space to be allocated per toilet, convenient design and layout, specific facilities for women, children and disabled should be established and conformed to in all projects. Such standards will ensure good quality for the user, increase efficiency for the construction agency and check

Special measures are needed to support service improvements in the poorest sections of community.

This does not mean subsidies only but proper plans and also technology options which suit the *local context* of these communities.

Source: Water and Sanitation Program, Technology Options for Urban Sanitation in India, 2008 corruption at the local level. Another component that has a high potential to be standardized across the sanitation sector, but is often duplicated is Information, Education and Communication (IEC) material. It is essential to develop a cohesive IEC framework by collating and reviewing already existing comprehensive IEC material that has been developed by various experts in government, development agencies and international non profits. Adapting existing material will avoid duplication of efforts, save time and ultimately contribute to scale.

Existing infrastructure, habits, and sector knowledge are all an important part of the solution. Leveraging these to plan sanitation strategies will successfully enhance the impact of sanitation outcomes.

#### **High Impact Non Profit Interventions**

Based on five months of research and expert interviews, Dasra has identified seven key interventions that non profits are currently undertaking to address the recommended cornerstones and deliver impact in the urban sanitation sector. The adjoining figure provides a landscape of these interventions based on their scalability and impact on providing urban communities' with access to toilets and sanitation.

Dasra's analysis reveals that the three most high-impact and scalable non profit interventions currently undertaken involve mobilizing key stakeholders across the urban sanitation landscape. These interventions are enabling behavior change for hygiene education, influencing government and training stakeholders.

# **High Impact Interventions for Increasing Access** to Sanitation for Urban Poor **INTERVENTIONS** most **scalable** most impactful intervention intervention behavior change for hygiene education training stakeholders WHITH HIME influencing government creating knowledge and WHITHIN. gathering data IIIII. mobilizing and organizing communities adapting appropriate hardware WWWW. providing flexible finance

#### 1. Enabling Behavior Change for Hygiene Education

Dasra understands that hygiene education needs to be an integral part of any sanitation-focused intervention. Only then will optimum health outcomes – a prime reason for improving sanitation – be realized.

Hygiene education primarily refers to behavior change communication (BCC) activities through the use of Information, Education, Communication (IEC) materials. The aim is to raise people's awareness of why and how to improve their hygiene behavior in order to improve their health. This includes behavior change in handwashing practices, avoiding contamination of drinking water, and on menstrual hygiene management.

Media being used by non profits to change people's hygiene behavior include:

- Printed materials: Brochures, posters, calendars, wall paintings, murals
- Mass Media: Films, television, radio
- Merchandise: Printed hats, pens, pencils
- Events: Street plays, discussions, musical events
- Communication Technology: Text messaging

Activities can be broad - based and less interactive such as wall paintings in toilets to target toilet users and wall paintings on buildings to target the general public or it can be focused to a certain audience such as handwashing campaigns at schools with school children and teachers, menstrual hygiene management with adolescent girls or mothers in anganwadi centers.

**Nidan** based in Patna, Bihar, leverages its existing relationships with workers' groups within slum communities in Patna to extend its services to urban sanitation – a felt need within those communities. With enlightened group members acting as 'sanitation champions', Nidan mobilizes households around sanitation, with continuous behavior change messaging playing a key role. Nidan uses group meetings, slum education centres and schools to spread sanitation and hygiene awareness.

WASH Institute As part of its broader agenda to create and disseminate knowledge, promote networking and build capacity within the sector, the WASH Institute has developed a set of cartoon films on hygiene promotion and menstrual hygiene management targeted at school children, using the characters of "Mr and Mrs Wash". This is part of its larger portfolio of IEC films and materials.

#### 2. Training Stakeholders

One of the cornerstones for obtaining scale and impact in the sector is to foster champions across the spectrum, so as to drive forward the sanitation agenda. Training is an effective vehicle for igniting the spark or growing the flame in potential champions. Non profits are well placed to offer relevant, focused training courses that build capacity, given their wealth of experience in implementing sanitation. Not only do they know what works they also understand where the gaps in skills and expertize are.

Of the non profits studied as part of our research, we note that many are providing external training courses on various technical and managerial aspects of sanitation

delivery. For some, it forms a core part of their program delivery to the point that they are generating a steady stream of income from it; for others it is an additional activity.

The programs currently on offer cover training of government and non-government stakeholders on technical issues such as sanitation hardware options, managerial issues such as operation and maintenance of community toilet facilities), related issues such as environmental sustainability related to sanitation provision.

Ecosan Services Foundation (ESF) based in Pune partners with the Ministry of Urban Development to provide a three-year training to support representatives of Urban Local Bodies in developing City Sanitation Plans (CSP) as outlined by the government. The course involves classroom training, e-learning modules, site visits and mentorship by ecological sanitation experts.

WASH Institute delivers both informal and formal courses to government officials, international and national non profit staff, students and others on sustainable planning, implementation and operational practices in urban and rural areas. WASH also has a formal affiliation with the Madurai Kamaraj University to provide certification course in Environmental Sanitation Science.

#### 3. Influencing Government

Government is best placed to provide effective urban sanitation services at scale, through the provision of conducive policy and legal frameworks, finance, skilled human resources and other resources. Non profits play a critical role in understanding government policies and ensuring that relevant provisions translate into meaningful activities on the ground and, where required, advocating with government to make changes to policy or legislation using evidence from their own experience of implementation.

Influencing happens at all levels of government – national, state and local. Since sanitation is a state subject and urban local bodies are mandated to implement sanitation in cities, most advocacy efforts have been witnessed at these levels. Government can be influenced in many different ways. Non profits in this sector often voice their opinions by:

- Participating in government committees and commissions to influence policy
- Undertaking research and studies on behalf of the government because of proximity to communities

#### **Key Resource Centers**

The Ministry of Drinking Water and Sanitation, which looks after rural services, has empanelled a set of non profits as "Key Resource Centres" to provide specialized training and capacity building programs to sector professionals to meet the challenges of leadership as well as managerial, administrative, technical, attitudinal and legal aspects in the rural water and sanitation sector. This is a major step forward, but is yet to be replicated by the relevant Ministry for the urban water and sanitation sector.

- Providing consulting services to prepare City Sanitation Plans and monitor implementation and impact
- Extending technical knowledge and expertize to support government programs
- Partnering with other non profits to discuss important aspects of state policy, underline the importance of collaborative work, create greater media awareness, and ensure that state interventions are being monitored for impact
- Lobbying with the government to provide allocated public funds for constructing sanitation facilities
- Demonstrating impact and advocating with the government to scale successful intervention

Consortium for DEWATS Dissemination Society (CDD) in Maharashtra and its network partners have been successful in lobbying for the inclusion of decentralized wastewater treatment systems (DEWATS) in government policy for treatment of wastewater in urban and peri-urban areas. The Kolhapur Municipal Corporation (KMC) has now decided to make recycling of treated wastewater for small and medium townships compulsory for reuse.

**Nidan** works with several levels of the polity and bureaucracy in Bihar to advocate for policy changes. For instance, it has successfully advocated with the Government of Bihar to include sanitation as a component of the state wide water policy. The organization also leverages government funding and actively collaborates with the government on project implementation.

#### 4. Creating Knowledge and Gathering Data

One factor contributing to poor urban sanitation coverage is the lack of data and knowledge that would help government and other stakeholders make informed decisions and targeted actions. This includes baseline data on the ground situation, and service performance data. For example, we understand that many cities in India still lack comprehensive maps that detail the size and location of all slum settlements in city. The speed at which slums are growing and proliferating adds to this burden.

