

# Community Slum Sanitation in India

## A Practitioner's Guide

March 2016

## Acknowledgments

The Community Slum Sanitation Practitioners' Guide has evolved over the years, and has had the benefit of many contributors at various stages.

Most importantly, the pioneers – the leaders and implementers of these innovative initiatives in different cities – who have been extremely patient with repeated queries, and magnanimous with making time for discussions, and for making documents, photos, and other resources available for this Guide.

These include but are not restricted to:

Ahmedabad: Bijal Bhatt (MHT, Ahmedabad); and officials from Ahmedabad Municipal Corporation

Bhopal: Anup Sahai (Aarambh, Bhopal) and officials from Bhopal Municipal Corporation;

Kalyani/Kolkata: Shantanu Jha (Former Chairman, and officials from Kalyani Municipal Council); Kamal Kar (CLTS Foundation), Shibani Goswami (KUSP, Kolkata);

Mumbai: Rajeev Jalota (AMC, MCGM), Jokin Arputhum, Sheela Patel, Celine D'Cruz and others (NSDF/SPARC, Mumbai), Anand Jagtap (OSD, SSP, MCGM) and members and officials from Pratha and MCGM;

Pune; Pratima Joshi (Shelter Associates, Pune), and officials from Pune Municipal Corporation; and

Trichy: D. Damodaran and Geetha Jegan (Gramalaya, Trichy), and officials from Trichy City Corporation.

In addition, numerous other officers, community leaders and members of organizations, local bodies, and slum communities have contributed to this Guide.

This work started with the support of the Cities Alliance under the guidance of Junaid Ahmad (World Bank, formerly WSP). Soma Ghosh Moulik (World Bank, formerly WSP), Deepak Sanan (Additional Chief Secretary, Government of Himachal Pradesh, formerly WSP) and Cathy Revels (formerly WSP and World Bank), in discussion with the Ministry of Urban Development, Government of India and selected NGO partners (especially Sheela Patel and Celine D'Cruz of SPARC), had provided the initial conceptualization and direction to a note on how to ensure sanitation services for slum dwellers. Pronita Chakraborti (formerly WSP), Sara Almqvist (formerly WSP), and Vivek Raman (World Bank, formerly WSP) assisted with taking the research efforts forward to develop this further. This work was supported by the Ministry of Urban Development Officers, including M. Rajamani, A.K. Mehta and M. Ramachandran. The Task Team Leader for supervising the development of the Guide has been Joseph Ravi Kumar. Christopher Juan Costain, WSP, provided support and guidance in development of this document. The research and drafting team comprised Meera Bapat, Barkha Goel, Pravin More, Rajiv Raman, and Somnath Sen.

We would like to thank all the reviewers who took the time to go through draft/s of the Guide, and suggest changes and improvements. Reviewers included Dirk Walther, GIZ; Susmita Sinha, Centre for DEWATS Dissemination; Pete Kolsky, University of North Carolina, Chapel Hill; Raghu Kesavan, World Bank; Shyamal Sarkar, formerly with the World Bank, apart from officers and leaders from the implementing organizations of the initiatives in the cities.

The responsibility of all errors and omissions rests with the drafting team.

The Water and Sanitation Program is a multi-donor partnership, part of the World Bank Group's Water Global Practice, supporting poor people in obtaining affordable, safe, and sustainable access to water and sanitation services. WSP's donors include Australia, Austria, Denmark, Finland, France, the Bill & Melinda Gates Foundation, Luxembourg, Netherlands, Norway, Sweden, Switzerland, United Kingdom, United States, and the World Bank.

The findings, interpretations, and conclusions expressed herein are entirely those of the author and should not be attributed to the World Bank or its affiliated organizations, or to members of the Board of Executive Directors of the World Bank or the governments they represent.

© 2015 International Bank for Reconstruction and Development/The World Bank Group

© 2015 Water and Sanitation Program (WSP)

[www.wsp.org](http://www.wsp.org) | [www.worldbank.org/water](http://www.worldbank.org/water)

---

# Table of contents

<b>Abbreviations and Acronyms</b>	3
<b>Color Indicators</b>	4
<b>Summary</b>	5
<b>Section 1: Background and Objectives</b>	13
Objectives of the Guide	13
Selection of Slum Sanitation Initiatives for the Guide	13
Target Group of the Guide	14
<b>Section 2: The Urban Sanitation Challenge and the Response</b>	15
Government Initiatives in Improving Slums	15
Jawaharlal Nehru National Urban Renewal Mission (2005-14)	16
Rajiv Awas Yojana	16
National Urban Sanitation Policy 2008	17
State Sanitation Strategies	17
City Sanitation Plans	17
National Sanitation Rating and Service Level Benchmarking	18
Swachh Bharat Mission (Urban) 2014-19	19
Community Toilet Complexes as a Response to the Slum Sanitation Deficit	19
<b>Section 3: Drivers of Successful Slum Sanitation Initiatives</b>	21
1. Enabling Frameworks for Slum Sanitation (Tenure and Provision of Services)	21
2. Political Will, Executive Engagement and Local Government Institutional Capacities	25
3. Addressing Indignity and Promoting Public Health	28
4. Promote Participation of Poor and Institutionalize Special Roles for Women	30
5. Choice of Location, Technology Choice and Design Features	33
6. Frameworks for Partnerships and Contracts	38
7. Empower Communities to Take the Responsibility of Managing Community Toilets	40
8. Management Models and Financial Viability as Key Elements for Successful Long-term Operation	43
9. Performance Monitoring and Evaluation	48
10. Integration of Slums with Sustainable Services in City-wide Services	52
<b>Section 4: Generic Steps for Slum Sanitation Initiatives</b>	54
A) Preparatory and Planning Stage	55
B) Implementation Stage	58
C) Monitoring and Evaluation Stage	62
D) List of Recommended Reference Material for Practitioners	65
<b>Selected References</b>	67

### List of Figures

Figure E1: Slum Sanitation – Generic Steps	11
Figure 1: A Sample MoU	49
Figure 2: Slum Sanitation – Generic Steps	54
Figure 3: Details of the Preparatory and Planning Stage	58
Figure 4: Details of the Implementation Stage	62
Figure 5: Details of the M&E Stage	65

### List of Tables

Table 1: Study Locations for Approaches to Slum Sanitation	13
Table 2: Average capital cost per seat: a comparison between Mumbai SSP and Tamil Nadu ISP	37

### List of Boxes

Box 1: Slums ....Defined	16
Box 2: Madhya Pradesh Sanitation Vision 2025	17
Box 3: NUSP Emphasizes CSPs to Serve the Urban Poor and Slum Settlements	18
Box 4: Public Toilets and Community Toilets	20
Box 5: Relevant Definitions	22
Box 6: Parivartan Slum Networking Program in Ahmedabad	23
Box 7: Bengaluru's Experience with Delinking Tenure and Service Provision	25
Box 8: KMC Attempts a New Way of Addressing Sanitation	27
Box 9: Mobilizing Children around Health and Hygiene Practices	29
Box 10: The Tiruchirappalli Initiative	31
Box 11: Common Design Deficiencies	34
Box 12: A Comparison of the Mumbai and Tiruchirappalli Approaches	35
Box 13: Recommendations for Construction	36
Box 14: Mumbai SSP "Compact" Contract	39
Box 15: Innovations in Training	42
Box 16: The Tiruchirappalli Model	44
Box 17: Estimated Daily Operating Surplus in Mumbai SSP	46
Box 18: Tiruchirappalli's Approach to M&E	50
Box 19: Torrent Power AEC leads in Slum Electrification	52

---

# Abbreviations and Acronyms

<b>AEC</b>	Ahmedabad Electricity Company Limited	<b>NBA</b>	Nirmal Bharat Abhiyan
<b>AMC</b>	Ahmedabad Municipal Corporation	<b>NGO</b>	nongovernmental organization
<b>BPL</b>	Below Poverty Line	<b>NL</b>	Natural Leader
<b>BPMC</b>	Bombay Provincial Municipal Corporation	<b>NOC</b>	No Objection Certificate
<b>BSUP</b>	Basic Services to the Urban Poor	<b>NSSO</b>	National Sample Survey Organisation
<b>BWSSB</b>	Bangalore Water Supply and Sewerage Board	<b>NSPD</b>	National Slum Development Programme
<b>CBO</b>	community based organization	<b>NUSP</b>	National Urban Sanitation Policy
<b>CBHI</b>	Community Based Health Initiative	<b>ODF</b>	Open Defecation Free
<b>CI</b>	cast iron	<b>O&amp;M</b>	operations and maintenance
<b>CSP</b>	City Sanitation Plan	<b>PMC</b>	Pune Municipal Corporation
<b>CT</b>	Community Toilet	<b>PT</b>	Public Toilet
<b>CTB</b>	Community Toilet Block	<b>RAY</b>	Rajiv Awas Yojana
<b>EIS</b>	Environmental Improvement of Slums	<b>RCC</b>	reinforced cement concrete
<b>GI</b>	galvanized iron	<b>SBM</b>	Swachh Bharat Mission
<b>GoI</b>	Government of India	<b>SEWA</b>	Self-Employed Women's Association
<b>GoM</b>	Government of Maharashtra	<b>SHE</b>	Sanitation Health Education
<b>HV</b>	Health Volunteer	<b>SHG</b>	self-help group
<b>IEC</b>	Information, Education, and Communication	<b>SLB</b>	Service Level Benchmarking
<b>ILCS</b>	Integrated Low Cost Sanitation	<b>SJSRY</b>	Swarna Jayanti Shahari Rozgar Yojana
<b>ISC</b>	Integrated Sanitary Complex	<b>SNP</b>	Slum Networking Project
<b>ISP</b>	Integrated Sanitation Project	<b>SPARC</b>	Society for Promotion of Area Resource Centres
<b>JNNURM</b>	Jawaharlal Nehru National Urban Renewal Mission	<b>SSP</b>	Slum Sanitation Program
<b>KMC</b>	Kalyani Municipal Council (also, Kolkata Municipal Corporation)	<b>SSS</b>	State Sanitation Strategy
<b>KUSP</b>	Kolkata Urban Services for the Poor Project	<b>TCC</b>	Trichy City Corporation
<b>MCGM</b>	Municipal Corporation of Greater Mumbai	<b>TNUDP</b>	Tamil Nadu Urban Development Project
<b>mm</b>	millimeter	<b>UBS</b>	Urban Basic Services
<b>MoU</b>	Memorandum of Understanding	<b>UIDSSMT</b>	Urban Infrastructure Development Scheme for Small and Medium Towns
<b>MHADA</b>	Maharashtra Housing and Area Development Authority	<b>ULB</b>	Urban Local Body
<b>MoUD</b>	Ministry of Urban Development	<b>USAID</b>	United States Agency for International Development
<b>MHUPA</b>	Ministry of Housing and Urban Poverty Alleviation	<b>UT</b>	Union Territory
<b>M&amp;E</b>	monitoring and evaluation	<b>VAMBAY</b>	Valmiki Ambedkar Malin Basti Awas Yojana
		<b>WASH</b>	Water, Sanitation and Hygiene
		<b>WatSan</b>	Water and Sanitation
		<b>WAVE</b>	Women's Action for Village Empowerment

---

# Color Indicators

In this document, three broad stages of preparation and planning through implementation to maintenance management, monitoring and evaluation have been identified in the full cycle of community slum sanitation.

For ease of reading and reference, these boxes are present where appropriate drivers are presented Chapter 3 onwards.

Preparatory and Planning Stage	Implementation Stage	Monitoring and Evaluation Stage
--------------------------------	----------------------	---------------------------------

In order to mark their relative importance, the boxes for these stages may be colored orange to signify their criticality, whereas a yellow ochre color is used when these are important although not critical.

Preparatory and planning stage	Implementation stage	Monitoring and evaluation stage
--------------------------------	----------------------	---------------------------------

---

# Summary

## Background

Following the launch of the National Urban Sanitation Policy (NUSP, 2008), a number of initiatives were taken: states formulated their State Sanitation Strategies, and more than 150 cities drafted or are in the process of drafting the City Sanitation Plans (CSPs, by March 2014). The NUSP recommended development of special strategies for slums and poor settlements as an integral part of the CSPs. But the significant presence of slums in Indian cities (estimated between 9 and 14 million – or 12 to 16 percent of India's 79 million urban households), and the specific difficulties that these settlements face in accessing basic sanitation (and other) services, demanded a greater understanding of the conditions, and exploration of strategies used to address these.

Based on the experience of slum sanitation initiatives implemented in a number of urban centers in India, over the last decades, this Guide draws out the critical drivers that appear to explain some facets of successful community slum sanitation initiatives. Initiatives from the cities of Ahmedabad, Pune, Mumbai, Bhopal, Trichy, and Kalyani are used as the examples to learn from (based on convenience and easy availability of information). A set of generic steps are identified and described thereafter for the preparatory, planning, implementation, and monitoring and evaluation stages of community sanitation initiatives.

## Audience

The Guide is aimed at assisting state urban development departments and agencies, Urban Local Bodies (ULBs), Water Supply and Sewerage Boards, Public Health and Engineering Departments, nongovernmental organizations (NGOs), community based organizations (CBOs) or self-help groups (SHGs), as well as the private sector consultants, contractors and other services providers. The Guide has been drafted such that personnel with diverse educational backgrounds and training can easily understand and, hopefully, apply it with necessary adaptation, in their work.

This Guide does not recommend a single set of solutions either for technology or for approaches, but serves as resource material for options on planning, implementation, and operation and maintenance (O&M) of community sanitation solutions for urban areas. The options, tried and tested in these cities, have to be considered in light of the local conditions, before adapting them as relevant.

## Why Community Sanitation, why not Individual Toilets?

It is well-known that sanitary facilities for each household, that is, individual toilets, when constructed, used and maintained, and cleaned properly, are the ideal solution from a public health point of view.

However, it may be practically impossible for households living in slums to have their own toilets for a variety of reasons including uncertain tenure, lack of space and/or affordability constraints. Hence, this Guide concentrates on the improvement of slum sanitation through community toilets or Community Toilet Blocks (CTBs), focusing on possible immediate practical action. Of course, all cities must strive for a situation whereby individual toilets become possible for each household to own and use. Some of the initiatives reviewed in this note have indeed included individual toilets in slums.

## Why not Wait for Slum Upgradation?

Starting in the 1970s, a number of national and state level programs and schemes sought to address the problems of slums including provision of basic services. These included Basti Improvement Programme (Kolkata); Urban Community Development Programmes (Hyderabad, Visakhapatnam); Environmental Improvement in Slums (EIS); and then in the 1980s, the Urban Basic Services (UBS) and the Integrated Low Cost Sanitation (ILCS) scheme. The National Slum Development Programme (NSDP, 1996) aimed at upgrading urban slums, whereas the Swarna Jayanti Shahari Rozgar Yojana (SJSRY, 1997) sought to provide gainful employment

to the urban unemployed or underemployed. The Government of India's (GoI's) Valmiki Ambedkar Malin Basti Awas Yojana (VAMBAY, 2001) had the primary objective of facilitating construction and upgradation of dwelling units in slums and providing a healthy environment by constructing community toilets under the Nirmal Bharat Abhiyan (NBA, Clean India Campaign).

In 2005, GoI launched India's urban flagship program, the Jawaharlal Nehru National Urban Renewal Mission (JNNURM) for strengthening and reforming urban infrastructure provision and service delivery, especially in 63 select cities, in a Mission mode. This comprised urban infrastructure provision and governance reforms, and the development of basic services to the urban poor. A national program dedicated to making India "slum-free", the Rajiv Awas Yojana (RAY) was launched in 2009, and targets 'slum-free India' by encouraging states/Union Territories (UTs) to tackle the problem of slums in a definitive manner.

In keeping with the vision of the NUSP and GoI's priority to make India clean, litter free and Open Defecation Free, the Swachh Bharat Mission (with separate components for rural and urban) was launched in October 2014. Estimated at a cost of approximately INR 62 lakh crore (INR 62 billion), SBM urban has the following objectives:

- Eliminate open defecation;
- Eradicate manual scavenging;
- 100 percent collection and scientific processing/disposal of municipal solid waste;
- Bring about a behavioral change in people regarding healthy sanitation practices;
- Generate awareness among citizens about sanitation and its linkages with public health;
- Strengthen ULB to design, execute and operate systems; and
- Create an enabling environment for private sector participation in capital and operation expenditure.

With such a clear indication that slums are now being accorded legitimacy, and their development or upgradation being on the anvil, the question arises as to why not wait for the slum-free project to enable

households to go in for individual toilets? Two practical considerations are in order:

- With the launch of the SBM, the construction of individual toilets to cover households without access is likely to be accelerated. However, in many locations, only community toilets will be feasible owing to constraints of space and tenure; and
- In most of the medium and small urban centers, the SBM or other programs may not be possible to implement in the short run.

Therefore, it is with urgency that states and cities must address the acute sanitation deficits in slums, even though these may be transient arrangements and, for many, the only solution for a few if not several years. Sanitation is a daily need, and expedient responses are the only way to ensure healthy liveable cities in the short and long run. The SBM provides the requisite momentum and programmatic framework to achieve this.

### Drivers of Successful Slum Sanitation Initiatives

The review of the cities led to the identification of the following factors or drivers of successful slum sanitation initiatives:

**1. Enabling frameworks for slum sanitation (tenure and provision of services):** Municipal Acts, Slum Acts, Acts enabling services provision such as that of utilities, and the regulations and executive orders thereunder recognize the slum settlements, and define the bounds of feasible options for sanitation services. Improved services may require some changes in these. Working on the enabling environment involves the following:

1. Examining the existing Municipal, State, Slum and Utility Acts and rules for type of services permissible;
2. Examining how, by law, the framework for service provision can be made more inclusive of households and settlements currently excluded;
3. Examining the extent to which tenure can be delinked from service provision – the NUSP recommends this and a few cities have implemented it;
4. Drafting and proposing changes to existing laws and regulations to enable access to individual household level

services ideally, and community services as a second-best option; and

5. Examining existing national and state level programs and schemes that may be utilized for improved sanitation service provision.

**2. Political will, executive engagement and local government institutional capacities:** Given the legal framework, the political and executive leadership of the city, extent to which the leadership of the ULB and other agencies is engaged with questions of slum services provision, and institutional capacities and incentives for the ULB to do so, form the second major driver of successful initiatives. This also depends on the extent of devolution of funds and functionalities for sanitation in general and for slum sanitation in particular, under the 74th Constitutional Amendment (see Annex 1). The considerations to assess the drivers of leadership, engagement and capacity are:

1. What is the structure of the local political leadership? What are the ways to have them lend support to improved sanitation services to slum communities?
2. What is the structure of the local political leadership (in the ULB, development authorities, water and sanitation utility/board)? How can it be mobilized to commit to sanitation services delivery to slums?
3. What is the extent to which functions, funds and functionalities are devolved to the ULB in the city?
4. Does the local body have an organizational unit or division with specialized and dedicated personnel for dealing with sanitation issues?
5. What are the means of building awareness amongst urban communities about the necessity of improved sanitation systems and practices?

**3. Addressing indignity and promoting public health:** Investments in water and sanitation result in huge preventive health benefits, and the importance of these benefits is far more pronounced in case of slums where provision and service levels are poor. Accessing portable water remains a struggle for most slum dwellers but these struggles vary based on different local factors and influences. In contrast though, sanitation in slums poses the dual risk of increased disease incidence, on one hand, and personal safety,

security and indignity, on the other, especially for women and girls. In a departure then from construction of toilets, slum sanitation initiatives have increasingly attempted to mobilize communities around health outcomes and safety and dignity, also a strategy for involving and empowering women through such initiatives. It is vital to think through certain considerations for integrating public health and dignity in sanitation initiatives:

1. What is the baseline condition of disease incidence (especially water borne diseases such as diarrhea, and so on) in the community and what are the community's perceptions regarding these?
2. What are the constraints of space and concerns of safety and dignity especially of women and children in the community?
3. What are the infrastructure and services required to address health and safety concerns, for example, well-lit toilets with adequate water, separate and secure toilet blocks for women, child friendly features, easy availability of soap and cleaning materials?
4. What better communication and measures can be used to promote robust menstrual hygiene management in the community?
5. Are there community level and formal mechanisms for monitoring health outcomes?
6. Is there regular communication and messaging for mobilizing the local community to adopt and use toilets, and sustain changed behavior and practices?

**4. Promote participation of the poor and institutionalize special roles for women:** Many slum sanitation initiatives have been sub-optimal since communities were not involved or even consulted in the design of the process or structure. All successful sanitation initiatives have, therefore, given high priority to instituting participatory processes in a structured manner right from the preparatory and planning stages. The participation of the poor households was central to their taking ownership of the initiatives. The special role of women in decision-making, community mobilization, health promotion and maintenance management finds differing but definitive treatment in all successful projects. Most of the projects stipulated representation of women in local committees, and made spaces for their active participation

in management and supervision. In some projects, women SHGs were also able to establish links with their livelihoods. The considerations for this driver are:

1. Does the initiative involve individual households to benefit or community groups or a mix thereof?
2. What are the ways to structure the participation of community members and especially provide spaces for women to be in key decision making processes?
3. What mechanisms can be used to ensure that community members including women are not excluded because of unsuitable timing, place, and so on, of decision making bodies?
4. In what ways can the formation of women-based groups be promoted?
5. What are the ways of linking livelihoods to construction and O&M of toilets – especially for women's groups?
6. Developing and utilizing innovative training and communication material to empower community members including illiterate and neo-literate groups;
7. The potential for community members being in the driver's seat by structuring financial and technical assistance around this;
8. Identifying risks to participatory processes being rushed or curtailed and providing flexibility to respond to these; and
9. Understanding local community dynamics and removing barriers to success (such as local forces that may oppose change and participation of new members).

**5. Choice of location, technology and design features:**

Starting from the availability of open spaces in slums, structure, access to safe disposal, and design features that attract users, involve a host of legal and practical considerations. The ULB and local communities need to work closely together to identify the options for location and size. Access to water supply, drainage and sewerage/septic tank cleaning services need close attention while evaluating possible locations since these can have long-term cost and management implications. A well-designed community toilet needs to have good quality construction and be well-maintained to attract a steady stream of paying users, and for it to last long. The introduction of services (for example, water supply and power), and separate

facilities for women, men and children in each section, user responsive features, and so on, are necessary to accord priority to:

1. Availability of land and its location to be identified along with the user community;
2. Access to network services including sewerage services, clear access to septage cleaning machinery, electricity, and so on;
3. Design options for sub-structure and super structure and their capital costs;
4. Sufficient separate facilities for men, women, children, differently-abled persons;
5. Space for supervision, meetings, and other related activities so that the toilet complex becomes an extra source of revenue for the community or brings about a sense of togetherness;
6. Provision of fixtures and user responsive features;
7. Financing, O&M management, O&M cost implications of preferred option; and
8. Supervision and quality control to ensure construction quality and good finish.

**6. Frameworks for partnerships and contracts:** Most slum sanitation initiatives fall under the purview of government rules for making budgetary allocation, and following the due process, rules and regulations for planning and authorizing expenditure. Procurement and contracting must be studied early on in the project cycle and remedial action taken, as they can pose considerable challenges in contracting and implementation. Since contractors and service providers are unlikely to have experience of having creating community infrastructure and service projects, the ULB needs to bring in expertise and develop a framework that brings parties together, builds trust, and provides clear risks and rewards for convergent performance. The following aspects need to be considered:

1. Mechanisms to clearly identify users and user groups that form the key community body to take ownership of design, construction and later maintenance management, that is, CBOs, women's SHGs, Water and Sanitation (WatSan) or Water Sanitation and Hygiene (WASH) committees, and so on;

2. Exploring options of design and construction agencies including NGOs, private companies, existing resources within the ULB or state agencies;
3. Assessment of the capacity of NGOs, CBOs, public agencies and private contractors;
4. Carefully developing the Memorandum of Understanding (MoU)/contracting/partnering framework such that roles and responsibilities and risks and rewards for each party are balanced;
5. Reviewing government procurement guidelines and securing special provisions in these to enable a flexible and suitable framework (for example, the 100 percent contract variation in Mumbai Slum Sanitation Program contracts);
6. Training and deploying a team competent in managing and supervising the contractors;
7. Developing trust and providing an environment for all parties to work together – removing perverse incentives;
8. Providing flexibility in design and costs to accommodate different types of implementation situations on ground; and
9. Supervision of implementation and robust methods of assessing quality at the time of commissioning and handover.

**7. Empower communities to take the responsibility of managing community toilets:** Most successful community slum sanitation initiatives are based on the premise that communities are best placed to carry out O&M management of the CTBs. Therefore, in case of CTBs, it is critical that community groups are organized, trained and provided support and incentives so that they can manage the technical, institutional and financial tasks for maintenance. The community group must be registered under a relevant law as a trust or society (as a sanitation or water and sanitation committee) so that it is able to operate bank accounts, receive and expend money, and account for it in a transparent way to its members. Forming such an association also helps in ensuring accountability and preventing misuse /“capture” of the CTB. In some cases, informal committees such as a WatSan committee or a women’s SHG that is not registered but trained in accounting and has leadership skills, may be involved from the beginning, and assisted

in opening bank accounts, and so on, (as an SHG) especially if the registration of a CBO as a trust is likely to be time-consuming and complicated in the short run. The following aspects are important:

1. Developing a strategy for individuals and groups in the community at the forefront of the initiative;
2. Identifying the appropriate composition, roles and responsibilities of the association;
3. Formalizing and/or registering under the relevant acts;
4. Training and capacity building of the CBO members in decision making processes, maintenance of records and accounts, periodic elections, and so on; and
5. Ensuring smooth functioning of the CBO and rapidly addressing any conflicts and disputes especially in the early stages. NGOs need to empower CBOs with the required skill-sets to ensure sustainability aspects;

**8. Management models and financial viability as key elements for successful long-term operation:** While the formal organization and setting up of the CBO is an important milestone, the rules and arrangements for managing CTBs sustainably need also to be carefully designed. These arrangements and rules or “management models” are also closely linked to the structure of costs and revenues of the CTB. This is critical in ensuring long-term sustainability of the CTB in terms of institutional and financial arrangements.

The CTB’s running costs include electricity, water supply, sewerage and septage clearance, cleaning tools and equipment, cleaning materials, salaries of cleaners, caretakers, minor and major repairs, and other contingent costs. Revenues come typically from user charges, as periodic/monthly passes for families, and from pay-per-use users. Additional revenues can come from sale of soap, and so on, at the CTB. The question of pricing is a critical one since, on the one hand, this can or cannot make the CTB sustainable financially and, on the other, affordability needs to be accorded attention since the CTB is intended for use by slum communities (and is not just a business proposition such as public toilets in public places could be).

Water and electricity costs can be prohibitive for CBOs in certain cases where prices and/or number of users are low.

If borne by the city corporation, the maintenance burden is reduced and resources can be put to other uses such as septage clearance, solid waste management, drainage improvement, and other toilet or slum improvement items. Waiving off utility costs (water, electricity, and so on) also needs to be done carefully since this may disincentivize efficient maintenance management leading to dilapidation of toilets.

Capital finance has hitherto been provided by state budgets or private sources, and availability of capital will be crucial in future in financing scaled-up slum sanitation initiatives.

The management models currently available are:

1. Sharing of responsibilities within CBO members;
2. Management by CBO members including supervision of cleaning staff, and so on;
3. Appointment by the CBO of the caretaker for day-to-day management along with overall supervision;
4. Management handed over to SHGs; and
5. Others such as management handed over to city-level women's or WASH groups' federation/s.

The nature of the CTB (that is, location, technology, physical design features discussed above), management model adopted, pricing of monthly pass and per use charges, and amount of subsidy available from the ULB together determine the financial sustainability of the CTB. There are other options that could be considered as well for the management of CTBs that may be more suitable. The following aspects are worth considering:

1. The type and design of the toilet and attendant capital cost options must be evaluated for O&M management and cost implications in the planning stages;
2. The maturity and capacities of the CBOs in undertaking management tasks – training and capacity building required for enabling them to do so;
3. Affordability of different sub-segments in the community, and potential “markets” of floating pay-and-use population;
4. Estimation of regular O&M costs, and contingencies for repairs, to arrive at monthly and per annum costs. The

possibility of ULBs taking care of part of the utility costs may be explored;

5. Assessment of the match between revenues and costs and detailed discussions with community members on the pricing and necessary contributions;
6. Agreement with the ULB/local ward offices about cleaning of septic tanks, major repairs and maintenance needs, and sharing of/contribution to water, electricity bills as necessary;
7. Projection and agreement of the CBO with the community on time-bound increases in membership/user fees; and
8. Regular review and evaluation of the management model and changes.

**9. Performance monitoring and evaluation:** Long-term benefits from improved sanitation can only be sustained if households continue to use their individual toilets or CTBs are properly maintained and managed. In either case, there needs to be a robust mechanism to track use behavior and monitor whether the upkeep arrangements are satisfactory. Monitoring and evaluation (M&E) of the performance of community toilets city-wide needs to be organized, resources provided for, and incorporated in the core service delivery function of the ULB or the responsible agency. The reasons for a formalized monitoring system of CTBs are manifold:

- i. The physical systems of the CTBs may break down requiring minor and major repairs – these have to be addressed immediately as communities cannot use toilets that are partially dysfunctional;
- ii. Disputes regarding management, or amongst users, can jeopardize the use of the CTBs by users, and hence need to be resolved immediately;
- iii. Stoppage of services/utilities, for example, water, power, septage clearance, and so on, can severely affect the functioning of the CTBs, and hence issues related to these will have to be addressed in consultation with the respective service providers; and
- iv. Changes in project rules and policies may be possible to incorporate based on actual experience of use and management in various CTBs.