Non profits are partnering with government and other stakeholders to gather data and create knowledge on sanitation status at various levels e.g., a slum, a city, a state. Under this, non profit activities range from feasibility studies for implementing a particular type of technology in a particular city, to developing a tool to support the collection, generation and analysis of data, and even to development of a national-level online knowledge sharing platform.

**CEPT University** is developing a Performance Assessment System to improve the quality of information on water and sanitation performance at the urban local body level. The system is a comprehensive set of tools arranged around key performance indicators for measuring, monitoring and improving water and sanitation, some focusing on service delivery to the poor and marginalized. The goal of this initiative is to improve the financial viability, reliability, quality and equity of water and sanitation by enabling data based decision making by state and local governments.

Shelter Associates partners with local authorities to study slum settlements and facilitate the development of basic infrastructure such as sanitation, water and housing. Research in the form of poverty mapping is the basis for all Shelter projects. Studies are undertaken to determine physical slum conditions, available resources and socioeconomic factors of slum dwellers. This information is then integrated into a Geographical Information System (GIS) that can be analyzed spatially to plan customized solutions for various communities.

#### 5. Mobilizing and Organizing Communities

The basic premise of any successful sanitation program is that people must want to use toilets. That desire or 'demand' is the foundation upon which are built many subsequent activities to enable sustainable access to toilets. Yet that demand is not always there in a community, and for a number of reasons. Old habits of open defecation can die hard – particularly among older generations – even when a lack of privacy or even safety is an issue. On limited incomes, spending on toilets may be given less priority vis-à-vis spending on mobile phones or other consumer goods. And what may work to motivate or "generate" demand in one community may not work in another community. Blanket approaches to demand generation cannot be undertaken, and understanding the motivators influencing demand and willingness to pay in a particular community is critical.

Non profits play a pivotal role in facilitating demand generation and willingness to pay for sanitation in a target community, preparing the path for community ownership over toilet facilities. This is typically the first phase of their engagement with communities. As government itself recognizes, engagement with communities on the softer issues is not something it has the time or skill sets to undertake.

From discussions with sector stakeholders, Dasra understands that there is a larger latent demand for toilets in urban slum communities than in rural communities in India. This is not hard to visualize given the extremely tough and difficult conditions of open defecation in many slums. People's dissatisfaction with existing conditions is generally higher. Yet our research also brought to light that, even though demand creation might be easier in urban slums, it still takes significant time, resources and effort to get communities to a point where demand is generated and translates into willingness to pay for facilities and services.

If demand generation is phase one, in phase two of engagement, non profits support communities in planning out the type of toilet facility required, the financing and the operation and maintenance responsibilities. They may also help facilitate relationship with the government.

During phase three of the engagement, non profits typically hand-hold the community through toilet construction. After construction, non profits may also hand-hold to strengthen community capacity to operate and maintain the facility, and to improve its chances of sustainability and profitability, where relevant.

Finally, non profits have also been directly involved in delivering sanitation services to residents of urban India. Sulabh operates more than 7,500 pay-and-use public toilet

Sulabh International Social Service Organisation (Sulabh):

In the 1960s,
Dr Bindeshwar Pathak,
the social entrepreneur and
man behind Sulabh
- a pioneer in urban
sanitation provision in India
– modified and developed a
twin-pit pour-flush twin pit
toilet model.

This is an "on-site" excreta disposal solution that does not have to be connected to a sewerage network and does not involve manual scavenging to clean.
This has become known as "Sulabh Sauchalaya".

The organization has gone on to develop, modify and pilot other technologies including community toilet linked biogas plant, waste water and effluent treatment plants.

complexes in public locations such as market places and other crowded areas in Indian cities and towns.

Non profits typically engage in sanitation provision through:

- Community Based Organizations (CBOs): To engage effectively and efficiently in communities and to work towards ownership of community toilet facilities, non profits typically choose to create or strengthen CBOs. Dasra's research shows that many non profits favor working with women Self Help Groups (SHGs) in order to generate demand since it is accepted that women consistently value sanitation more than men, which makes it an easier sell. For construction and operation and maintenance arrangements of community facilities, non profits work with existing CBOs while others choose to support the creation of new CBOs specifically for the purpose of running the toilet facilities. This fits with the need to respect inclusive sanitation as a key cornerstone of reaching scale and impact.
- Opinion leaders and elected representatives: Indian experience shows the need to have the buy-in of community opinion leaders and elected representatives when constructing community toilet facilities in slums. Investments in slums can take on a political nature, making it critical for non profits to ensure that opinion leaders and elected representatives become supporters rather than opponents of better sanitation.

Mahila Housing SEWA Trust (MHT)'s 'Parivartan' (meaning "change") program is the organization's largest sanitation endeavor, generating demand for sanitation facilities in slums through SHGs and CBOs. MHT simultaneously encourages supply of sanitation services through close partnerships with urban local bodies. Once these are formalized, MHT provides a bundle of six services to slum households: an individual toilet, sewer connection, water connection, paved roads, street lights and solid waste management. Parivartan is currently active in Gujarat, Bihar, Rajasthan, Madhya Pradesh and Delhi.

Society for Promotion of Area Resource Centres (SPARC) undertakes community-led sanitation programs by forming or working with existing CBOs in low income areas. SPARC cultivates bottom-up change initiated by the community and builds their capacity to mobilize and advocate for long-term solutions to housing and sanitation. This enables communities to remain in charge and address their basic needs from a 'rights' perspective.

#### 6. Adapting Appropriate Hardware

As discussed in Chapter 1, providing sanitation facilities to India's urban slums is an extremely complex business. The siting of slums (on hillsides, on river banks, in flood prone areas, where no piped water is available) and the density of slum buildings – to name just a couple of issues – often makes it physically difficult to connect slums to existing city sewerage networks. Added to that is the cost of extending large-scale infrastructure to India's urban slum populations given their size and spread. Alternative hardware solutions that are appropriate for slum situations (technologically and financially) and meet the need for safe excreta collection, transport and disposal/treatment are very much required. They are part of the customized solutions Dasra believes is a cornerstone to enabling access to sanitation. Like demand generation and hygiene education, there is no single hardware solution that can be applied across slums in a city. It is critical to have a range of hardware solutions that the community is convinced of, as that will itself promote willingness to pay and ownership of operation and maintenance arrangements.

Certain Indian non profits have been instrumental in taking forward research, development and adaptation of technological options and management models in urban sanitation, as described below.

Consortium for DEWATS Dissemination Society (CDD) has pioneered the adaptation of Decentralised Waste Water Treatment Systems (DEWATS) in India, which can be used as part of a slum/community based sanitation approach. In DEWATS, the wastewater from toilet use is treated "on-site" using a system that requires low electrical, electronic or mechanical input and generates water of quality that can be re-used for gardening purposes. This can be combined with a biogas plant to generate biogas (from excreta) for the local community.