Instituting an M&E framework involves:

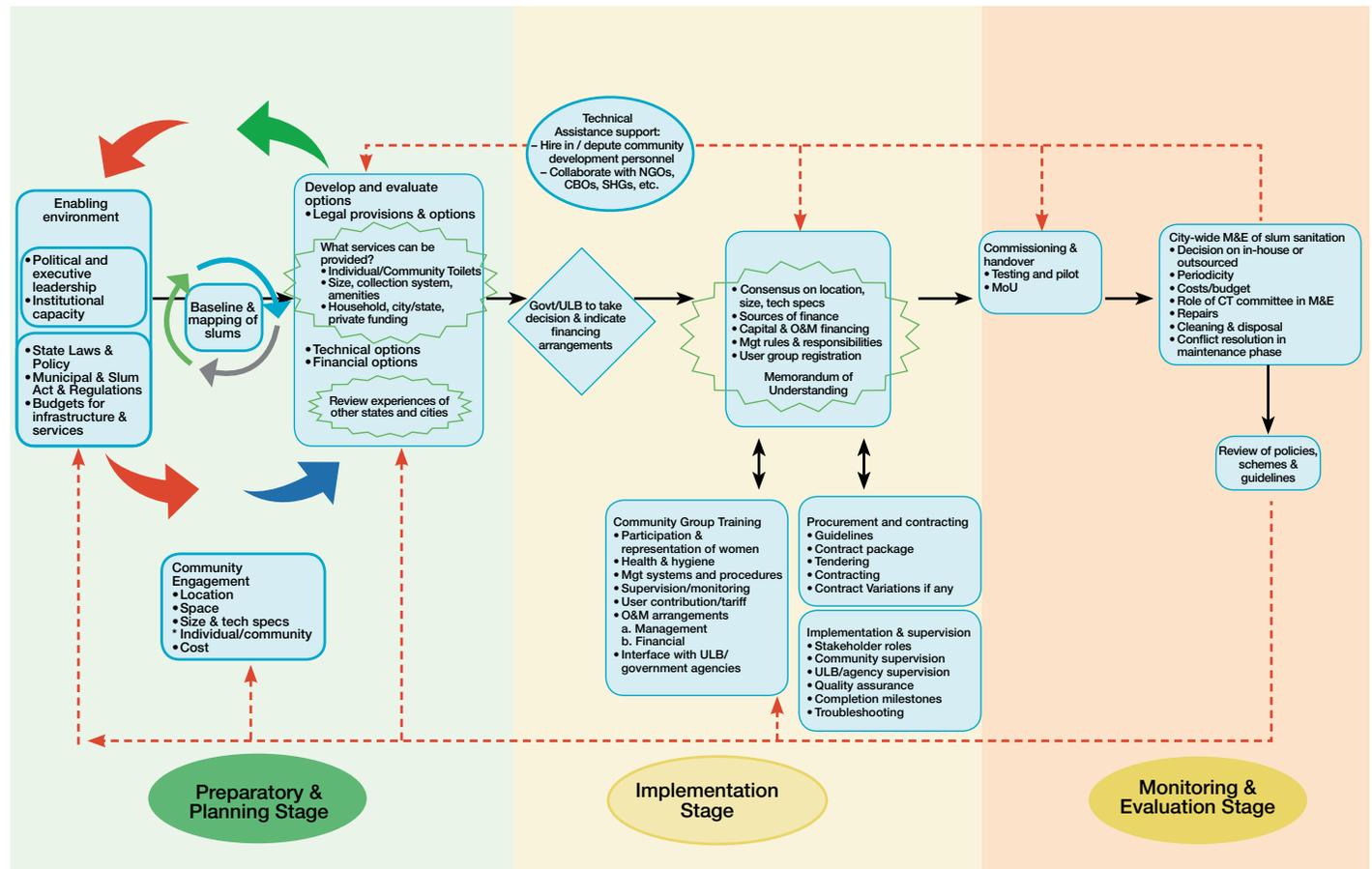
1. Identification of different critical aspects and levels of monitoring during the preparatory and planning phases, including project monitoring at one level (usually done by the project/ULB) and identification of indicators of use, physical condition, CBO management, accounts and finance, health and hygiene behavior changes, inclusion of stakeholders, at another;
2. Incorporation of key monitoring indicators in the MoU between parties so that these indicators become the action items for specific partners;
3. Some monitoring indicators may need standards to be set out to measure actual performance against. For instance, what would be the indicators of “cleanliness”? This could be “no spit”, “no slime”, “no yellow pans”, and so on;
4. Identification of penalties and rewards however soft or hard, for achieving certain performance standards;

5. Periodic studies and assessments on user behavior, satisfaction, management and financial indicators of CBOs, condition assessment of physical features and fixtures of CTBs, and so on; and
6. Systematic and rapid sharing of the results of M&E with all stakeholders including CBOs, communities, ULBs, NGOs, and others members of the public. For example, Yearly Public Toilet Surveys on the condition of assets, usage and maintenance management, revenue situation, users’ satisfaction, and household surveys for behavioral changes could be undertaken.

### Generic Steps for Slum Sanitation Initiatives

Under the NUSP 2008, a series of iterative steps were listed out as an aide to preparing the CSP. One of the detailed tasks in overall city sanitation planning is to prioritize sanitation in slums and informal settlements of the city. Even in cities where a CSP has not been prepared, the task of addressing

FIGURE E1: Slum Sanitation – Generic Steps



a sanitation crisis in slum areas and informal settlements should be taken up on a priority basis. The full cycle of activities for slum sanitation initiatives can be clustered into three broad stages:

- A) Preparatory and planning stage;
- B) Implementation stage; and
- C) M&E stage.

Each of the above stages includes a number of activities and tasks, and many of these are iterative in nature, for example, the baseline and mapping of slums can either be done in one stretch, or broken down into phases over time or areas, so that it does not become a bottleneck to starting some of the other activities early.

It may also be noted that activity-blocks in each of the three stages have inter-connections with those in other stages, and this is desirable for constant learning while doing. While using information in boxes and in a somewhat liner fashion, the intent of the sequencing is to show the connections and how feedback loops can help improve planning, implementation and monitoring.

These activity clusters are presented in Figure ES1. A detailed description of these is presented in Section 4.

### **Recommendation and Review**

The Guide is recommended for use by states and city agencies, as well as by NGOs, private sector organizations, and so on. Feedback on the utility of this Guide will be welcome, as this will help in improving and making it more useful and functional in practice. It is important to understand that this Guide needs to be treated as a framework document, needing revisions based on practice, rather than be an inflexible set of guidelines.

### **Presentation of the Guide**

Section 1 presents a short introduction to the context of urban India and urban sanitation, followed by a brief review of programmatic responses by GoI to improve slum sanitation services. Thereafter, the Guide draws out the critical factors or drivers using examples from successful community slum sanitation initiatives reported from the urban centers selected for this study. A set of generic activity clusters and steps are included at the end the preparatory, planning, implementation, and M&E stages of community sanitation initiatives.

---

# 1. Background and Objectives

---

## Objectives of the Guide

The National Urban Sanitation Policy (NUSP, Ministry of Urban Development (MoUD), Government of India (GoI), 2008) envisages the formulation of State Sanitation Strategies (SSSs) and City Sanitation Plans (CSPs). A CSP is expected to be an integrated sanitation plan for the entire city, and provision of sanitation in slums and unserved areas is an integral component of it. However, given the acute problems suffered by residents in slum settlements, it is necessary to accord special attention to identifying strategies that will lead to affordable, practical and sustainable sanitation solutions for all of them. The objective of this Guide is to focus attention on such strategies and identify crucial steps leading to sustainable sanitation for urban poor settlements. It draws lessons from approaches and experiments in slums and unserved areas implemented in different towns and cities over the last two decades to apply them to the new paradigm of city-wide planning, implementation and management of sanitation facilities, especially for the poor.

## Selection of Slum Sanitation Initiatives for the Guide

The last two decades have witnessed a number of initiatives in services provision in general, as well as sanitation services provision in particular, from different cities in India. These have come from the metropolitan centers, Class I cities and smaller cities. A smaller set of these initiatives was selected for the development of the Guide, for reasons of convenience and easy availability of information.

As presented in Table 1, these locations range from larger cities such as Mumbai to small towns like Kalyani where different approaches to sanitation provision to poor settlements have been attempted. This selective set is by no means exhaustive, nor does it purport to be representative of all types of urban areas, but the diversity of examples from

these cities provide the basis for identifying the elements or factors of city-wide approaches to slum sanitation approaches, that are critical for delivering sustainable sanitation.

**Table 1: Study Locations for Approaches to Slum Sanitation**

No.	City	State
1	Ahmedabad	Gujarat
2	Bhopal	Madhya Pradesh
3	Kalyani	West Bengal
4	Mumbai	Maharashtra
5	Pune	Maharashtra
6	Tiruchirappalli (or Trichy)	Tamil Nadu

It may be noted that each of the above initiatives was founded on its own context-specific objectives and strategies and, hence, the lessons will need to be assessed and adapted to the local circumstances and conditions. Indeed, even the formulation of the NUSP has benefitted from some of these experiences, since these initiatives were pioneers in some aspect or the other, and therefore, used in formulating some of the principles of NUSP.

While the Guide uses “slums”, “informal” settlements and “urban poor” settlements interchangeably, it is well recognized that slums may have households other than poor households. The thrust of the Guide is on identifying approaches to such settlements irrespective of their composition in terms of the poor and other households. It may also be noted that many urban poor households do not live in slums but in dispersed locations, or are homeless – this Guide does not address their particular circumstances.

### Target Group of the Guide

The Guide is aimed at helping decision makers and practitioners from all disciplines and training, including but not restricted to engineering, finance, social and community development, planning, administration, and so forth.

The Guide shall assist state urban development departments and agencies, Urban Local Bodies (ULBs), water supply and sewerage boards, public health and engineering departments, nongovernmental organizations (NGOs), community based organizations (CBOs) or self-help groups (SHGs), as well as the private sector consultants, contractors and other services providers.

### Individual Household Sanitation is Ideal, and Community Sanitation Second-best

While sanitary facilities for each households are the ideal solution, and some initiatives covered in this note have

included the construction of individual toilets in slums, this Guide concentrates on the improvement of slum sanitation through community toilets. It focuses on possible immediate practical action when it is impossible to provide individual latrines for a variety of reasons including uncertain tenure, lack of space and/or affordability constraints – a reality in most slum settlements in India. Of course, all cities must strive for a situation whereby individual toilets become possible for each household, as this is most sustainable, and best in terms of health outcomes.

This Guide does not provide a single set of solutions either for technology or for approaches, but will serve as resource material for options on planning, implementation, and operation and maintenance (O&M) of shared, community sanitation solutions for urban areas. The options presented have to be further considered in light of the local circumstances and prevailing conditions, before being adapted as relevant.

---

## 2. The Urban Sanitation Challenge and the Response

---

The problem of inadequate provision and unsatisfactory O&M of sanitation facilities is acute in the urban centers of India and, given the rapid urban growth rates (Census, 2011), it is more than likely to become aggravated in the years to come. According to Census 2011, 17.4 percent of urban India was estimated to be living in slums. The National Sample Survey Organisation (NSSO) (69th Round, 2013) estimated 8.8 million households, or about 12 percent of urban Indian households, to be living in slums. However, the latest Census (2011) report on housing stock, amenities and assets in slums reveals that 13.74 million out of the 78.9 million urban households live in slums.

Deficiencies in the existing sanitation infrastructure and services are widespread. According to Census 2011, coverage of urban households by sewerage and septic tanks was 33 percent and 38 percent, respectively. About 14.6 percent households were reported to have pit latrines. Further, 6 percent urban households (4.7 million) were reported to be using public toilets, with 12 percent urban households (about 10 million households or about 50 million people) being forced to defecate in the open.

In slums, about 19 percent households had to defecate in the open and 15 percent slum households had to use public (perhaps including community) toilets. Every third household (34 percent) in slums had no latrine facility within the premises (Census 2011). In slums, septic latrines and sewage systems are reported but from a smaller proportion of households.

This underlines the severity of sanitation deficits in slums, and the high reportage of use of shared and community/public toilets by households poses considerable challenges for provision of sustainable sanitation solutions for slum and other poor households.

The trouble though is that even when households have access to toilets – this is more than 80 percent of urban households as presented in the preceding section – the safe collection, treatment and disposal of human excreta is woefully inadequate and poses major challenges to health and environment of urban India.

**Sanitation is more than just household access: the full cycle of safe collection, conveyance and treatment/reuse is still a challenge – a bigger challenge for slum settlements whence safe collection and conveyance pose numerous challenges.**

A 2009 study of Class I and Class II towns found that treatment capacities were less than 32 percent of sewage generated. Two-thirds of this capacity was in the 35 one million-plus population cities, but nearly 37 percent of the treatment plants did not conform to discharge standards into water bodies (CPCB, 2013). A National Sanitation Rating of 423 Class I cities, which covered 72 percent of the country's urban population, reported that 90 percent of the cities (379) had less than 40 percent of their sewage treated; and 65 percent of the cities (274) had unsatisfactory arrangements for safe collection of human excreta, whether onsite or sewerage (MoUD, GoI, 2010).

### **Government Initiatives in Improving Slums**

One of the challenges that rapid urbanization brought was the growth of slum settlements owing to failure of public agencies to provide affordable housing and services to rapidly growing urban populations. According to the NSSO 69th Round (NSSO, 2013), 8.8 million households, or about 12 percent of urban Indian households were estimated to be living in slums.

### Box 1: Slums ....Defined

In the NSSO 69th round survey, for operational purposes, slums were defined as follows:

- Areas notified as slums by the concerned municipalities, corporations, local bodies or development authorities were termed notified slums.
- Also, any compact settlement with a collection of poorly built tenements, mostly of temporary nature, crowded together, usually with inadequate sanitary and drinking water facilities in unhygienic conditions, was considered a slum by the survey, provided at least 20 households lived there. Such a settlement, if not a notified slum, was called a non-notified slum. (Note that while a non-notified slum had to consist of at least 20 households, no such restriction was imposed in case of notified slums.) The word “slum” covered both notified slums and non-notified slums.

Source: NSSO 69th Round, 2013.

### Jawaharlal Nehru National Urban Renewal Mission (2005-14)

In 2005, GoI launched two ambitious national programs (the Jawaharlal Nehru National Urban Renewal Mission (JNNURM) and the Urban Infrastructure Development Scheme for Small and Medium Towns (UIDSSMT)) for strengthening and reforming urban infrastructure provision and service delivery. In order to address the issues of rapid urban growth and cope with its challenges, GoI decided to draw up a coherent urbanization policy/strategy to implement projects in 63 select cities on mission mode. Under JNNURM and UIDSSMT focused attention was accorded to the development of Basic Services to the Urban Poor (BSUP in JNNURM cities and Integrated Housing and Slum Development Program for UIDSSMT towns) in the cities covered under the Mission. This included:

- 1) Security of tenure at affordable prices;
- 2) Improved housing;
- 3) Water supply;
- 4) Sanitation; and
- 5) Ensuring delivery through convergence of other already existing universal services of the government for education, health and social security.

### Rajiv Awas Yojana

A national program dedicated to making India “slum-free”, the Rajiv Awas Yojana (RAY) launched in 2009, marked an important advance in GoI's approach to social housing and basic public service for the urban poor. The program

focused on improving and provisioning of housing, basic civic infrastructure and social amenities in the intervened slums; promoting enabling reforms to address some of the causes leading to creation of slums; facilitating a supportive environment for expanding institutional credit linkages for the urban poor; institutionalizing mechanisms for prevention of slums including creation of affordable housing stock; and strengthening institutional and human resource capacities at the municipal, city and state levels through comprehensive capacity building and strengthening of resource networks.

For the slum dwellers and urban poor, RAY envisages a ‘Slum-free India’ through encouraging states/Union Territories (UTs) to tackle the problem of slums in a definitive manner. It aimed to empower communities by ensuring their participation at every stage of decision-making through strengthening and nurturing slum dwellers’ association/federations (MHUPA 2011).

In sum, the situation of unsatisfactory sanitation provision persists despite state efforts to provide basic infrastructure to unserved poor areas and informal settlements or slums in urban centers. For quite a few decades post India's independence, “slum improvement” was regarded as a short-term palliative to be implemented till all urban households were accommodated in decent housing with proper services arrangements. Over the years, however, a more pragmatic view has been taken finally leading to the formulation of the NUSP in 2008, with the goal of transforming “urban India into community-driven, totally sanitized, healthy and

liveable cities and towns” and ensuring proper sanitation services to all including the poor and unserved households (NUSP, 2008).

### National Urban Sanitation Policy 2008

Despite these efforts, a large proportion of people living in informal settlements in towns and cities still bear deleterious effects of poor sanitation. In 2008, therefore, MoUD, GoI launched NSUP with a vision to make all Indian towns and cities totally sanitized, healthy and liveable for all citizens with a special focus on hygienic and affordable sanitation facilities for the urban poor and women. The policy recognizes that some key issues related to the urban poor and unserved settlements need to be addressed to achieve the vision:

- Raising awareness regarding inherent linkages between sanitation and public health;
- Creating an integrated city-wide approach to sanitation; and
- Resolving constraints of lack of tenure, space or affordability in informal settlements.

It recommends that provisioning of basic sanitation should be delinked from the issues of land tenure and every urban dweller should be provided with minimum levels of sanitation, irrespective of the legal status of the land on which he/she is dwelling, possession of identity proof or status of migration. It, however, stresses that the provision of sanitation would not entitle the dweller to any legal right to the land on which he/she is residing (p.14, NUSP, MoUD 2008). It emphasizes that priority should be given to the provision of individual toilets but wherever this is not

feasible community-planned and managed toilets should be promoted.

### State Sanitation Strategies

Traditional approaches to sanitation investments have involved piece-meal asset creation focused infrastructure provisioning, often with very little focus on service delivery. As a result, several urban projects in water and sanitation have often not rendered the envisaged service delivery benefits. It is in this context that states are building on the intent of the NUSP guidelines and articulating service delivery targets to achieve inclusive and affordable access to sanitation in urban areas (see Annex 2).

By April 2014, about 11 state governments had formulated their state-wide sanitation service targets, and estimated financing needs (covering both capital expenditure and maintenance costs) required to achieve these targets based on normative gaps and transition path at a household level and at the network level.

### City Sanitation Plans

In order to realize its vision of 100 percent totally sanitized Indian cities and towns, NUSP envisages all Indian states develop SSSs and all Indian cities formulate CSPs. The policy provides the necessary framework for state governments and municipalities to approach sanitation in an integral manner. CSPs are understood as integrated and holistic sanitation master plans for entire cities detailing out short-, medium- and long-term strategies. It also considers improvement and extension of sanitation infrastructure including toilet access, confinement, transport, treatment and disposal of wastewater and septage together with all related technical,

### Box 2: Madhya Pradesh Sanitation Vision 2025

The Government of Madhya Pradesh, for example, aims to make all urban areas in the state fully sanitized by 2025 and attempts to bring a comprehensive service delivery orientation to its implementation by setting targets that can be identified and monitored. Among other things, the Madhya Pradesh Sanitation Vision 2025 aims to:

- Make urban areas in the state Open Defecation Free (ODF) by 2017;
- Facilitate toilet access initially with community toilets provision and migration to 99.8 percent individual toilet coverage by 2025; and
- Achieve 100 percent safe disposal of waste-water generated by 2025 through a combination of sewerage systems (75 percent coverage), onsite systems (23.5 percent septic tanks + 1.5 percent pit latrines).

financial, institutional and social aspects. Further, issues related to governance, awareness creation and capacity building are also detailed in the CSP.

As of March 2014, more than 150 cities were reported to be in the process of drafting their CSPs.

While designing the CSP, the ULB will need to ensure services to the poor, regardless of space, tenure or economic constraints.

### National Sanitation Rating and Service Level Benchmarking

The two major national-level initiatives in support of implementing the NUSP include: National Sanitation Rating of Cities (2009-10) and Service Level Benchmarking (SLB) of ULBs.

#### 1) National Sanitation Rating of Cities (2009-10)

In order to assess the performance in urban sanitation, GoI has instituted a rating of cities on urban sanitation indicators

### Box 3: NUSP Emphasizes CSPs to Serve the Urban Poor and Slum Settlements

#### Reaching the Unserved Populations and the Urban Poor

Experiences from many Indian cities show that a differentiated approach is necessary to extend good quality sanitation services to the poor — the group that suffers the most in terms of adverse impacts on health and lost earnings.

Participatory approaches are needed to consult the poor settlements and involve them in the process of planning and management of sanitation arrangements. Many settlements may have the necessary conditions to support the provision of individual onsite sanitation arrangements (for example, as tried out in some pockets in Ahmedabad) that are ideal; in many others, tenure and legal issues prevent provision of individual toilets and hence community toilets (CTs) are the only way for immediate succor and access (for example, as is the case with Mumbai, Pune). In some places, conventional and shallow sewers have also been tried out as alternative to on site solutions in dense settlements. Examination of legal/tenurial, space and affordability issues in close consultation with communities becomes a key step in planning innovative means that are owned by users and will be sustainably managed by them.

NGOs can play an important role in mobilizing slum communities. Further, when community groups themselves take over the O&M of community facilities, then sustainable services become possible.

Another segment of population normally without sanitation is those who live in dispersed urban locations not being slums or in groups of houses that have legally not been notified as slums. Innovative approaches are required to extend services to these population groups too.

The Implementing Agency will need to take stock of the legal and non-notified settlements in the city and, in partnership with NGOs and CB0s, initiate a process of collaborative planning and delivery of services.

At least 20 percent of the funds under the sanitation sector should be earmarked for the urban poor. The issues of cross subsidization of the urban poor and their involvement in the collection of O&M charges should be addressed.

The last and not least of all obstacles is the mindset of the officers of ULBs and other citizens: biases and myths often hinder proper service provision to poor settlements. There must be a concerted effort to raise awareness amongst all stakeholders about the huge health and environmental costs that all have to bear if services are not comprehensively provided to all citizens.

Source: NUSP, MoUD, GoI, 2008.

for self-assessment of cities and highlight the areas where improvements are required. The ratings aimed to track public health and environmental standards as two outcomes that cities must seek to ensure for their citizens. The first round of the rating of cities was conducted between December 2009 and April 2010 under the guidance of the National Advisory Group on Urban Sanitation and in consultations with the state governments and ULBs. As many as 436 cities were rated included metros, big Class I (with 1 to 5 million populations) cities and other Class I (100,000 up to 1 million population) cities, covering almost 72 percent of India's total urban population (NUSP 2010).

Each city was scored on 19 indicators that are divided into the categories of Output (50 points), Process (30 points) and Outcome (20 points) indicators.

The second round of Rating (2014-15) proposes to also measure the number of community and public toilets (seats) for more than 460 Class I (population with more than 100,000 persons) cities.

## 2) Service Level Benchmarking of ULBs

SLB focuses on service delivery and not just infrastructure creation, and ranks ULBs in terms of their performance on 29 indicators across four key service sectors (water supply, sewerage, solid waste management, and storm water drainage).

The awards and ranking from both initiatives are available on <http://moud.gov.in>. The Second Round of National Sanitation Rating of Cities (2014-15) covering more than 460 Class I cities is expected to be completed by early 2015.

### Swachh Bharat Mission (Urban) 2014-19

In keeping with the vision of the NUSP and GoI's priority to make India clean, litter free and ODF, the Swachh Bharat Mission (SBM) (with separate components for rural and urban) was launched in October 2014. Estimated at a cost of approximately INR 62 lakh crore (INR 62 billion), the SBM urban has the following objectives:

- Eliminate open defecation;
- Eradicate manual scavenging;

- 100 percent collection and scientific processing/disposal of municipal solid waste;
- Bring about a behavioral change in people regarding healthy sanitation practices;
- Generate awareness among citizens about sanitation and its linkages with public health;
- Strengthen ULB to design, execute and operate systems; and
- Create an enabling environment for private sector participation in capital and operation expenditure.

The Mission has been launched and received priority and attention at all levels, including national, state and cities and towns. This has provided the much-needed priority to sanitation and hygiene, and has given a great push forward to achieving clean, healthy cities as envisaged by the NUSP.

### Community Toilet Complexes as a Response to the Slum Sanitation Deficit

As noted above, individual toilets must be promoted as much as possible since these are known to be the healthiest and most sustainable arrangements that households use and maintain (given that the toilets are sanitary and have adequate disposal arrangements). Individual sanitary facilities may not be possible, though, in dense urban settlements due to a multitude of reasons such as tenure, space constraints, financial factors, and so on. In such cases, community toilets play a very large role in providing sanitation facilities to the urban poor and, to a large extent, form an effective alternative for improving sanitation coverage for these households.

NUSP, in a significant departure from earlier policy positions, recommends that provisioning of basic sanitation be delinked from the issues of land tenure, so that a basic minimum level of sanitation is ensured for the poor. It promotes sustainable service delivery and acknowledges that priority needs to be given to the provision of individual toilets but, wherever this is not feasible, community (and public) sanitation solutions need to be supported (NUSP, p. 12).

In India, CTs have, in the past, been provided by the municipalities and corporations as well as by NGOs. The success of these toilets has been mixed when judged on use and maintenance aspects. Due to inadequate financial and

#### Box 4: Public Toilets and Community Toilets

While both Public Toilets (PTs) and CTs provide vital sanitation services in urban areas, there is a clear distinction between the two:

1. PTs usually are located in commercial areas such as markets, train and bus stations, and so on in areas characterized by high population throughput. These are pay-and-use toilets (in some cases, free to use), and could be operated by the government, private operators or NGOs. Examples of such toilets are the Sulabh complexes prevalent in many Indian cities.
2. CTs are usually situated in or near slum locations, and have a core group of identifiable regular users. Sometimes CTs may be located near a commercial or high population throughput area but their distinctive feature is the regular user group and a management arrangement by users themselves, or someone on their behalf.

PTs can be run as commercial ventures by the government or sub-contracted to the private sector, while CTs need to be accountable to user groups while being viable either through user contributions or some other ways of financing of expenses.

human resources, and inappropriate institutional incentives, many of the CTs are poorly maintained, fall into unsanitary conditions and, in some cases, are abandoned by users within a few years of construction. The major deficiencies of many of these community toilets were identified as:

- a. Lack of cleanliness and poor up-keep, and lack of proper disposal facilities (septic tanks, sewerage, and so on) especially in the 'free to use' toilets;
- b. Poor construction standards;
- c. Insufficient water and electricity supply;
- d. Inappropriate accessibility due to location;
- e. Insecurity (especially for women users); and
- f. Inadequate funds and arrangements for O&M.

Many of these deficiencies can be effectively addressed through better planning, design, construction, O&M – as illustrated by the cases in this guide.

This note recommends individual toilets wherever possible since these prove to be much cheaper, more sustainable and more scalable compared to CTs. The NUSP and the *Technology Options for Urban Sanitation in India* manual (WSP/ MoUD 2008) dwell on the technology and design issues for these toilets and hence readers are encouraged to refer to the manual for further information on technology and design aspects.

Where CTs are also not possible, people have to depend on public toilets nearby – as is the case in densely populated slums adjacent to commercial and public places. Such situations are best avoided because of poor affordability by households that, in turn, is likely to force them to defecate in the open.

---

# 3. Drivers of Successful Slum Sanitation Initiatives

---

The analysis of selected slum sanitation initiatives helped in identifying some of the key factors or drivers that appear to have significantly contributed to the success of these initiatives. Different strategies have worked in different locations – and this section attempts to describe, with examples, how these drivers actually worked in practice.

The importance of each of the drivers is briefly described followed by examples from different cities on how these worked. The cost of not paying attention to the driver is also highlighted in some cases. At the end of information on each driver, a set of issues or questions are listed for readers to keep in view while thinking about sanitation initiatives. A color box at the top and a para in the end also help in understanding at the stage of planning, implementation or monitoring and evaluation (M&E) the driver becomes critical.

Please note that drivers are the main blocks around which slum sanitation can be approached – but these have many interlinkages and are therefore not either mutually exclusive or exhaustive.

## 1. Enabling Frameworks for Slum Sanitation (Tenure and Provision of Services)

<b>Preparatory and planning stage</b>	<b>Implementation stage</b>	<b>Monitoring and evaluation stage</b>
---------------------------------------	-----------------------------	--

The starting point of provision of services to slum communities is the legal and administrative recognition accorded to them. Slums are often “invisible” to municipal authorities in that they may not be recognized at all as settlements. The first difficulty arises in agreeing on a definition of what constitutes a slum and what do with these settlements. Since this is a state subject, usually state government laws determine how slums are defined, how these may be recognized and categorized,

and dealt with, that is, either improved or developed; or how residents in different categories or locations may be relocated and rehabilitated in a new site. Apart from evictions that are a controversial issue in many cities, under-counting or non-recognition of squatter or informal settlements under the legal provisions of the relevant state law has been highlighted as a major issue that makes these settlements “invisible”.

In addition to slum acts, the municipal acts that govern ULBs, and those laws that create and govern service providers, for example, water and sewerage boards, together determine the kind of services that can be provided to slum settlements. Hence, this is the starting point of any exercise to plan slum sanitation services provision.

Since questions of urban land tenure are deeply contested issues, relevant state department or specialized state level agencies are often responsible for recognition of slum settlements, and make provisions for their development, relocation, regularization, and so on. This brings into account the relative roles of the state agencies and department, and the role of ULBs. The latter are typically supported administratively by the state urban departments but are governed by the relevant state municipal acts. These acts and rules may have provisions that have a bearing on services provision in slums too.

For ULBs, it is often convenient to postpone service provision till such time that the legal tenure questions are resolved. Even though slums were not accorded attention earlier, in the past four decades, different states have enacted legislation to recognize and notify slums in their cities. These acts and rules also specify the method by which “re-development”, “resettlement”, and attendant services may be provided. **Therefore, the starting point of any slum sanitation initiative would have to be enabled by such a legal framework that first accords some sort of legal status to slum settlements.**

### Box 5: Relevant Definitions

The Model Property Rights to Slum Dwellers Bill 2011 (Ministry of Housing and Urban Poverty Alleviation, 2011) proposed some definitions for states to consider in their acts and rules:

**“Slum” or “Slum Area”** means a compact settlement of at least 20 households with a collection of poorly built tenements, mostly of temporary nature, crowded together usually with inadequate sanitary and drinking water facilities in unhygienic conditions.

**“Untenable Settlements”** are those settlements which are on environmentally hazardous sites (such as riverbank, pond sites, hilly or marshy terrains, and so on), ecologically sensitive sites (mangroves, national parks, sanctuaries, and so on), and on land marked for public utilities and services (such as major roads, railway tracks, trunk infrastructure, and so on).

**“In-situ Slum Redevelopment”** means the process of redevelopment of slum areas by providing dwelling space and other basic civic and infrastructural services to the slum dwellers, on the existing land on which the slum is based.

**“Slum Resettlement”** means the process of relocation and settlement of slum dwellers from the existing untenable slums to an alternative site with dwelling space, basic civic and infrastructural services.

**“Basic Civic Services”** means services of drinking water supply, drainage, sewerage, solid waste disposal and street lighting.

Source: <http://mhupa.gov.in/ray/guidelines%20and%20user%20manuals.htm>, accessed August 11, 2014.

It may be noted, in the past two decades, that the policy environment has made some progress and slums have come to be “tolerated” to some extent. From being regarded as “illegal and unwanted settlements” and, finally, a move has been made to recognize such settlements as legitimate sites of housing and livelihoods, arising out of state and market failures. But this still requires attention in order to ensure planned development, public health and socioeconomic security not only for these communities but also for their neighborhoods and the entire city.

As reflected in implementation of laws and development schemes in practice, there are serious differences about the extent of recognition (many informal, squatter settlements are left out of the count), basis of recognition (cut-off dates are commonly used to define boundaries of legality), and what the state ensures in terms of development inputs including infrastructure and service improvements, upgradation of housing, relocation, and so on. These are contested realms and lie at the heart of services provision including sanitation to slum communities.