#### 7. Providing Flexible Finance

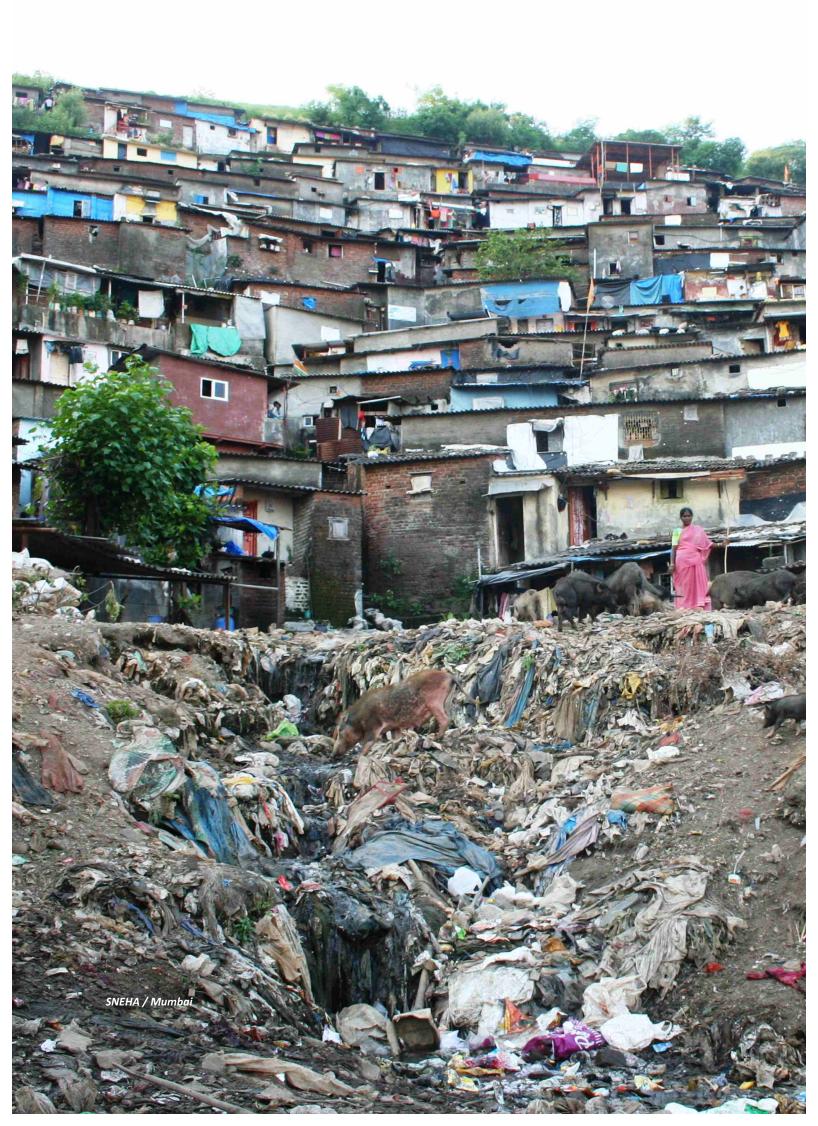
A study published in 2012 stated that "Households in developing countries invest more than donors or governments in water and sanitation (WATSAN) services, but these investments are often 'sub-optimal', because of limited access to finance. WATSAN entrepreneurs, although they provide critical services particularly for the poor, often find that their financing needs fall in the 'missing middle' (estimated roughly at between US\$ 2000 and US\$ 100,000). Limited access to financing is a key obstacle for small-scale finance recipients to deliver sustainable services".

A small but fast growing intervention that Indian non profits now deliver is access to small-scale finance for sanitation and water purposes, often to those who would be otherwise excluded from access. These include, for example, loans for building a household or community toilet or for upgrading that facility or for getting a water connection. These loans are typically not income generating in traditional microfinance terms, however they are income enhancing.

The sector literature notes that the market for such loans is growing in India, particularly in rural areas. Some well-established MFIs, such as BASIX, have diversified their products to include sanitation loans while other non profits working in the sector have either started to offer loans directly or through spin-off sector-specific microfinance institutions (GUARDIAN, the brain-child of Gramalaya in Tamil Nadu). As of late 2011, an estimated 150,000 toilet loans covering the sanitation needs of more than 750,000 people in India have been provided, from institutions such as the Bharat Integrated Social Welfare Agency (BISWA), GUARDIAN, Bihar Women Development Corporation (BWDC), Evangelical Social Action Forum, and Grameen Koota.

BISWA works across 22 states to implement its Urban Water and Sanitation Program in areas where the community has already been mobilized into women's groups for the microfinance initiatives of the organization. BISWA conducts behavior change and awareness campaigns on sanitation in these groups and offers loans to construct sanitation infrastructure. The loans provided could be pure financial support or finance coupled with technical guidance primarily consisting of sourcing of raw materials, linking with skilled masons and timely supervision.

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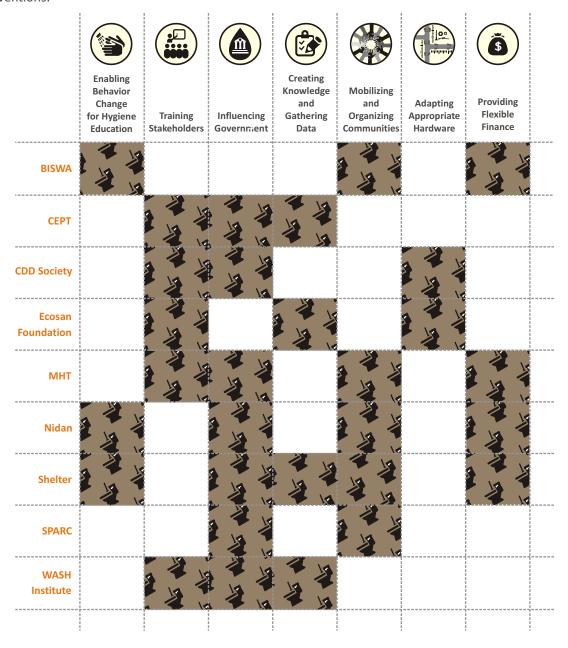




# Mapping Non Profits with High Impact Interventions for Improving Sanitation

Dasra identified over 160 organizations across the country and evaluated their approaches to incorporate best practices which best leverage the five cornerstones of providing access to sanitation to marginalized urban communities. Dasra has shortlisted nine high potential non profits with innovative, scalable models which improve urban sanitation outcomes by working within the community and in partnership with government and international agencies.

Several of the following organizations also work with rural communities and some of them have broader missions such as access to low cost housing or environmental sustainability. However, the urban sanitation programs of these organizations are poised for scale and for the purpose of this report, Dasra has chosen to focus only on those programs. Below is a comparison of the most scalable and high impact non profits mapped to high impact interventions:



## Bharat Integrated Social Welfare Association (BISWA)

Chairman: Dr. Khirod Chandra Malick | Website: www.biswa.org | Founded: 1994 | Location: Sambalpur Coverage: 22 states Total Budget: `51.3 Crore (\$ 10.3M) | Sanitation Budget: `4.6 Crore (\$ 925,000)

BISWA is one of the largest social welfare organizations in India, working with marginalized populations across 22 states. BISWA started out as a non profit extending microcredit to underprivileged women, enabling them to grow their income through small enterprises. Over time the organization's strategy evolved to providing finance linked with development initiatives. This subsequently became an important pillar at BISWA and today, BISWA finances a range of developmental causes from education and health to safe water and sanitation.

Urban Water and Sanitation Program: This program leverages BISWA's existing finance-linked women's groups in urban slums in creating awareness about safe drinking water and sanitation. BISWA then provides micro-loans to households to construct individual or community toilets as well as to connect to municipal water pipelines.

The finance-linked asset building program allows poor households to invest in sanitation infrastructure and repay over time in affordable installments. Moreover, BISWA creates a spillover effect on the income of the community by generating employment through local enterprises making sanitation linked products such as phenyl and soap; as well as increased demand for individuals skilled in occupations such as brick laying.

#### **High Impact Interventions**









BISWA conducts awareness campaigns on sanitation in communities that have already been mobilized for microfinance activities and offers loans to construct sanitation infrastructure. The loan amounts typically range from `10,000-30,000, repaid at a 24% reducing interest rate. The loans provided could be pure financial support or finance coupled with technical guidance which consists of sourcing of raw materials, linking with masons and timely supervision of construction.

Lastly, BISWA's sanitation finance loans are a self-sustaining initiative - with profits from interest covering all costs of the program and the community assuming complete ownership post-construction.