### Relevant Acts and Rules Enable the Type of Sanitation Services Delivery

The state slum acts, municipal acts, agency/board acts and regulations may permit services to be provided fully or partially. In the former case, the slum area and housing unit are accorded status so that it can receive some basic services, although service delivery may be constrained by availability of space, finances, and so on. In the latter case, the law may only permit for essential services to be provided through limited means, for example, water supply through pipelines to community water points and/or Community Toilet Blocks (CTBs). In this case, different states may again have enabling provisions about the land on which such infrastructure may be located. For instance, municipal corporations may be empowered to permit construction of toilet blocks on slums located on their own land or of the state government or even, as in case of Bhopal Municipal Corporation (BMC), slums on lands belonging to private parties.<sup>1</sup>

---

<sup>1</sup> In many cities, settlements are located on lands owned by Defense, Railways and other union government agencies, posing a complex and unresolved issue.

### How have States and Cities Approached Tenure and Service Provision Issues?

The Ahmedabad Municipal Corporation (AMC) utilized its governing Municipal Act, to allocate finances for the improvement of health conditions in the city – and hence, investments in environmental services in slums in the city. This was combined with innovative use of an executive order (NOC 500, discussed below), to operationalize a comprehensive Slum Networking Project (SNP or “Parivartan”) in the city.

Other states and cities have opted for the route of executive orders to enable slum sanitation services provision, using the existing legal provisions in various acts or by making minor modifications in these acts.

Bhopal and Trichy have used a project approach to plan and implement community sanitation initiatives that were first implemented as pilot projects and later sought to be scaled up. Tamil Nadu incorporated the Trichy Gramalaya experience into the state-wide Integrated Sanitation Project (ISP) under the Tamil Nadu Urban Development Project (TNUDP).

The Government of Maharashtra (GoM) issued an order in 2005 mandating that community groups will play an integral role in planning and management of CTBs in urban Maharashtra slums. In this manner, GoM sought to scale up the practices demonstrated in BMC’s Slum Sanitation Program (SSP) to all such slum sanitation initiatives in urban Maharashtra.

### Box 6: Parivartan Slum Networking Program in Ahmedabad

With a population of 3.5 million (2001), Ahmedabad reported more than 40 percent of its population living in over 1,600 slums and informal settlements. In the mid-1990s, a private textile mill had approached AMC to help improve slums in the mill’s neighborhood. This initiated the formulation of the Parivartan Program or SNP comprising:

**Physical infrastructure services** including individual water supply connection; individual toilets connected to sewerage; storm water drainage; paved internal roads and lanes; street lighting; solid waste management; and landscaping; and

**Community development** inputs including mobilization and formation of CBOs and their involvement in implementation, O&M, and for supporting health, education, livelihoods, micro-credit, and so on.

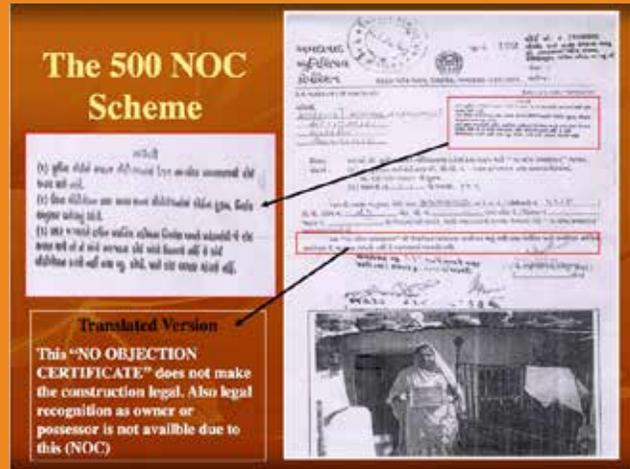
The program was funded mainly by AMC. It realized that, for slum dwellers to access infrastructure services, it was quintessential to provide tenure security and urban social protection to slum dwellers. Along with this, state level enabling legislations such as an amendment to the Bombay Provincial Municipal Corporation (BPMC) Act, 1949 had aimed to progressively eliminate slums, prevent the reemergence of slums and upgrade and control existing slums. In Ahmedabad, water and sanitation services were not provided to communities that lacked legal tenure. An amendment to the BPMC Act, 1949 made it obligatory for AMC to spend at least 10 percent of its own revenue for improving basic services in slums.

To encourage slum dwellers to continue to invest in their homes, AMC agreed to provide some sort of protection for a 10-year period to the households participating in its program. The executive orders and rules at the state government and ULB level provided an important enabling legal framework of service provision to slums. AMC started the 500 NOC Scheme aimed at helping slum residents acquire a No Objection Certificate (NOC) with a payment of INR 500. This document had the photo of the householder declaring that s/he will not claim ownership or legal claim over the house structure and services, and AMC declared that it would not demolish the structure and stop services for a period of 10 years in normal circumstances. (Only two instances of demolition were noted thereafter to acquire land for infrastructure projects. Affected communities were duly relocated.)

With the help of the NOC, slum residents could now apply for legal individual sewage and water connections to their house. AMC issued NoCs for the upgradation of community and individual household facilities including water, drainage, sanitation, pavements and roads for a period of 10 years. In addition, it used the BMC Act to systematically make budgetary allocations for improvement to health conditions of the city residents including slums. The SNP was therefore one of the first initiatives to delink tenure from services provision.

This led to the willingness of slum communities to participate in and contribute towards capital cost of infrastructure development and a community level corpus fund for O&M. AMC, in partnership with a private company and NGOs (Saath and Gujarat Mahila Housing Sewa Trust), extended a bundle of services including individual toilets, water taps and drains in nearly 50 slum settlements beginning the late 1990s. Individual services were preferred and provided over community facilities, scaled up to other cities of Gujarat except Vadodara where only community facilities were provided. By 2014, only three slums (of the more than 40 slums under Parivartan project) suffered part or full relocation. This was for infrastructure projects, and did not lead to AMC revoking its NOC per se.

Sources: WSP (2007); Rusling, Sara (2010), SEWA Academy/MHT 2009.



It may be noted, however, that executive orders and project achievements may be difficult to sustain in the absence of political and legal backing. A case in point is the continued prevalence of a different approach to slum sanitation in case of Maharashtra. The Maharashtra Housing and Area Development Authority (MHADA)-constructed CTBs are intended to respond to the huge deficit and demand for toilets in slums, using union and state government funds (not under the control of the BMC). However, the design of these (single-storied) toilets does not include full services such as continuous water and electricity supply due to constraints of lower cost norms. In addition, there may not have been resources available for mobilization of community groups for maintenance management (as mandated in the GoM order of 2003), leading to poor maintenance.

Delinking tenure from services delivery should be enabled. NUSP (2008) has already made this a cornerstone of the national urban sanitation policy, and states and cities are encouraged to systematically delink access to sanitation services from tenure constraints in slum communities.

Some laws and administrative provisions and schemes may actually be inimical to mobilizing communities for improved sanitation practices. Under the Kolkata Urban Services for the Poor (KUSP), about INR 9,900 was made available for constructing toilets in poor communities of the 38 municipalities in the Kolkata Metropolitan Area (outside the Kolkata Municipal Corporation). Therefore, while service provision was already possible under the municipal act, KMC wanted to experiment with community led health initiative that would mobilize people to build and use toilets using their own resources rather than opting for scheme funds. In the initial mobilization phase, the scheme provision actually created confusion in one of the slums in Kalyani and they were not able to join in the KMC led initiative. KMC, in fact, had to pass a resolution and present it to the state department that they would not take the scheme funds yet attain the target of sanitation service provision in slum communities using a different approach.

The example above shows that the enabling framework of the law, policy and schemes needs to be the starting point of

**Box 7: Bengaluru’s Experience with Delinking Tenure and Service Provision**

In Bengaluru, under the AusAID-assisted Master Plan Project, the Bangalore Water Supply and Sewerage Board (BWSSB) waived off the requirement for proof of land ownership as requirement for water supply connections, and replaced this with proof of residency. A special new water tariff slab was introduced to provide for shared connections (so that, in spite of large combined consumption of five to six families, the applicable tariff would be the lowest one, and not the high telescopic slab applicable for normal individual households). Connection fees were reduced (INR 830, down from INR 1,850) and permitted to be paid in instalments. The procedures for applying for connections, and issuance of meters, and so on, were also simplified.

In this way, the BWSSB was able to delink service provision from legal tenure – the utility gaining by increased customer-base revenues, households by avoiding long queues, loss of productive time, and girls not missing schools.

Source: BWSESMP, 2002.

any slum sanitation initiative. While it may not be possible to make amendments to the law, or change administrative provisions, these must be kept in view throughout the cycle of preparation, planning, implementation and maintenance management. Since some of these can take time to change, indeed, the demonstration of a example such as Trichy can actually build a constituency that supports such changes to come about.

To summarize, the enabling environment comprises the following legal, executive/administrative, and scheme questions to be examined:

1. Examine the existing municipal, state slum and utility acts and rules for type of services that are permissible;
2. Examine how, by law, the framework for service provision can be made more inclusive of households and settlements currently excluded;
3. Examine the extent to which tenure can be delinked from service provision – the NUSP recommends this and some cities have done it;
4. Draft and propose changes to existing laws and regulations to enable access to individual household level services ideally, community services as a second-best option; and
5. Examine existing national and state level programs and schemes that may be utilized for improved sanitation service provision.<sup>2</sup>

<sup>2</sup> Past schemes for slum sanitation service provision at the Gol level have included the integrated low cost provision scheme, the Valmiki Ambedkar Awas Yojana and JNNURM supported BSUP/Integrated Housing and Slum Development Programmes schemes. The recently launched RAY enables upgradation of slums leading to, ideally, household level sanitation services.

**Critical Stages**

The enabling framework’s driver is critical in the preparatory and planning stage. This factor needs attention during the implementation phase as well since program and project rules may need to be legitimized by legal and administrative changes. In the maintenance and monitoring stage, legal and administrative frameworks need further review. The last stage may also be opportune for evidence based policy changes.

**2. Political Will, Executive Engagement and Local Government Institutional Capacities**

<b>Preparatory and planning stage</b>	<b>Implementation stage</b>	<b>Monitoring and evaluation stage</b>
---------------------------------------	-----------------------------	--

Sanitation is a state subject under the Constitution of India. This has been further devolved to ULBs by the 74th Constitution Amendment. The actual devolution of funds and functionaries for sanitation in general and for slum sanitation in particular, depends on the extent to which different states have ratified and given effect to the 74th Constitutional Amendment in their own local body acts and rules. The legal devolution follows the practical consideration that sanitation is indeed a public good, and needs to be provided and managed locally.

Given the above legal framework, political and executive leadership of the city, extent to which the ULB and other agencies are engaged with questions of slum services provision, and institutional capacities and incentives for the ULB to do so, form the second major driver of successful initiatives.

AMC has conventionally been one of the strongest municipal corporations in the country due to its strong organizational capacities and manpower resources, and in being able to signal its strong financial foundation by being the first city to issue municipal bonds. AMC is responsible for providing a wide variety of municipal services and therefore when a dynamic, executive leadership put together the Parivartan project, legitimacy of the effort was never in question. In fact, AMC's partnering with Arvind Mills (which partly financed the project in the initial stages), on the one hand, and various community groups and NGOs (MHT/SEWA, Saath), on the other, added to AMC's institutional capacity to mobilize slum communities and deliver benefits to them.

The Municipal Corporation of Greater Mumbai (MCGM) is again a very large and strong local government that was able to reach out to slums in the city through its territorial divisions as well as specialized Slum Sanitation Cell. The slums accounted for more than 55 percent of the total population of Mumbai. Both these cities showed the necessity of significant devolution of resources and responsibilities in order for initiatives to become effective at scale.

It is important for services to slum communities to be a part of an appropriate department or division within the ULB. In many cases, sanitation departments look after solid waste management only whereas management of human excreta does not find a place or competent staff institutionally. In the context of slum sanitation provision, it is also important to distinguish between CTBs and PTs, the management of which may require a different set of organizational skills and competencies. Some ULBs and utilities have experimented with recruiting specially trained personnel for engagement with community groups and may be in the process of regularizing these (consultant/on special duty/deputation) positions such as social development officers or community facilitators.

The integrated functioning of engineering frontline personnel with social development officers/community mobilization staff needs considerable institutional attention. Capacity building for these as well as other officers is required for imparting analytical and engagement skills to them, as well as for their reorientation to provide sanitation services.

The case of KMC is that of a comparatively smaller local body with dynamic leadership. In this case, mobilization of communities with strong leadership led to community volunteers and leaders themselves formulating and implementing solutions with municipality and other external agents acting as facilitators. It also showed that large public investment in constructing toilets was not necessary and self-financed infrastructure was likely to be better used, maintained and managed better if at the household level.

In spite of sufficient institutional capacity and resources, the desirable impacts of dynamic leadership are not always possible to sustain. The dynamic executive leadership in the late 1990s of the Pune Municipal Corporation (PMC), led to the development of an ambitious slum sanitation scheme for the city. This citywide sanitation program engaged all elected representatives and facilitated the involvement of communities. NGO and CBO partners were mobilized and budgetary allocations made by the PMC for the implementation of this program. However, in the later stages, the momentum of the program suffered on account of a number of factors. The Society for Promotion of Area Resource Centres (SPARC report (2014)) mentions, "In Pune, the major champion pushed for the project to be rushed for completion. It was because the administrator knew that his successors may not sustain the level of scale and partnership. This created distortions in the processes and because wrong choices happened, the alliance (with Mahila Milan, National Slum Dwellers Federation and SPARC) paid highly for that in financial and reputational terms". In Kalyani, too, a leadership change led to reordering of city level priorities.

In many if not most such initiatives, the leadership role of an elected leader, or an officer, has been central in getting things moving initially. While this is a pivotal role; it is also important to institutionalize the systems and procedures in order that

### Box 8: KMC Attempts a New Way of Addressing Sanitation

Kalyani was faced, in the 1990s, with a large number of settlements with toilets that were not used by residents. These toilets were constructed under different schemes for rehabilitation and improvement of the population living in bastis (slums), in which many had migrated from neighboring Bangladesh.

The huge pile of solid waste littered on roadsides and on a field was coupled with the problem of indiscriminate dumping of bio-medical waste with this garbage. A rudimentary sewerage was in a state of dilapidation with the overall outcome being the image of the two cities of Kalyani, one that was rich and planned, and the other with slums, garbage and waste. After being a Notified Area Committee, Kalyani was accorded the status of a Municipal Council in 1994.

On taking stock of the condition of the city and its 19 wards, the newly elected chairman was ready to initiate a series of changes in the way the municipality functioned. One of the first set of actions was to start conducting municipal meetings in camera to ensure transparency. It was also emphasized to the elected representatives that, according to the West Bengal Municipal Corporation Act, the executive powers of the municipality were vested in the chairman and elected representatives. Therefore, the role of elected representatives ceased to be representing wards and transformed into being members of a decision-making and executive authority.

The second set of changes involved devolution of financial resources to the ward levels using a consensus approach (instead of a quota based one) and incentivizing improved expenditure performance locally. It was very difficult to convince other ward councilors, including those from the opposition, to formally resolve not to access scheme funds available for toilet construction under KUSP. With the municipality's own staff, including engineers, there was the additional task of convincing them about what would be value for money but sanitary toilets.