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#### Scalability

BISWA has expanded from a small organization in Odisha in 1994 to one of the largest non profits in India, demonstrating the organization's ability to scale. BISWA aims to capitalize on this experience to build 3 million toilets and install 2 million water taps in Odisha by 2015, with 40% of these being in urban areas. An important factor lending to such large scale is the underlying linkage with microfinance. BISWA leverages groups that already access finance for various needs to channel its sanitation loans. Furthermore, BISWA already has significant infrastructure in place with 400 offices and 4,300 employees. All this groundwork allows the organization to draw on existing resources, ensuring that the Water and Sanitation Program is much more scalable.

#### **Quality Indicators**

#### Outreach

BISWA's Urban Water and Sanitation Program has provided loans for sanitation infrastructure in 32 Urban Local Bodies in Odisha as well as Raipur in Chattisgarh. In 2011-12, 55,980 individuals accessed sanitation loans from BISWA.

#### **Endorsements**

BISWA's staff of 4,300 is led by founder - Dr. Khirod Chandra Malick, who previously worked with the State Bank of India. The organization has a full time Water and Sanitation team of 14 staff. This team provides mobilization, training and monitoring support, while the Credit department manages all loan transaction activities in the field.

#### Leadership

BISWA's work has been recognized through several awards such as the India NGO Award, Karamveer Award, National Achievement Award for Business Excellence and the Global Microfinance Impact Award. The organization's microfinance services have received positive ratings from multiple rating agencies, including M-CRIL, CRISIL, Mix Market and MIX Global.

#### **Partnerships**

BISWA is a key implementing partner for the Total Sanitation Campaign and State Water & Sanitation Mission in Odisha. Additionally, BISWA has previously worked with reputed institutional funders such as USAID and the Michael and Susan Dell Foundation to improve sanitation in Bhubaneshwar.

## Center for Environmental Planning and Technology (CEPT)

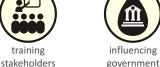
Chairpersons: Prof. Meera Mehta & Prof. Dinesh Mehta | Website: www.pas.org.in | Founded: 1962 | Location: Ahmedabad Coverage: 400+ ULBs in Gujarat & Maharashtra | Total Budget: `25 Crore (\$ 4.6M) | Sanitation Budget: `5 Crore (\$ 900,000)

CEPT is an academic institution created in 1962 with undergraduate and postgraduate degrees in architecture, urban planning and policy, sustainability and other related fields. Unlike other academic institutions in India, the activities of students and professors extend beyond the classroom to include practical application, community service, research and consulting.

Performance Assessment System (PAS): In 2008, CEPT received a major grant from the Gates Foundation to research and develop a comprehensive set of tools for improving the quality of information on water and sanitation performance at the urban local level. The resulting system, called the Performance Assessment System (PAS), is unlike similar benchmarks because it includes indicators that capture the delivery of services to the poor and marginalized. The goal of the PAS project is to improve the financial viability, reliability, quality and equity of water and sanitation by enabling data based decision making by state and local governments. In addition to developing the system, CEPT works with local partners to implement the system, disseminates lessons learned and best practices and provides consulting services to Urban Local Bodies (ULBs) on how to create and implement water and sanitation improvement plans.

#### **High Impact Interventions**







During the first year of the PAS project, CEPT developed the PAS using existing frameworks, stakeholder feedback and pilot study findings. Upon completion of the PAS, CEPT shifted their focus to rolling it out with their local implementation partners. This process involves reaching out to state governments, advocating for the top-down adoption of the PAS and then training local government how to use it.

CEPT's impact with the PAS is primarily indirect, yet it has the potential to create a viable market through systems change and contribute to long term sustainability because of its role in enhancing government's capacity to serve.

#### Scalability

Partnering with local NGOs allows CEPT to scale the PAS rapidly by leveraging local capacity and creating local ownership. For example, in Gujarat and Maharashtra, local partners have led implementation efforts and successfully trained 400+ ULBs to use the PAS. Achieving such scale without these partners would have taken CEPT much longer. An important step to scaling to other states, such as Rajasthan where CEPT already has traction, will be identifying and recruiting other high-quality local NGOs to lead implementation efforts. CEPT also collects the data generated by the PAS and analyses it to identify macro level trends. CEPT then uses this information to author research, highlight best practices and refine the PAS. These activities raise the profile of the PAS and make it an even more effective tool for ULBs. Furthermore, these activities increase CEPT's reputation as an expert on water and sanitation issues, potentially attracting follow-up work.

#### Quality Indicators

#### Outreach

So far, 400+ ULBs in Gujarat and Maharashtra have adopted the PAS, covering approximately 70 million people. Of these ULBs, 30 partner with CEPT on service improvement plans for water supply and sanitation. Many students that work on the PAS project also go on to pursue careers in the water and sanitation sector.

#### **Endorsements**

The PAS project is led by Prof. Meera Mehta and Prof. Dinesh Mehta. Both recognized around the world as experts in the fields of urban planning, water and sanitation. They are supported at CEPT by a full time staff of 21. CEPT also retain the services of six consultants for various activities such as household surveys and website development.

#### Leadership

Prof. Meera Mehta is a member of the Steering Committee of the Global Water Partnership, an inter-governmental organization with headquarters in Stockholm, Sweden, and a member of the UN Working Group on Equity for post 2015 Water, Sanitation and Hygiene for All (WASH) targets.

#### **Partnerships**

In Gujarat and Maharashtra, their implementation partners include the Urban Management Center (UMC) and the All India Institute for Local Self Governance (AIILSG) respectively. At both, 10-15 employees work full time on PAS. Approximately 45% of the overall PAS budget goes toward funding these organizations

#### Consortium for DEWATS Dissemination (CDD) Society

Chairperson: Joe D'Souza | Website: www.cddindia.org | Founded: 2002 | Location: Bangalore Coverage: 9 states | Total Budget: `4 Crore (\$ 200,000) | Sanitation Budget: `4 Crore (\$ 200,000)

#### Overview

CDD Society aspires to improve the living conditions of the poor across South Asia. Through the provision of **Decentralized Basic Needs Services (DBNS)**, it aims to improves water, sanitation and energy access for one million marginalized people by 2015. DBNS includes community specific systems for Decentralized Wastewater Treatment (DEWATS™), Decentralized Solid Waste Management (DESWAM), Decentralized Water Supply Systems (DEWASS) and Decentralized Renewable Energy Systems (DERES).

For sanitation specific needs, CDD Society offers DEWATS<sup>™</sup> which is an on-site ecologically-friendly solution, typically with no grid connection, requiring low electrical or mechanical input. It is based on a simple and cost-effective technology for treatment of organic wastewater. CDD Society provides technical support on design and implementation of DEWATS<sup>™</sup> and adopts a participatory community based approach in the planning, operation and maintenance of toilet blocks integrated with DEWATS<sup>™</sup> and waste management solutions.

CDD Society also provides capacity building training to a range of service providers from project managers to design engineers and social coordinators on implementing DBNS across South Asia.

#### **High Impact Interventions**



stakeholders





adapting appropriate hardware

To date, CDD Society has primarily worked to develop appropriate decentralized hardware solutions which are cost effective, environmentally sound and address the community's basic needs. After several years of refining its technology, the organization is now focusing on training DBNS stakeholders in order to create a critical mass of service providers; this will ensure wider adoption of the technology. The society is also focusing on advocacy initiatives to create a conducive policy environment for wider adoption of DBNS solutions.