In order to engage with slum communities, the KMC leadership decided to identify and encourage Natural Leaders (NLs) from these communities. These NLs were provided special motivation and training, and mobilized around the themes of improved public health including sanitation. A number of social and cultural events were organized as this community led movement – called Community Based Health Initiative (CBHI) – of which the focus was on the outcome of ODF communities.

The local municipal leadership, that is, the chairman, elected leaders as well as community leaders, were further assisted by external experts and well-wishers of this approach. Within a short period of less than two years, more than 40 communities were able to become ODF using their own resources, and no subsidy or financial support from the government in constructing toilets. Some of these communities had, in addition, constructed improved drains, platforms for handpumps and other such small infrastructure using their own resources. The NLs and volunteers would continue to monitor behavior of residents, incidents of diarrhoeal disease and report and discuss these on a weekly basis with the municipality.

A strong municipal leadership that had attempted a fundamental change in the culture of municipal politics was therefore responsible for mobilizing communities to take ownership of their health.

*Source:* Interview with Shantanu Jha, former Chairman, KMC, June 2014.

the slum sanitation projects are implemented well, and they are monitored properly later on too. Hence, while the initial push needs leadership, many of implementation and service delivery/maintenance phases need institutionalization of monitoring and actions based thereon – and the capacities to do so.

In summary, the considerations to assess the driver of leadership, engagement and capacity are:

1. What is the structure of the local political leadership? What are the ways to have leaders lend support to improved sanitation services to slum communities?

2. What is the structure of the local political leadership (in the ULB, development authorities, water and sanitation utility/board)? How can it be mobilized to commit to sanitation services delivery to slums?
3. What is the extent to which functions, funds and functionaries are devolved to the ULB in the city?
4. Does the local body have an organizational unit or division with specialized and dedicated personnel for dealing with sanitation issues?
5. What are the means of building awareness amongst urban communities about the necessity of improved sanitation systems and practices?

### Critical Stages

This driver is also important in the preparatory and planning stage, especially devolution and leadership. The engagement and organizational capacities become critical in planning and implementation. This continues to remain salient in the monitoring and sustenance of the initiative.

### 3. Addressing Indignity and Promoting Public Health

Preparatory and planning stage	Implementation stage	Monitoring and evaluation stage
--------------------------------	----------------------	---------------------------------

While investments in water and sanitation are normally justified on grounds of huge preventive health benefits that accrue, the centrality of these benefits is far more pronounced in case of slums. Accessing potable water remains a struggle for most slum dwellers but these struggles vary based on different local factors and influences. In contrast though, sanitation in slums poses the dual risk of increased disease incidence, on one hand, and personal safety, security and indignity, on the other, especially for women and girls. In a departure then from construction of toilets, slum sanitation initiatives have increasingly attempted to mobilize communities around health and safety, dignity, and community-level outcomes. This has also been the strategy for involving and empowering women through such initiatives.

Slum sanitation programs start with a hygiene education and community mobilization activity. This is also a way of

encouraging stakes/ownership, building capacities in the communities for making linkages, and getting prepared to manage the facilities as well as sustain behavior changes.

While public health promotion and appeals to dignity have been a continuing theme in nearly all successful slum initiatives, the examples of Tiruchirappalli and Bhopal are presented here. NGOs such as Gramalaya in Tiruchirappalli and Aarambh in Bhopal extended health and hygiene education to women in households and students from government or municipal schools (mostly living in poor and underserved settlements) and, to make it interesting, they have used games (like snakes and ladders) and skits (*nukkad natak*) to convey the message. These children act as sanitation messengers and ensure that hygienic practices are observed at home and in their schools.

In 14 government schools, Aarambh built child friendly toilets for children. Each child contributed INR 1 per month for buying cleaning materials and for minor repairs. Health educators visited government schools to impart hygiene training. In these schools, Child Water, Sanitation and Hygiene (WASH) Committees were set up with children acting as hygiene messengers to promote and monitor hygiene and sanitation and ensure that drinking water was stored properly (in a covered pot kept at a height from the ground). Slum children have also been given health and hygiene training on practices such as hand-washing and menstrual hygiene.

Many community initiatives have now adopted measures not only to promote health and hygiene messages, but also provided proper mechanisms targeted at special needs of women and adolescent girls. Menstrual Hygiene Management messages, material and mechanisms are important as a part of this pillar, and must be accorded high priority in any slum sanitation initiative. For example, Gramalaya encouraged increased engagement in advocacy on menstrual hygiene and installed incinerators in girls' toilets and, along with bathing facilities, provide access to water and soap within a place that provides an adequate level of privacy.

The considerations of integrating public health and dignity in sanitation initiatives are:

### Box 9: Mobilizing Children around Health and Hygiene Practices

Bhopal, the capital of Madhya Pradesh, is a fascinating amalgam of scenic beauty, old historic city, and planned modern settlement. The “city of lakes” has a population of about 18,00,000 (Census 2011), of which about a third live in 374 notified slums.

The NGO Aarambh that has been working with children since 1990s, mainly on issues of child rights, began a pilot project on sanitation in 2005. With WaterAid in partnership with BMC and UN Habitat, Aarambh launched a slum sanitation program to make slums ODF using the community-led approach. Through a Poverty Pocket Situational Analysis that focused on the poorest of poor with no access to water and sanitation facilities, Aarambh identified 17 slums in Bhopal. A total of 5,000 households were covered – 2,600 individual leach pit latrines and two CTBs were built – and 11 slums were declared ODF by the government in 2008.

The community-led approach targeted women and children. The team began with door-to-door campaigns telling women about sanitation issues, wall writing on hygiene practices, septage management, performing skits (*nukkad nata*) to give messages on health and hygiene, celebrating World Water Day, World Toilet Day and Environment Day.

Developing a sanitation solution through community participation was conceived as the first activity in the Aarambh pilot program to build toilets in Bhopal. A Water and Sanitation (WatSan) Committee comprising seven to 13 persons with a third as women, was established and trained in each community. The responsibilities of the WatSan Committees were: oversee and monitor construction, O&M of the facility, set and collect user charges, carry out repairs directly or through the private sector, and be accountable to the community regarding O&M. Shiksha Swasthya Sanitation teams were formed for health promotion and communication and they were active in door-to-door campaigning on hygiene, need for constructing toilets with septic tanks, etc.

Aarambh has also promoted segregation of waste through competitions such as ‘healthy lane’, ‘healthy house’ where community women act as judges.

Source: Interview with Mr. Anup K. Sahai, Chief Functionary, Aarambh.

1. What is the baseline condition of disease incidence (especially sanitation-attributable diseases such as diarrhea, and so on) in the community and what are the community perceptions regarding these?
2. What are the constraints of space and concerns of safety and dignity especially of women and children in the community?
3. What are the infrastructure and services (for example, well-lit toilets with adequate water, separate and secure toilet blocks for women, child friendly features, easy availability of soap and cleaning materials, and so on) required to address health and safety concerns?
4. What communication and measures can be undertaken to better promote robust Menstrual Hygiene Management in the community, and as a part of the toilet block?
5. What are the community-level and formal mechanisms for monitoring health outcomes?
6. Is there regular communication and messaging for mobilizing the local community to adopt and use the toilet, and sustain changed behavior and practices?

#### Critical Stages

In most other sanitation initiatives, women were established as central actors and/or target groups along with children, together with instituting the link between sanitary installations, safe disposal, improved hygiene practices and sustenance of behavior change. It is difficult to clearly identify when and how these strategies become critical. Suffice it to

say that this needs to be sustained throughout the project cycle while the emphasis may be different at different stages, depending on the local context.

#### 4. Promote Participation of Poor and Institutionalize Special Roles for Women

<b>Preparatory and planning stage</b>	<b>Implementation stage</b>	<b>Monitoring and evaluation stage</b>
---------------------------------------	-----------------------------	--

Many initiatives involving construction of toilets in slum communities met with failure because the households and communities were not involved or even consulted in the design of the process or structure, leading to disuse and dilapidation. All successful sanitation initiatives have, therefore, given high priority to instituting participatory processes in a structured manner right from the preparatory and planning stages.

The local context determines to what extent households and communities can be empowered to take control of the process. Where the legal tenure constraints preclude the possibility of household toilets, participation of household members can only be elicited in the preferred design, location and maintenance management functions of these communal facilities. SPARC (2014) elaborated, “Every locality in Pune was visited, Mahila Milan held meetings especially with the women, then drawings for the designs were done and toilets were first demolished then desludged and reconstructed.” In most initiatives, communities were mobilized and their participation sought at the planning stage of the CTBs. The success of such efforts in different communities would spell the difference between sustainable outcomes or otherwise.

Where individual toilets are possible, however, the importance of participatory processes does not diminish either as was demonstrated in Ahmedabad, Kalyani and some parts of the Bhopal initiative. The participation of the poor households was central to their taking ownership of the initiatives. The Kalyani approach sought to try the whole

initiative by what households and communities desired even in terms of the exact technical option selected (communities were trained in ensuring that all installations were sanitary<sup>3</sup> and safe). Standard toilet designs were made available in the sanitation initiative in Bhopal but households were active participants in supervision and contributing their labor to the construction. The availability of the sewer system in Ahmedabad enabled households to construct toilets that could be connected to it. The Parivartan initiative involved the resizing and other adjustments of the housing plots of poor households that communities worked together to resolve.

The project structures and rules to institutionalize participation by communities, especially the poor and women, are also contingent upon the financing and other resources available with the local government and the communities. In many urban slum communities, the time available for households to participate in planning exercises can have high opportunity costs, for example, lost wages, timings of meetings being inconvenient, and so on. While some of these constraints have been worked around in some initiatives, the question of cash and labor contributions can pose challenges. In case of individual toilets, it was found that households might have been forthcoming with cash contributions or contributing their own labor. This becomes difficult to elicit in the case of CTBs.

While in Bhopal and Ahmedabad individual households made their contributions following a simple formula, in case of Mumbai, the CBT could not be partially owned by community members and hence a “membership” fee was instituted (this has since been discontinued). Eliciting participation in financial terms or in kind has been broadly understood to instill ownership, thereby leading to usage and proper upkeep and maintenance. The exact proportion or absolute contribution that accounts for a successful outcome depends on the local context in case of CTs. The picture is clearer in case of individual toilets where the participation of the household in constructing and looking after household toilets has been shown to be more directly related.

<sup>3</sup> Communities were trained by facilitators in ensuring that S-Pipes were provided to prevent transmission of pathogens, excreta was not visible, foul odor was avoided and toilets were kept clean.

Different projects have identified sub-segments within the community and carved out roles for them to participate in the initiatives. Most projects have assumed that slums largely comprise poor households and, so, participation of poor households has been promoted except in cases where the projects were to benefit individual households, for example, the AMC project that was limited to households with less than 40 square meter plot sizes. However, most community toilet initiatives have sought to mobilize all households including but not restricted to those who may be defined as poor in that context. This broadly inclusive strategy appears to have worked reasonably well given the practical constraints of identifying and differentiating between poor and other households. In some initiatives such as in Mumbai, there was a distinction made between “owners” and “tenants” in determining who may be able to participate as a member. This may have resulted in some legitimately poorer households having to use the CTs on a comparatively more expensive pay and use rate as opposed to a cheaper monthly pass fee rate.

The special role of women in decision-making, community mobilization, health promotion and maintenance management finds differing treatment in different projects. Most of the projects stipulated representation of women in local committees. For instance, a WatSan committee comprising seven to 13 persons with a third being women

was established in case of the Bhopal initiative. Similar representation norms were also followed in other sanitation projects. In some projects, women SHGs were also given importance to establish links with livelihoods. The Tiruchirappalli initiative is an example of this.

Under the SSP in Mumbai, another strategy employed was to mobilize households to become members of communities by contributing initial membership fees signaling their ownership of the process. In many cases, contractors appeared to make the contribution on behalf of households and hence this was discontinued. Care needs to be taken to ensure that such proxy contributions are not permitted, and the demand is correctly signaled.

Some of the slum sanitation initiatives have also tested and successfully used innovative training and educational material appropriate for illiterate and neo-literate target groups. These material and training programs are very effective in empowering community members in comprehending complex issues and using a common vocabulary for conceptualizing and communicating with each other as a group.

The CBHI approach followed in Kalyani sought to completely reimagine the role of the community by facilitating a process in which the community would, in fact, drive the initiative rather than be a participant in it. The strategy involved

### Box 10: The Tiruchirappalli Initiative

Tiruchirappalli city has been a growing industrial center and is the fourth-largest city in Tamil Nadu. It has a population of about 9,00,000, of which nearly 27 percent live in slums (Census, 2011).

Until 2000, the Trichy City Corporation (TCC) managed all CTBs, which were dirty, dysfunctional and not used by slum dwellers. In 2000, WaterAid supported NGOs working in the field of urban sanitation (that is, Gramalaya, SCOPE, Sevai, Exnora International, Annai, Ramasamy Chellappa Educational Trust, Environmental Conservation Group and Kalki Groups) to work with communities to renovate and take over management of CTBs directly themselves, and also supported communities in building completely new toilets.

The participation of women was a key feature of the TCC project. Gramalaya adopted a process by which a number of SHGs were created with 15-20 women each as members. About two to seven such SHGs per community were established. Each SHG creates Sanitation and Hygiene Education (SHE) teams from existing members who take upon the responsibility of raising awareness and promoting slum sanitation and hygiene. The SHGs were given a central place in ensuring their views on the location of the toilet, and procedures followed. The SHE teams manage the CTBs on pay and use basis, maintain account books, disburse salaries among staff and improve the facilities

such as provision of asbestos roofs, gates, and so on.

It has addressed the practical gender needs of women being users of safe and properly maintained sanitation facilities; and, secondly, addressed the strategic gender need to give decision-making power to women, to operate and maintain toilets and for them to benefit in terms of their livelihoods. One such key agent of change, Indra (name changed), a housewife and member of the SHG group in Veragupettai, became a SHE team leader in 2000. She began looking after the CTB constructed in 2001 after demolishing the existing structure in a Veragupettai slum with about 79 households.

The SHE team would earn as much as INR 18,000-20,000 per month from the CTB usage. By 2007, the SHE team had collected about INR 3,00,000 from user fees, and decided to construct a community hall in its slum that could be used for training on hygiene as well as for social gatherings. It now operates as a training classroom for SHGs and is also available for rent at INR 1,000 a day.

Indra spearheaded the movement by encouraging toilet usage in neighboring communities. Initially, no one came forward to contribute in construction/maintenance of the CTB despite sincere efforts of the Gramalaya staff. Indra was instrumental in motivating the nearby SHG through persistent motivation and hygiene awareness, including door-to-door education, to meet with TCC and renovate their CTB. She supported the endeavors of the neighboring SHG to renovate the CT and it became functional in 2008.

Regular meetings for discussions on accounting for funds and using the balance for slum welfare activities in concurrence with the sanitation and hygiene promotion activities of the SHE teams have also induced 28 families to install household toilets with WaterAID support.

Sources: Sulabhensis (n.d.); WaterAid and Gramalaya (2008); WaterAid India (2006); WSP, 2006.

mobilizing the community by triggering and powerfully communicating the links between current open defecation practices and the burden of disease, indignity and shame. This was followed by empowering leaders, volunteers and other community members in improving health practices, and design, construction and use of toilets. It may be noted that households were mobilized to construct toilets and participate in all other project activities making their own cash and capital contributions. External assistance was limited to facilitation, training and encouragement as well as public recognition and awards on achieving ODF status.

The considerations for this driver are:

1. Whether the initiative involves individual households to benefit or community groups or a mix thereof.
2. What are the ways to structure the participation of community members and especially provide spaces for women to be in key decision making processes?
3. Mechanisms to ensure that community members including women are not excluded because of unsuitable

timing, place, and so on, of decision making bodies.