#### Scalability

CDD Society has adopted a scalable model which includes a consortium of 20 member partners working across 9 states of India and across Nepal, Afghanistan and Bhutan. The CDD Society functions as the central framework organization providing technical, R&D, financial, capacity building, marketing and documentation support to its partners from project conception to completion. To facilitate scale the organization has a four-fold approach which includes: (1) direct project implementation; (2) capacity building and training of DBNS service providers (3) support on citywide sanitation planning; and (4) advocacy initiatives. The combination of the above, has enabled CDD Society to successfully promote the adoption of DBNS, upgrade the technologies involved and facilitate a wide outreach and uptake of the solutions.

#### Quality Indicators

#### Outreach

Thus far CDD Society and its partners have supported more than 500 sanitation related projects across India and South Asian countries. Approximately 100 of these projects are specifically in low income communities benefitting close to 200 households in each community.

#### Endorsements

Bremen Overseas Research and Development Association (BORDA), the German developer of DEWATSTM technology was instrumental in founding CDD Society in India. Today it enjoys ongoing technical and funding support from BORDA and significant grant support from German institutions such as Federal Ministry for Economic Cooperation and Development as well as the European Commission

#### Leadership

CDD Society is headed by Joe D'Souza followed by its executive directors, Rajesh Pai and Susmita Sinha. Mr. Pai, a civil engineer by training, heads the design and infrastructure division. Ms. Sinha has a background in environmental management and heads the capacity building and knowledge management division. CDD Society has a team of 40 staff members, the majority of whom have over 10 years of experience in development related work.

#### **Partnerships**

CDD Society has a partnership with Rajiv Gandhi Rural Housing Corporate Limited, Government of Karnataka and BORDA, under which it has established the Centre for Advanced Sanitation Solutions (CASS) in Bangalore.

#### **Ecosan Services Foundation**

Chairperson: Dayanand Panse, Prashant Mahagaokar | Website: www.ecosanservices.org | Founded: 2006 Location: Pune | Coverage: Pan India | Total Budget: `1 Crore (\$ 200,000) | Sanitation Budget: `85 Lakhs (\$ 170,000)

#### Overview

Ecosan Services Foundation (ESF) was established in 2006, with the support of GIZ, Germany's international development agency. The organization creates awareness and demonstrates the impact of ecological sanitation in order to solve the issue of sanitation in a more efficient and sustainable manner.

Consulting: ESF conducts feasibility studies for various stakeholders, including the government, to determine the sanitation status of certain regions or institutions such as schools. Based on its findings, ESF then recommends customized ecological sanitation solutions. Its services extend to creating action plans based on the recommendations, providing technical assistance and monitoring construction and maintenance.

Capacity Building: ESF partners with the Ministry of Urban Development (MoUD) to conduct a three year training course to support representatives of Urban Local Bodies to develop City Sanitation Plans (CSP) as outlined by the government. The course involves classroom training, elearning modules, site visits and mentorship by ecological sanitation experts.

#### **High Impact Interventions**



stakeholders





appropriate hardware

ESF believes that ecological sanitation is a relatively new concept in India and it is crucial to create awareness and educate other stakeholders about its benefits. To achieve this, ESF conducts research, suggests customized technical solutions, supervises implementation and evaluates the impact of the same. These consultation projects are then used to demonstrate that ecological sanitation is hygienic, economically feasible and environmentally appropriate.

#### Scalability

ESF's programs, both consulting and capacity building, are scalable because they adopt the 'advisor' and 'train the trainer' approach respectively. ESF's experience in conducting feasibility studies has enabled them to document their processes in a 16 module curriculum that is used to build capacity of other stakeholders such as government officials. ESF's capacity building program is being piloted in 5 cities that is mainly delivered online apart from three weeks of residential training. A panel of sanitation experts mentors the participants through this process to ultimately formulate a CSP which when implemented will improve the sanitation scenario of the entire city. ESF builds capacity of city – level government officials, leverages sector experts to conduct the program and delivers most of the program online – all these factors contribute towards the program's scalability.

#### Quality Indicators

#### Outreach

ESF has trained more than 1,000 individuals including 125 rural government officials. ESF is currently training the first cohort of 15 urban government officials in 5 cities – Vasai Virar, Rajmunshi, Hispote, Vikharabad and Tirupathi. ESF is currently also piloting a school sanitation program under the Indo – German Bilateral Mission, providing sanitation facilities to 10 low income schools in Delhi and Raipur.

#### **Endorsements**

ESF was founded with the support of GIZ, Germany's international donor agency. GIZ continues to remain one of the biggest supporters of ESF, till date. Other funders include European Union and Swiss Agency for Development and Co operation.

#### Leadership

SF is headed by two directors, Dayanad Panse and Prashant Mahagaokar. They are assisted by a team of 11 employees who work in four different verticals — Consulting, Capacity Building, Knowledge management and Administration. The team is mainly experienced in environmental sciences and civil engineering.

#### **Partnerships**

ESF has successfully undertaken various consulting projects for government departments such as the Ministry of Urban. Based on the success of those projects, ESF now has the opportunity to train government officials, thereby strengthening its linkages with the government.

## Mahila Housing SEWA Trust

Chairperson: Bijal Bhrahmbhatt | Website: www.sewahousing.org | Founded: 1994 | Location: Ahmedabad

Coverage: 5 states | Total Budget: `5.6 Crore (\$ 1.1M) | Sanitation Budget: `1.8 Crore (\$ 353,000)

#### Overview

Mahila SEWA Housing Trust (MHT), a sister organization of Self Employed Women's Association (SEWA), was registered as an autonomous organization in 1994. It was founded to address basic infrastructure and housing needs of SEWA's membership base, and poor women in general, many of whom work out of the home. MHT believes that if women's living conditions are improved through the provision of basic services such as toilets, sanitation, water and electricity, then their economic productivity will increase. While MHT's work includes low-income housing, land tenure, energy efficiency, and a construction training school for women, most of its work is concentrated on sanitation and allied services.

Parivartan: This program is MHT's largest sanitation endeavor, generating demand for sanitation facilities in slums through self help groups (SHGs) and community based organizations (CBOs). This program has a partnership with the Ahmedabad Municipal Corporation, SEWA Bank and the community. MHT strives to provide a bundle of six services to slum households: an individual toilet, sewer connection, water connection, paved roads, street lights and solid waste management. Two-thirds of the bundle is funded by municipal corporations and one third by the community, pegged with the progress of the work. MHT has taken this approach across Gujarat, Bihar, Madhya Pradesh, Delhi and Rajasthan.

#### **High Impact Interventions**



mobilizing communities



government

training stakeholders



providing flexible finance

To improve basic infrastructure and housing in urban slums, MHT works closely with the Government and slum communities. MHT influences Government to build and pay for basic infrastructure to the edge of the slums. MHT then mobilizes the communities as SHGs and CBOs to invest in infrastructure within the slums, through a cost-sharing mechanism with the Government. To ensure successful service delivery, MHT trains slum residents on how to monitor the progress of infrastructure development, and how to approach the Government if progress and quality is not up to par. Additionally, MHT provides or links community members with flexible financing to make upfront payments for infrastructure.

#### Scalability

The scalability of the Parivartan program hinges on three critical factors: (1) leveraging the community networks for outreach; (2) providing a bundle of services; and (3) providing a partnership model for financing capital costs. The vast SEWA membership base enables MHT to enter communities that are already organized into SHGs and CBOs, facilitating faster buy-in for MHT's services. The bundle of six services lowers infrastructure costs per household. Finally, the partnership model for financing capital costs ensures community ownership and leverages municipal corporation funding, making the program replicable across urban slums at minimal cost.

#### **Quality Indicators**

#### Outreach

MHT currently reaches out to 50,646 households across 12 cities, impacting over 235,000 individuals. A detailed study on Parivartan's impact in Babalablabinagar, Gujarat, shows increased literacy amongst school going children (72% vs. 66%), increase in monthly income (INR 318 vs. INR 288), decrease in illnesses (19% vs. 7%), and increase in self-esteem and sense of empowerment for women.

#### **Endorsements**

MHT has received funding from prominent institutional donors such as the Rockefeller Foundation, Bill and Melinda Gates Foundation, Michael & Susan Dell Foundation, Sir Ratan Tata Trust, and USAID. Parivartan of Ahmedabad Municipal Corporation was awarded the "Dubai best practices award in 2006."

#### Leadership

Bijal Bhrahmbhatt, Director, is a Civil Engineer with over 15 years of experience in water, sanitation and housing. She is supported by five department heads who lead the Technology, Community Mobilization, Finance/ Accounts, IT and Administrative teams. Overall, the organization has a staff strength of 70. MHT has an active Board with representatives from grassroots and technical institutions.

#### **Partnerships**

Parivartan relies on strong linkages with Municipal Corporations, which MHT has built and maintained successfully. A central part of this partnership is a cost-sharing agreement and a 10 year non-eviction notice for the slum residents. Additionally, MHT partners with local non profits and CBOs to mobilize and organize slum communities.

#### Nidan

Chairperson: Arbind Singh | Website: www.nidan.in | Founded: 1995 | Location: Patna

Coverage: 5 states | Total Budget: `5.5 Crore (\$ 1.1M) | Sanitation Budget: `1 Crore (\$ 200,000)

#### Overview

Nidan was founded with the objective of organizing informal workers to provide them greater bargaining rights in the market economy. The organization started out with collectivizing the unorganized poor through self help groups (SHGs), issue based groups, cooperatives and even small businesses. Soon Nidan began offering a range of services to these groups – financial services such as loans and insurance, legal services, skill development, education and health.

**Urban Sanitation Program:** Sanitation developed as a key component of Nidan's services, especially in urban slums where the need was strongly felt. Nidan has developed a community-led intervention that leverages its existing workers' groups to create awareness about adequate sanitation. Households are mobilized to build toilets, with construction costs being shared between the households and Nidan.

The Urban Sanitation program is also deeply rooted with the rest of Nidan's community initiatives – the organization uses existing platforms delivering its other services as a channel for sanitation awareness.

At the macro level, Nidan actively engages with the government to advocate for policy changes and to influence government spending on urban sanitation

#### **High Impact Interventions**



enabling behavior change



mobilizing communities



providing flexible finance

With enlightened group members acting as 'sanitation champions', Nidan mobilizes all households in a community around the issue of sanitation. Continuous behavior change messages play a key role in this process – Nidan uses group meetings, slum education centres and schools to spread sanitation and hygiene awareness. Households are encouraged to build individual toilet blocks and in case they are unable to invest any money themselves, Nidan links them with finance through its SHGs, cooperatives or sister microfinance institution.

Nidan's Urban Sanitation Program is driven by the community and the organization has a strong understanding of slum dwellers' needs. Nidan uses this knowledge to then influence the government to design policies appropriate to prevailing urban conditions.

#### Scalability

Currently, Nidan's Sanitation Program reaches 36 out of the 145 slums in Patna. Nidan plans to scale to the remaining 109 slums in Patna in the coming years; eventually expanding to urban areas across the states in which it is operational. Nidan already has a presence in these areas through other community programs and will leverage existing infrastructure to implement safe sanitation. This coupled with the organization's deep reach amongst various finance as well as non-finance linked workers' groups will significantly contribute to scale. Furthermore, there is great external opportunity. For instance, the city of Dhanbad has brought on Nidan as a technical expert to make the city 100% open defecation free by 2017. This demonstrates clear demand for Nidan's services, paving the way for expansion beyond Patna.

#### Quality Indicators

#### Outreach

Presently, Nidan reaches out to 36 slums in Patna through its Urban Sanitation Program. 600 individual household toilets have been constructed in these slums and all slums have access to safe sources of water for daily use. Nidan also recently expanded its program to the city of Dhanbad in Jharkhand.

rights has been recognized through awards such as the World Bank Development Marketplace Award 2011, Microinsurance Award 2007. Founder, Arbind Singh, has also received many prestigious awards such as the Skoll Foundation Social Entrepreneur of the Year 2012, Ashoka Fellowship, Eisenhower Fellowship and Schwab Foundation Social Entrepreneur of the year.

Nidan's commitment towards safeguarding informal worker

#### Leadership

Nidan has a full time team of around 500 staff members led by Executive Director, Arbind Singh. Arbind founded Nidan in 1995 and since then has been actively guiding the organization. He is supported by a strong team of senior managers from development and management backgrounds who head the program and support departments.

#### Partnerships

**Endorsements** 

Nidan works with several levels of the polity and bureaucracy in Bihar to advocate for policy changes, implement projects and leverage funding. Additionally, Nidan has been funded by reputed donors such as the America India Foundation, Department for International Development (UK) and Ford Foundation.

#### **Shelter Associates**

Chairperson: Pratima Joshi | Website: www.shelter-associates.org | Founded: 1993 | Location: Patna

Coverage: 6 cities in Maharashtra | Total Budget: `50 Lakhs (\$ 100,000) | Sanitation Budget: `50 Lakhs (\$ 100,000)

#### Overview

Shelter Associates was established with the belief that the urban poor are a vital part of a city and should be incorporated into formal urban planning systems to prevent them from being further marginalized. To achieve this, Shelter Associates partners with slum communities and local authorities to study slum settlements and to facilitate the development of housing and basic infrastructure including sanitation and water.

Data and Information Systems: Research in the form of poverty mapping is the foundation for all of Shelter's projects. Studies are undertaken to determine physical conditions, available resources and the socio-economic position of the slum dwellers. This information is then integrated into a Geographical Information System (GIS) where it is organized spatially and analyzed to generate specific solutions for a variety of slum communities.

Community Engagement: Based on the slum information, Shelter devises strategies to facilitate construction of community or individual toilets in a settlement. The organization then engages closely with the slum communities to facilitate construction and to provide education and training in relation to operation and maintenance as well as health and hygiene.

#### **High Impact Interventions**







enabling mo behavior change comi

mobilizing communities

influencing government

creating





creating providing knowledge flexible finance

Shelter Associates trains community youth to undertake mapping studies of their own settlements. This enables increased participation levels of the communities during the construction phase. It takes between 6 months to 2 years for Shelter to mobilize and organize the community, facilitate construction and train them to take ownership. Shelter provides sanitation options to communities and leverages government funds or provides gap funding to construct these facilities. Shelter uses its studies to impact Government policy and also makes it available to other stakeholders to plan projects.

#### Scalability

In the late 1990s, Shelter Associates pioneered the use of technology such as GIS to conduct city wide studies in Pune, Sangli – Miraj, and Solapur. Leveraging community youth to conduct these studies has helped Shelter reduce costs and increase scale. The information systems, in turn, expedite the process of community engagement. Having conducted this research in many cities, Shelter has the potential to train other stakeholders making this program even more scalable. In the next three years, Shelter plans to use the GIS to gather information of a tier II city with a population over 500,000, and facilitate access to sanitation to slum communities across that city.

#### Quality Indicators

#### Outreach

Shelter Associates works in 29 slums of Sangli – Miraj impacting more than 20,000 slum dwellers across 4,000 households. This project is widely acknowledged as one of the best sanitation success stories in India. Shelter has mapped and mobilized communities across 6 cities. Currently, it is working closely with communities in Pune to do the same.