4. Exploring ways to promote the formation of women-based groups.
5. Ways of linking livelihoods to construction and O&M of toilets.
6. Developing and utilizing innovative training and communication material to empower community members including illiterate and neo-literate groups.
7. The potential for community members being in the driver's seat by structuring financial and technical assistance around this.
8. Identifying risks to participatory processes being rushed or curtailed and providing flexibility to respond to these.
9. Understanding local community dynamics and removing barriers to success (such as local forces that may oppose change and participation of new members).

### Critical Stages

Participation of households and communities and that of sub-segments has been demonstrated to be the most important factor that runs through the cycle across all successful

programs. Evidently, the preparatory and planning stages are crucial in instituting formal structures of participation as well as stipulating formal and informal processes that shall become operational in the planning, implementation and maintenance management phases. The most important aspect of this driver is the manner in which the participatory structures and processes transform across the project cycle. Mobilization and training seem very important in the preparatory stages whereas the supervisory and decision-making role of the local committees becomes paramount in the planning and implementation stages. This, in turn, transforms into a maintenance and management oversight function in the last phase.

### 5. Choice of Location, Technology Choice and Design Features

<b>Preparatory and planning stage</b>	<b>Implementation stage</b>	<b>Monitoring and evaluation stage</b>
---------------------------------------	-----------------------------	--

One of the most difficult constraints in slum settlements is the availability of open spaces. There is limited potential for constructing standard designs of toilets in these often dense and crowded places. Slum locations, such as those in the Parivartan Project in Ahmedabad, were fortunate in having spaces that households could carve out in/near their plots for individual toilets. Selected slum households in Bhopal had space available on which individual toilets could be constructed. In such situations, the next consideration is that of safe disposal. Available sewerage in Ahmedabad enabled households to connect to it easily.

In slum locations, wherein tenure or lack of space precludes individual toilets, CTBs present the alternative. For CTBs too, finding an appropriate location is likely to depend on a number of factors including necessity to clear out existing structures or change of actual land use, ownership of the land, ease of access for the potential user community, proximity/access to the water and sewerage networks, sub-surface conditions, proximate neighborhood, and so on. The ULB and the local communities need to work closely together to identify the right location, keeping the above

factors in view. Since many ULBs are legally authorized to acquire and reuse lands (belonging to the ULB, state government or other private parties), this is likely to be easier to resolve. It is also important to consider locations that should be avoided, for example, a desolate/isolated area (particularly in smaller urban centers), area close to a temple, and so on.

Access to water supply, drainage and sewerage/septic tank cleaning services need close attention during evaluating alternate locations since these can have long-term cost and management implications.

A well-designed CT will need to signal good quality of construction and maintenance in order for it to attract users. It has to be kept in mind that a CT is a permanent structure. Material used in construction should be of specified quality and standards allowing a lifespan of at least 30 years. It should not require frequent replacement or repair, as funds might not be available within the community or responsible municipality. The workmanship and quality of work should be good. In addition, the preferences of the user community must ideally be incorporated during the design stages.

In Tiruchirappalli, Mumbai and Pune, successful sanitation initiatives involved construction of bright, well-ventilated, properly constructed CTBs. In the successful slum sanitation toilets though, for example in Tiruchirappalli, adequate arrangements for water supply, provision for bathing and washing clothes, good quality flooring and shutters have made the toilets attractive to users.

This also means that capital costs increase but if these are maintained and managed properly, the toilet structures last longer and users are willing to pay for these facilities, making these sustainable. The introduction of continuous water supply and power has been one of the distinctive features of successful public toilets too in Indian cities.

Different studies have shown that common deficiencies in toilets are to do with poor design, lack of user-friendly features, indifferent construction quality, poor maintenance, and so on.

Some of the O&M costs are attributable to water supply, disposal/cleaning of the septic tank and electricity bill, apart from salaries of personnel and cleaning materials. Connecting to sewerage offers the cheapest disposal solution; else regular arrangements for the cleaning of septic tanks need to be in place. Getting large septic tanks from private parties often turns out to be expensive and hence ULBs provide these services free or at a subsidized rate to slum community toilets. It must be ensured, though, that there is adequate space for cleaning/vacuum tugs to reach the septic tank. For water and electricity too, appropriately subsidized special tariff categories are required to render the O&M cost affordable for this segment.

It is an accepted practice to have clearly demarcated and separate toilets for men and women. This may be achieved by providing separate entrances or locating them on different floors. It is important to provide for easily accessible and specially designed toilets for differently-abled persons. These toilets may also be useful for the elderly who might find using normal toilets difficult. Keeping in mind the special needs of children, child-friendly toilets were introduced in Tiruchirappalli, Bhopal, Pune and Mumbai. The Gramalaya toilet, with colorful pictures and illustrations drawn on the walls, was developed to promote toilet habits among children at an early age. There are half-doors that ensure that

the child can see the parent and feel safe. On the other hand, many of the child-friendly toilets in Pune and Mumbai CTBs remained unused. Hence, it is very important that child-friendly toilets are designed and their use promoted in a planned manner.

The sub-structure, super structure and services and features in the CTB have implications on how attractive it is for users, and therefore what they are willing to pay for using it. Specifications such as adequate floor slopes to ensure that water does not stagnate and form puddles anywhere in the toilet block, paving of the outdoor area in front of the entrance to the toilet block to prevent footwear carrying mud inside, and so on, need to be considered during construction.

In many slum locations, however, the capital cost and attendant O&M costs may be perceived to be too high and unaffordable by the ULB and for the community. Therefore, it is important that different design options are produced and discussed with their attendant capital and O&M cost implications. The financing source and constraints thereon will also affect the choices made in this regard. The cost in Mumbai SSP increased from INR 55,000 per toilet seat in 2006-07 to almost INR 1,50,000 in 2013-14. Limitations of land also could necessitate exploring options such as multistoried structures in Mumbai SSP.

### Box 11: Common Design Deficiencies

- Number of toilet seats available falls short of the actual requirements of the community with the result that CTBs are crowded and users experience long waiting times (especially looking into the male-female ratio, there should be more seats for women);
- Special requirements of children (small squatting seats) are not met;
- Separate space for washing clothes is not provided; bathrooms are used for washing clothes resulting in long waiting times for other users;
- Poor ventilation results in foul smell which attracts insects;
- No proper place is provided for people to wait;
- Adequate water supply is not available on continuous basis;
- No lighting for use of toilets at night is provided;
- There is no proper disposal system. Septic tank effluent is usually discharged into the open drains causing an obnoxious odor, health hazards and becoming a breeding ground for mosquitoes and other insects; and
- Maintenance is unsatisfactory because of poor flooring, improper drainage, lack of a caretaker room, store, and so on.

Source: WSP 1995, Guidelines on Community Toilets, p.6.

**Box 12: A Comparison of the Mumbai and Tiruchirappalli Approaches**

Mumbai SSP	Tiruchirappalli
<p>The SSP is a project for the construction of CTBs, aimed at providing sustainable sanitary facilities to the slum dwellers of Mumbai. It also focused on creating awareness, alleviating health risks, community capacity building and improving the urban environmental conditions.</p> <p>The project has demonstrated the effectiveness of constructing a high quality asset with 24-hour water, power and sewerage connectivity, with a long potential service life.</p> <p>The sanitation technology and layout and amenities provided were designed in close consultation with the community, with optimum utilization of available space. Since land in Mumbai is scarce, the demolish and reconstruction option was the preferred one. The project opted for multi-storey construction (one floor each for women and men, each with 10 toilet cubicles or more, separate sections for men and women, additional facilities for children and disabled persons, urinals, and bathing areas). Quality standards include ceramic-tiled floors, aluminum shutters, galvanized iron (GI) water pipes, cast iron (CI) sanitary pipes, circulating areas. Other standard features are: bathing cubicles, urinals and squatting platform/space for children. The latter is specially designed at a child-scale, with a certain degree of openness to allow for adult supervision, and it is often equipped with special handles to help balance.</p> <p>The SSP provides 24-hour water supply (through an overhead tank), electricity connection for lighting and waste disposal to sewers, where feasible, or to septic tanks and aqua privies. In order to guarantee safe disposal of sewage, the blocks were connected to the municipal sewerage network. Where this was not possible due to a difficult location, alternative in-situ methods were used making sure that local capacities are built within the community for the maintenance of the system.</p> <p>In most CTBs, the top floor is being used for the caretakers' residence as an incentive for the caretaker to live on the premises. This means lower management and maintenance costs (as the accommodation forms part of his salary). Housing the caretaker of the CTB directly in the same building or on the same plot can have a positive impact on safety and security. Further, this also prevents robbery of CTB items (for example, light bulbs, water pipes or pumps) and use of the toilet block for illegal purposes by anti-social elements can be reduced and the security, especially of women, increased. Where these rooms are not used, they have been put to use for community activities (child recreation center, library, among others).</p>	<p>The focus of Gramalaya was on delivering a range of options from conversion of dry community latrines into modern flush-out toilets, construction of new toilet complexes as well as individual toilets, depending on demand, status of tenure, and availability of space.</p> <p>The CTBs in Tiruchirappalli provide a clean environment, child-friendly seats, disabled-friendly seats, facilities for hygienic disposal of cloth used as sanitary pads during menstruation and hand-washing facilities (basins with soap) in most Women's Action for Village Empowerment (WAVE)-supported toilets. These toilets have 10 seats for men and 10 for women. They also offer bathing and clothes washing facilities.</p> <p>Other features included provision of safe drinking water through handpumps, standposts and repair of existing sources. SHE teams also sell soap, shampoo sachets, oil, talcum powder, and so on, on the toilet premises. SHE teams and WAVE federation have built their own community centers, and gardens are promoted around all toilets.</p> <p>Since water is drawn from borewells using electric motors, the average monthly expenditure on electricity is as high as INR 1,200, and ranges up to INR 5,150. Initially, the TCC covered the electricity costs and communities managing the CTBs were not required to pay charges. However, a few years ago, TCC began passing on these charges to the communities. Appeals by ward councilors, SHE teams and WAVE to TCC on the grounds of insufficient income have resulted in exemptions in some CTBs and others now pay domestic rate versus the commercial rate which is much higher. Currently, 65 percent of WAVE complexes pay for electricity. All toilet complexes are connected with underground drainage (or sewer) facilities.</p> <p>The caretaker room is replaced by a meeting room, where the community and the NGO members meet, to discuss Information, Education and Communication (IEC) activities and financial audits.</p>

Sources: Sulabhenvis (n.d.); WaterAid and Gramalaya (2008); WaterAid India (2006); WSP, 2006.

**Box 13: Recommendations for Construction****Materials and workmanship**

Based on the type of waste disposal and water supply, and number of toilet seats, urinals, baths and washing areas to be provided, a layout plan of the major component of the CTB including disposal system and immediate surroundings should be prepared keeping in view the land area available. Deriving from that, the construction drawing of the CT needs to be prepared and material choices need to be made. All construction works should be carried out according to the relevant specifications, approved designs and drawings. It should always be kept in mind that a CT is a permanent structure. Material used in construction should be of specified quality and standards allowing a lifespan of at least 30 years. It should not require frequent replacement or repair, as funds might not be available within the community or responsible municipality. The workmanship and quality of work should be good. Both are important to insure a long life-cycle of the community toilet.

**Superstructure**

The walls of the superstructure could be of bricks and cement or any comparable low-cost material. Separation walls between individual facilities need not be very high, but enough to provide user privacy. The roof of the superstructure may be of reinforced cement concrete (RCC) or red stone with cement or GI sheet. RCC is the most durable, requiring least or no repair or maintenance, but costs more. Red stone costs a little less than RCC but its life is much shorter than that of RCC. Costs for GI sheets are almost the same as for red stone and it has a long life and requires low repair and maintenance. The door of the complex and each individual cubicle, respectively, is also an important consideration. The three different materials commonly being used are wood, iron, and plastic. The most common material used for doors is wood and iron sheet. Plastic doors are durable but cost more than the other two.

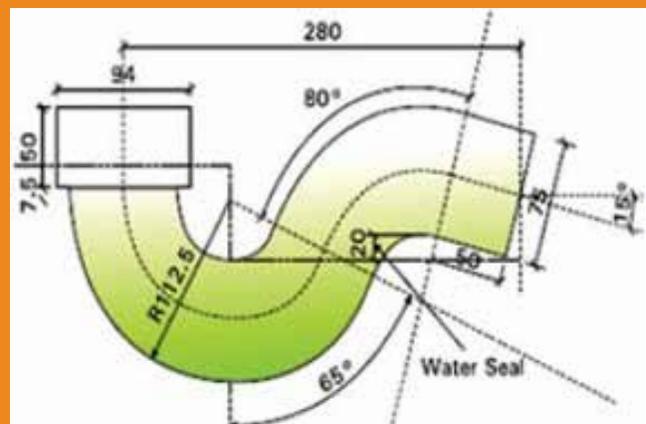
The water reservoirs and pipelines should be tested to avoid loss of valuable natural and financial resources. The robustness of sewers is equally important to avoid groundwater contamination and respective precautions should also be taken when constructing onsite systems.

**Toilets**

The toilet seats should consist of a toilet bowl or squatting pan and a water seal or S-trap. The squatting pan should have a slope of about 25-30°, same as those used for household toilets. The squatting pans and traps should be fixed carefully so that the S-trap has a water seal of 20 millimeter (mm), requiring 1.5 to 2 liter of water per use of the toilet. Also, the top of the pan needs to be level with the floor so that the floor drains freely to the



S-trap or water seal.



Drawing of 20 mm water seal.

pan. Pans and traps may be of ceramic or fiber/plastic. The fiber/plastic pan and trap are useful in certain situations due to light weight, lower cost, longer life, resistance against breakage and ease of transportation.

For user comfort, there should be a 200 mm space between the rear edge of the pan and the back wall of the superstructure. Foot-rests should be fixed at the time of laying the floor. These should be about 20 mm above the floor level, inclined slightly away.

Source: WSP Internal Communication



Toilet pan with 28 degree slope.

**Table 2: Average capital cost per seat: a comparison between Mumbai SSP and Tamil Nadu ISP**

Mumbai SSP	Tamil Nadu ISP
SSP toilets cost per seat ranged from INR 50,000 to 70,000 in 2006-07, and INR 74,000-88,000 in the later period (Lot 8R).	By 2013-14, cost of constructing a 10-seater CTB was between INR 12-15 lakh for about 40 users per seat per day.
MHADA toilet (earlier provision of community toilets) blocks cost between INR 40,000 and 58,000 per seat. <sup>4</sup>	Municipal Corporation Integrated Sanitary Complexes (ISCs), typically 20-seater, would cost INR 50,000 per seat.
By 2013-14, per toilet costs were in excess of INR150,000 per seat.	Town Panchayat area ISC (6-10 seats) costs per seat estimated about INR 25,000.

Source: Estimates from Mumbai SSP (2014); Gramalaya (2014).

Especially with community toilets, the risk of the facility falling in disuse and disrepair is high not only because of poor maintenance management but also if the quality of construction and services/fixtures provided is of inferior quality. In Mumbai, the toilets constructed earlier in slums, were standard batteries of 10X10 (men and women separate) toilet seats but these had no water supply or electricity arrangements. Many of these fell into despair because they were difficult to use and clean, unsafe and unusable at night, and were prone to breakages and dilapidation easily. Similar toilet blocks are also seen in other cities.