#### Endorsements

Shelter's work has been featured in international media such as Times World, BBC and Le Monde. Shelter's methodology is included within the UN Habitat's best practice database and its work has been exhibited in the Smithsonian Cooper-Hewitt, National Design Museum in New York. Pratima Joshi, an Ashoka fellow, has been profiled as an 'Amazing Indian' by Times Now, and is a 'Google Earth Hero' for her innovative use of Google Earth to alleviate poverty.

#### Leadership

Shelter Associates is headed by Pratima Joshi, an architect by profession. She is assisted by an Associate Director and a team of 15 people including architects, GIS analysts, social workers, community workers and support staff.

#### Partnerships

Given its mission of inclusive urban planning, Shelter focuses on central and state level advocacy within ministries such as the Ministry of Urban Development. Shelter has been appointed as a consultant for the Integrated Housing and Slum Development Program through which it has impacted policy — under the government's new slum rehabilitation policy, holistic city-wide slum planning is now mandatory.

## Society for Promotion of Area Resource Centres (SPARC)

Chairperson: Sheela Patel | Website: www.sparcindia.org | Founded: 1984 | Location: Mumbai Coverage: Pan India | Total Budget: `10 Crore (\$2 Mn) | Sanitation Budget: `1 Crore (\$200,000)

#### Overview

The Society for the Promotion of Area Resource Centres (SPARC) focuses on the rights of the urban poor to access secure tenure, housing, infrastructure and basic living standards. SPARC works in partnership with two communitybased organizations, the National Slum Dwellers Federation (NSDF) and Mahila Milan (MM), collectively known as the Alliance. The ultimate aim of the Alliance is to facilitate institutional arrangements to organize communities and build their capacities in collective decision making. This is to both design solutions and negotiate with resource providers e.g. government to produce inclusive cities that work for all.

The Alliance began by addressing the challenges faced by women due to lack of sanitation in slums and gradually developed a community-led sanitation program that involves the local municipalities and communities working together to find workable solutions. The municipalities bear capital costs of construction, and design, operation and maintenance is done by the locals. This includes forming community based organizations (CBOs) in low income areas or working with existing CBOs to train them in conducting surveys, identifying locations for toilets, working with architects/ engineers for appropriate designs, and savings for maintenance of the toilets.

#### **High Impact Interventions**







The Alliance cultivates bottom-up change initiated by the community and builds their capacity to mobilize and advocate for long-term solutions to housing and sanitation. This enables communities to remain in charge and address their basic needs from a rights perspective. Based on its grassroots experience and demonstration of good governance practices, SPARC supports the communities in their negotiations with relevant authorities and advocates for pro-poor policy changes.

#### Scalability

The SPARC-NSDF-MM coalition model with a collective membership of close to 2 million people has achieved significant scale since its formation in 1986. By virtue of being decentralized, people-led movements, NSDF and MM have been successful in spreading to 71 cities across the country and sharing their learnings with over 30 countries across the world. In 1998, SPARC formed a non profit construction company called Samudhaya Nirman Sahayak (SSNS) to assist slum communities in construction activities. This allows the Alliance to actively bid for government contracts for housing and sanitation development whilst remaining closely involved with implementation. Lastly, the Alliance addresses a wide spectrum of basic needs - from housing and rehabilitation to water and sanitation. This holistic service offering enables it to gain stronger buy-in for community led sanitation projects, which would independently require stronger efforts for acceptance from the community.

#### Outreach

Thus far 1 million community members have benefitted through urban sanitation and water projects in different cities of India. In the last year under the Mumbai Sewerage Disposal Project (MSDP) and the Mumbai Metropolitan Region Abhiyan (MMR), the Alliance constructed 358 toilet blocks which are being used by over 3.7 lakh users (74,290 families).

#### **Endorsements**

Ms. Sheela Patel and Mr. Jockin Arputham (founder of NSDF) are both 2011 Padma Shri award winners; Ms. Patel is also a technical advisor to the Jawaharlal Nehru National Urban Renewal Mission. SPARC has received funding from large institutes such as the International Institute of Environment and Development (UK) and Rockefeller Foundation.

#### Leadership

Ms. Sheela Patel, SPARC's founder-director since 1984 is supported by a board of 6 directors, 3 advisors and 1 associate director. SPARC's 30 member field and office based team consists of technical consultants, researchers and administrators. Additionally, an army of 500 community leaders from NSDF and Mahila Milan are supported by SPARC in negotiating with higher authorities.

#### **Partnerships**

SPARC in partnership with the Urban and Development Resource Centre (UDRC), Orissa , has constructed community toilet blacks in the city of Bhubaneswar, Puri and Cuttack. SPARC also consults with a firm called Libra Associates on their sanitation projects in Mumbai.

## Water Sanitation and Hygiene Institute (WASHi)

Chairperson: Prakash Kumar | Website: www.washinstitute.org | Founded: 2008 | Location: Kodaikanal Coverage: Pan India, South Asia | Total Budget: `1.4 Crore (\$ 287,000) | Sanitation Budget: `1.1 Crore (\$ 230,000)

#### Overview

The Water, Sanitation and Hygiene Institute (WASHi) is one of the few organizations in the water and sanitation sector that focuses on bridging the knowledge gap in delivering community based sustainable solutions. Through training initiatives for key stakeholders ranging from masons to grassroot level workers and to government employees, the organization aims to bridge the lack of skilled human resources in the sector. WASHi's main program areas are as under:

**Delivering Knowledge Building Courses:** WASHi offers informal (3-5 days) and diploma courses (of 1 year) to government employees, non profits, professionals and students on sustainable planning, implementation and operational practices in Water Sanitation and Hygiene.

**Promotion of Low Cost Solutions:** Through extensive field research and collaboration with international and national institutes, WASHi promotes optimal and cost-effective solutions for this sector.

Advocacy Initiatives for policy level changes: Based on WASHi's action research and Plan India studies undertaken in collaboration with other institutes, national and regional seminars are held to advocate for changes at a policy level.

#### **High Impact Interventions**







government

cr

creating knowledge

WASHi's primary intervention is the training programs delivered in the form of informal 3-5 day workshops. The institute targets mainly government employees, grass-root level organizations and funding agencies with the objective of building their capacities and promoting sustainable solutions amongst key stakeholders in the sector. To supplement its training initiatives, WASHi develops and demonstrates technical models and disseminates information, communication and educational material in the form of films, calendars, books and pamphlets. The organization also undertakes action research through field studies and experiments and focuses on advocacy initiatives such as national and regional level seminars.

#### Scalability

WASHi has seen a high demand for its informal courses from the government and international and national non profits. The courses taught at decentralized facilities across India will focus on high quality inputs; WASHi is expanding its resource panel of experts to constantly evolve and deliver these courses. The institute also conducts 1 year residential academic courses in water and sanitation from its Kodaikanal facility; the diploma course, in affiliation with reputed universities, offers sustainable employment opportunities in this sector. WASHi intends to further publicize the course and expects its uptake to increase in the coming years.

#### **Quality Indicators**

#### Outreach

Since its inception WASHi has provided training to over 2000 beneficiaries with a majority belonging to national and international NGOs and government participants.

In the last year WASHi trained 602 beneficiaries at its informal workshops and had 12 people enroll for the diploma course on Environmental Sanitation Science.

#### Endorsements

WASHi has been listed as a Key Resource Centre by the Department of Drinking Water Supply, Government of India. The institute has received funding from reputed agencies such as Plan India, Ministry of Drinking Water and Sanitation and the Stockholm Environment Institute.

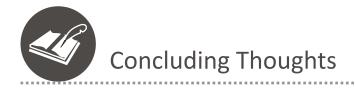
#### Leadership

WASHi has a team of 9 full time personnel and 50 resource panel members. The executive committee consisting of 5 members including the CEO Mr. Kumar, supports the WASHi team on strategic decision making. Ms. Ignatius is the principal programme coordinator and has over 10 years work experience with WaterAid. The team also has training coordinators, an accountant and a secretary.

#### Partnerships

WASHi has established linkages with national and international bodies and UN organizations to promote capacity building and dissemination of information. These include reputed institutions such as UNICEF, DFID, WaterAid, Water For People and Plan India amongst many others.





Investing in sanitation promises multi sectorial returns – it not only saves lives but ensures healthier children, boosts education, augments environmental security and enhances economic welfare. There is an urgent need to acknowledge sanitation as a key focus area of development and commit philanthropic funding to successful non profits that champion this cause effectively.

Non profits are best placed to deliver impact, at scale because of their proximity to the poorest communities and their ability to liaise with key stakeholders such as government and development agencies. Dasra recommends that philanthropists fund non profits that are training stakeholders, enabling behavior change for hygiene education and influencing government as these are the three most scalable and high – impact interventions undertaken to provide access to sanitation in urban India.

However, challenging entrenched social habits and building the capacities of communities and government requires significant time and effort that should be supported by long term strategic funding. Philanthropic support directed efficiently to this sector will go a long way in breaking cultural barriers, creating sustainable change and giving it the priority that it rightly deserves.



Investing in sanitation generates massive returns on health, the environment and the economy. In fact, the overwhelming evidence is that there is no single development policy intervention that brings greater public health returns than investment in basic sanitation and hygiene practices.

Source:

WaterAid at the UN International Year of Sanitation Launch, 2008



#### Dasra's Research Process

#### Assessment of Urban Sanitation in India

Dasra undertook preliminary mapping based on secondary research, discussions with development experts, NPOs, government, beneficiaries of NPO programs

Mapped NPO interventions

From a list of over 160 organizations, Dasra shortlisted 15 organizations delivering relevant programs in urban India



# Site Visits to Non Profit Organisations (NPOs)

Met with the executive director to understand history, evolution of programs and scaling plans

Interviewed and exchanged views with senior staff about programs and impact

Conducted field visits to interact with the communities and witness on ground impact



#### **Analysis of NPO Programs**

Analyzed strengths and weaknesses of sanitation programs

Identified gaps and opportunities for funding

Ascertained strength of management and organization structure

From 15 organizations Dasra shortlisted 9 with the ability to deliver high quality impact at scale.



#### **Summary and Conclusions**

Evaluated organizations based on key criteria

Synthesized analysis and derived conclusions

Developed recommendations for investment

Dasra has over a decade of experience of researching the social sector in India. As an organization we pride ourselves on being analytical and research-focused with many of our team coming from analytical roles in the financial and corporate sector. We transfer those well-honed skills to the social sector.

We are used to working on reports in sectors where access to reliable primary research can be limited and hard to verify. We have developed systems and processes to ensure we can paint an honest picture.

There is currently very limited quality research specific to urban sanitation in India with extremely limited data on available infrastructure and sanitation levels in urban low income settlements. This created a huge challenge for our research team who undertook time-intensive secondary research to ensure our data was accurate and gave us a true reflection of the issues and current state of the problems.

Dasra undertook 5 months of detailed interviews with experts from development agencies and sector bodies, academics, non profits, government officials and communities in order to understand the challenges and issues in providing improved sanitation to urban slum communities and how these are addressed by non profits.

In the course of our research, we studied national and global best practices to benchmark them against the current state of sanitation interventions in urban slums.

#### **Selection Criteria**

In this study Dasra has focused on non profits that fulfill the following key criteria:

- A. Direct Impact on Access to Urban Sanitation—A number of non profit organizations highlighted in the Non Profits Analysis documents have programs that are not exclusively aimed towards the improvement of urban sanitation. As much as possible, Dasra aims to invest in programs that exclusively cater to this specific need. Given the multi-sectoral nature of work with low income urban communities (housing, access to drinking water) and the lack of sanitation standards in the country, measuring impact as opposed to reach or outcomes, can be significantly challenging. Wherever available Dasra includes impact measurement, in other cases we rely on the organizations reach. Since access to improved sanitation is governed by influential stakeholders such as the government and the Urban Local Bodies, the involvement of other stakeholders is crucial to ensuring meaningful impact. Furthermore, it is important to gauge the cost effectiveness of the organization's interventions.
- **B.** Ability to reach high volumes— Slum communities are extremely dense populations that are in a constant state of flux due to migration. To create large scale impact, non profits need to reach out to large numbers within these communities.
- C. Partnerships with the Public System Independent solutions that can be rolled out to the public system by building linkages with the system itself. Now, with a number of different schemes and services aimed at improving services for urban poor, the entire public system is a key stakeholder and cannot be excluded from the process of enhancing access to sanitation.

**D. Scalability**– Dasra defines scalability as:

- The evident availability of required resources: for example, the need for skilled engineers to provide a product/service in urban slums may be a constricting factor to scale; on the other hand training community members to provide a service is an example of a scalable intervention.
- **Gestation period**: the time required to realize impact from the start of the program
- Cost per beneficiary

#### Dasra's use of statistics

#### How reliable are the official statistics on urban sanitation?

Reliable data on urban sanitation in India is hard to find, one of the biggest challenges facing the State and the non profits who want to understand what works. Key issues include:

- Official data (including 'Census of India') only collects data on 'notified' or 'recognized' slums that account only for half of the urban slum settlements.
- 2. National surveys do not typically include performance on all cornerstones and best practices. In addition, there is a paucity of information of the effectiveness of government schemes targeted towards urban infrastructure on sanitation for the poor.
- 3. Many slums are excluded from data collection, which makes it difficult to present extremely accurate numbers of the urban poor. In addition, due to frequent migration, it is nearly impossible for these numbers to remain up to date.
- **4.** There are massive discrepancies between official data and non profit and academic sources, due to the sensitive nature of subjects like land tenure and violence against women. Where possible we have tried to use official data so as to provide a basis for common understanding and cooperation between the government and non profits.

49



#### **Aanganwadi**

A government run, community-based day care center for children 0-6 years old through which the Integrated Child Development Scheme is delivered.

#### BCC

Behaviour Change Communication. BCC is a process of intervening with individuals, communities and societies to develop communication strategies that promote positive behaviors.

#### **BSUP**

Basic Services for Urban Poor. BSUP is a sub – mission of JnNURM addressed exclusively to urban poor living in slum/squatter settlements in cities and towns. This component focusses on improvement of living conditions of the urban poor by way of providing housing along with infrastructure, with a view to gradually removing slums/squatter settlements from cities and also providing security of tenure to the urban poor.

#### Community Based Organizations (CBOs)

Civil society non-profits that operate within a singlelocal community. Like other nonprofits they are often run on a voluntary basis and are self funded. Within community organizations there are many variations in terms of size and organizational structure. Some are formally incorporated, with a written constitution and a board of directors while others are much smaller and are more informal.

#### **JnNURM**

Jawaharlal Nehru National Urban Renewal Mission is a city-modernization scheme launched by the Government of India under the Ministry of Urban Development. JnNURM aims at creating 'economically productive, efficient, equitable and responsive cities' by a strategy of upgrading the social and economic infrastructure in cities, provision of Basic Services to Urban Poor (BSUP) and wide-ranging urban sector reforms to strengthen municipal governance.

#### Kiloliter

A metric unit of volume or capacity equal to 1000 liters

#### ULB

Urban Local Body. Indian ULBs are constitutionally provided administrative units that provide basic infrastructure and services in cities and towns. Large urban areas are governed by nagarnigams, often simply called corporations. Smaller urban areas are governed by nagarpalikas, which are often referred to simply as municipalities. The area under a corporation/municipality is further divided up into wards.



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