The considerations in determining location, technology choice and design features are:

1. Availability of land and its location to be identified with the user community.
2. Access to network services including network, sewerage services, clear access to septage cleaning machinery, electricity, and so on.
3. Design options for sub-structure and super structure and attendant capital cost.
4. Sufficient separate facilities for men, women, children, differently-abled persons.

<sup>4</sup> SSP per seat costs are estimated on the basis of contract value and hence do not strictly indicate costs. MHADA CTBs are constructed according to cost norms provided by Gol.

5. Space for supervision, meetings, and other related activities so that the toilet complex becomes an extra source of revenue for the community or brings about a sense of togetherness in the community.
6. Provision of fixtures and user responsive features.
7. Financing, O&M management, O&M cost implications of preferred option.
8. Supervision and quality control to ensure construction quality and good finish.

### Critical Stages

The above examples show that the choice of location, technology and design features are important to consider in the initial preparatory and planning stages. In this stage, it will become clear whether an individual or community toilet is feasible. It is important to generate numerous design options with attendant costs at this stage and assess these with the community and the ULB.

Once the preferred option is chosen and designs finalized, the implementation phase needs to ensure good quality and timely construction. Upkeep and maintenance including preventive and minor/major repairs will become important areas of attention in the last phase.

### 6. Frameworks for Partnerships and Contracts

<b>Preparatory and planning stage</b>	<b>Implementation stage</b>	<b>Monitoring and evaluation stage</b>
---------------------------------------	-----------------------------	--

Most slum sanitation initiatives fall under the purview of government rules for making budgetary allocation, and following the due process, rules and regulations for planning and authorizing expenditure.

In many cases, where individual households are intended to benefit, the ULB needs to have clear criteria to select beneficiary. These are typically households that satisfy certain norms, for example, being from the Below the Poverty Line (BPL) category, owning/residing on plots less than a stipulated size, not owning sanitary toilets/owning dry toilets, and so on.

In the case of community toilets, identification of the user community can become complicated due to difficulties in stipulating boundary/eligibility conditions. One of the ways that may work is to get the community to form an informal association with memberships. Other options include treating all potential users equally and forming a management committee.

There are also options regarding the choice of agency/individual for design and construction. Typically, a specialized division in the ULB is responsible for design while assistance may be sought from specialized consultants as well. The actual construction may be awarded to contractors. In some cases, community members may also come forward to participate in the construction either as laborers contributing their labor share or, in some cases, slum dwellers groups may wish to construct the toilets themselves or engage their own masons and labor to get the work done. The above options for identifying the beneficiaries/users, the task of design and the agency for implementation need to be coherently packaged into a framework of either partnerships or contracts for proper implementation.

In the Kalyani community initiative, households and communities were free to get the work done themselves because there was no public funding involved in the construction. In the Tiruchirappalli toilet blocks, the process of design and construction was managed by the NGO in partnership with the community groups and the work was executed by contractors under their supervision. In the Bhopal initiative, too, the user WatSan committee monitored the construction of the community toilets, which was overall managed by the NGO and contractors. The Pune contract with NGOs extended beyond the construction phase and sought to incorporate a maintenance management arrangement after commissioning of the toilets. Though this has proved to be a challenge since a few NGOs maintained the toilet blocks for some time but stopped thereafter.

The Mumbai SSP had also contracted NGOs to carry out community mobilization, health and hygiene education, and separately planned to contract construction agencies which would then execute the construction contracts.

This approach of two different agencies working with communities in parallel did not work. After review and discussions, the Mumbai SSP came up with a new compact contract in which innovations were undertaken in designing the contracting framework as presented in Box 14.

If the contracting framework of the partnership between the ULB, slum community, NGOs and the private sector is not clearly laid out and agreed, the risks of failure become

very high. This could arise out of inadequate appreciation of incentives, risk and reward frameworks for the parties involved as well as operational ground level difficulties of working in slum communities that may have conflicts and contests. In case of the Pune initiative, expectations of proper O&M in perpetuity by NGOs and CBOs were belied by high costs and lack of financial viability of the CTs. This led to the toilets falling into disrepair in the wake of user communities unwilling to pay fully for O&M expenses.

### Box 14: Mumbai SSP “Compact” Contract

The Mumbai SSP’s unique features included a demand-responsive participatory approach; incentives for contractors, NGOs and CBOs to work together; contracting innovations; high technical standards and good features in toilets; CBO registration and handover for O&M management; and so on. However, during the initial years (1997-99) of the Mumbai SSP, the contracts let out (Lots 1 to 5) received limited interest from community groups and only 21 public toilet blocks were constructed. Reasons included:

- Residents in slum areas were not initially aware of the comparative advantage of the SSP toilet design over common alternatives such as the free MHADA toilets. Besides the SSP toilets required community contributions to be mobilized (not the case for either of the alternatives);
- The issuing of separate contracts for the NGO and building contractor did not provide either stakeholder with adequate incentives and contract tasks to effectively market the benefits of this particular type of RCC toilet; and
- The main project partners were on a learning curve on how best to design and implement the project.

These lessons led to the development of a revised project approach that was used for subsequent contracts. More than 300 SSP public toilet blocks were provided in the period 2000 to 2004 (Lots 6 to 8). Much better progress was achieved in the second half of the project through the following measures:

- Bundling the contractors’ and NGOs’ work into one “compact” contract, so that both parties worked together to promote the toilet blocks to community groups in an efficient manner. NGO or contractor led joint ventures are accepted;
- Inviting bids for larger contracts with the scope for the provision of 20 to 40 public toilet blocks each with 20 toilet cubicles for a whole ward. Such larger contracts were more attractive to capable contractors and NGOs;
- The above measures enabled the NGO and contractor to generate good demand for the SSP public toilets, by constructing one or more good quality public toilets that were demonstrated and promoted to nearby community groups;
- The incentive to provide more toilets with a 100 percent positive contract variation was allowed. This enabled better promotion of toilet blocks to new community groups and encouraged good quality toilet blocks;
- The provision for 100 percent negative contract variation increased the risk-taking ability of contractors in difficult areas where demand may not be generated. This protects against audit objections in the case of non-performance in a particular area;
- Flexibility across wards with larger contracts allowed a more demand responsive approach and was more attractive to contractors and NGOs; and
- A simple contract payment schedule, based on stages of completion, reduced the time and cost for interim payments.

Source: TARU-WEDC, 2005.

SPARC also highlighted this in its 2014 report, “The financial challenges that sanitation presents to the alliance between the Municipality and NGOs continue, billing and payments from the city are always delayed and advanced finance to the tune of 35 -45 percent of project costs is often needed if work momentum is to be continued.”

A severe constraint to providing slum sanitation services in many Indian cities is the lack of NGOs and private agencies with competence and skill in community mobilization, contracting and facilitating or managing good quality construction. This may pose absolute limits and necessitate initiatives for building capacities through training, exposure visits and partnerships with agencies that have worked in other cities. ULBs also need to recruit, depute from other departments/agencies, or contract personnel with contracting, community mobilization and community-interfaced engineering competencies early, so that there is a pool of people trained in these matters. Contracting, procurement and proper implementation supervision can prove to be a major source of delays if not done properly.

To summarize, the following aspects need to be considered while drawing up the framework for partnerships and contracts for construction and implementation:

1. Mechanisms to clearly identify users and user groups that will be the key community body to take ownership of design, construction and later maintenance management, that is, CBOs, women's SHGs, WatSan or WASH committees, and so on.
2. Exploring options of design and construction agencies including NGOs, private companies, existing resources within the ULB, and community groups competent to carry out construction, and so on.
3. Assessment of the capacity of NGOs, CBOs and private contractors.
4. Carefully developing the Memorandum of Understanding (MoU)/contracting/partnering framework such that roles and responsibilities and risks and rewards for each party are balanced.
5. Reviewing government procurement guidelines and securing special provisions in these to enable a flexible

and suitable framework (for example, the 100 percent contract variation in Mumbai SSP contracts).

6. Training and deploying a team competent in managing and supervising the contractor.
7. Developing trust and providing an environment for all parties to work together – removing perverse incentives.
8. Providing flexibility in design and costs to accommodate different types of implementations situations on ground.
9. Supervision of implementation and robust methods of assessing quality at the time of commissioning and handover.

### Critical Stages

While conventional work programs assume that procurement and contracting needs to be considered after the design process is completed, the nature of the slum sanitation initiative needs to engage with this question in the preparatory and planning stage along with generating options for the physical design, options for partnerships and/or contracting need to be generated and carefully assessed. In most cases, the finalization of the technical designs is closely linked to preferred options for implementation arrangements. In the planning and implementation stage, of course, the selection of agencies for different roles and responsibilities becomes a critical activity. Supervision and management of agencies remains critical through the implementation phase till commissioning and handover. Depending on the nature of the contract, the implementing agencies may also have a role in the maintenance and monitoring phase.

### 7. Empower Communities to Take the Responsibility of Managing Community Toilets

Preparatory and planning stage	Implementation stage	Monitoring and evaluation stage
--------------------------------	----------------------	---------------------------------

In the initiative that involved individual toilets, the households themselves were responsible for using and maintaining these on their own. Most successful community slum sanitation initiatives are based on the premise that communities are best placed to carry out O&M management of CTBs. Therefore, in case of CTBs, it is critical that community groups are organized, trained and provided the

necessary support and incentives so that they can manage the technical, institutional and financial tasks for maintenance.

The initial activities, that is, mobilization of communities, their involvement in decision-making about toilet location and technology, supervision of implementation, as described in the foregoing drivers, would already have resulted in the formation of some sort of a formal or informal community association. Depending on the local context, this association may be registered under a relevant act, for example, the Society Registration Act or Trust/Charities Act to give the association a legal status. This is necessary for the association to operate bank accounts, receive and expend money, and account for it in a transparent way to its members. Forming such an association also helps in ensuring accountability and preventing misuse/“capture” of the CTB.

Depending on the nature of the slum settlements, the size and exact composition may vary. It needs to be ensured that most of the user households are represented in the association adequately. This may be done on an area basis, for example, different parts/streets/pockets of the settlement. In addition, it needs to be ensured that women have a preeminent representation in the association – at least equal to men, preferably in some decision making role such as president, secretary, treasurer. This is to ensure that women as a user group are properly represented in decision-making that would affect their use and maintenance of the CTB. In the Bhopal initiative, a WatSan committee with six women and six men members as formed. The committee entered into a MoU with BMC and was involved in supervision of construction as well as carrying out maintenance management of CTs. In Pune and Mumbai, the facilitating agencies/NGOs intended to promote and train community groups for later management roles. The experience of mobilizing community groups was mixed. In some cases, groups were not involved in the preparatory and planning stages leading to their becoming token institutions. In other cases, some of these were formalized as registered bodies and handed over the maintenance management tasks. This underlines the need for strong community mobilization processes and institutionalization of roles and responsibilities of community structures.

The initiative in Tiruchirappalli demonstrated, early on, the multiple facets of mobilizing and empowering community groups, especially women, for management (and monitoring) of CTBs. The Tiruchirappalli initiative went beyond the conventional sanitation committee model and trained and mobilized women SHGs to manage the CTBs (this is described in the following sections).

The case of Kalyani demonstrates the use of NLs and Health Volunteers (HVs) in leading the community health initiative. Most households in the 44 slums in Kalyani built their own toilets and participated in upgrading community infrastructure as well as carrying out maintenance of these assets. There were no formal associations or committees created and the initiative worked through individual leaders and existing formal and informal groups, for example, cultural groups, youth groups, and so on. This was effective for an intense mobilization with close monitoring of behavior change at the individual and community levels. In Ahmedabad, too, communities were mobilized for participating in infrastructure construction/upgradation and management thereafter of the community assets.

One of the important tasks in securing a clear operating mandate for the CBO is the delineation of the roles and responsibilities between the ULB/implementing agency, facilitating agency/NGO, the private sector/contractor, and CBO at different stages of the project. In many successful initiatives, the institutional roles for maintenance are formalized through a bipartite or tripartite MoU, for example, between ULB and CBO and/or NGO.

It is very important that members of the CBO are provided training and capacity building to carry out their roles and responsibilities in an effective manner. This training initiative is best extended to non-office bearer members of the association as well so that there is some redundancy in the CBO capacities. Basic training needs to be accompanied by putting in systems or proper functioning of the CBO, including a schedule of meetings, maintenance of records, books of accounts and bank statements, receipt books, list of members and other documentation necessary according to the law that the CBO is registered under. Proper functioning,

documentation, accounting and disclosure not only help in maintenance management but also infuse identity and pride in the committee to work effectively. It is important for the CBOs to be fully trained in and be comfortable in interfacing with the utilities and other support agencies so that they can do rapid trouble-shooting of problems.

As soon as a toilet or a seat therein becomes dysfunctional, WatSan committees need to take immediate action and fix the problem so that users do not lose faith in the facilities, its management and the whole system. This requires capacity building of the CBO teams which needs to be undertaken periodically by ULBs.

The criticality of mobilizing community groups for maintenance management has been a common feature in all successful initiatives. However, some differences in approach are noticed across these initiatives as highlighted above. One of the practices noted in some initiatives, for example, Mumbai SSP, was to treat owners of houses in slums as legitimate members of the committee and exclude tenants from having a stake in the association.

In many committees, “democratic” practices such as regular meetings, maintenance and disclosure of books of accounts, and so on, may have been instituted during the project which may or may not have been continued. Apart from formal registered status, these norms and rules that underpin the formation of the CBO are very important to think through carefully. In many cases, lack of attention to these aspects may result in weakening or breakdown of CBOs and collapse of the CTB management. The ULB and facilitating agencies

also need to be active on ensuring that conflicts and disputes do not impact the functioning of the CBO association in the early stages so that their credibility in the community is intact.

To summarize, the following aspects are important to ensure a central place for the community group in maintenance management:

1. Developing a strategy for individuals and group in the community at the forefront of the initiative.
2. Identifying the appropriate composition, roles and responsibilities of the association.
3. Formalization and/or registration under the relevant acts.
4. Training and capacity building of the CBO members in decision making processes, maintenance of records and accounts, periodic elections, and so on.
5. Ensuring smooth functioning of the CBO and rapidly addressing any conflicts and disputes especially in the early stages. NGOs need to empower CBOs with the required skill-sets to ensure sustainability aspects.

### Critical Stages

The task of community mobilization starts at the preparatory and planning stages. An introduction of the expectations that CBOs will need to carry out maintenance management needs to be done at this stage. Formalization of the CBO's roles and responsibilities, its composition, legal status, and rules of functioning need to be completed through the implementation stage. The CBO becomes critical in the maintenance and monitoring stage.

### Box 15: Innovations in Training

A number of innovative approaches are being tested in simplifying technical and management aspects of sanitation; and using these as training and capacity building aides. Some of these range from materials that demystify the technology, whereas other modules are related to operating and maintaining toilets as enterprises. ULBs and NGOs working on community slum sanitation may identify and use such innovative training resources and organizations.<sup>5</sup>

---

<sup>5</sup> Cf. [www.samagra.org](http://www.samagra.org), for instance.

## 8. Management Models and Financial Viability as Key Elements for Successful Long-term Operation

<b>Preparatory and planning stage</b>	<b>Implementation stage</b>	<b>Monitoring and evaluation stage</b>
---------------------------------------	-----------------------------	--

While the formal organization and setting up of the CBO is an important milestone as discussed earlier, the rules and arrangements for managing CTBs sustainably need also to be carefully designed. These arrangements and rules or “management models” are also closely linked to the structure of costs and revenues of the CTB. This is critical in ensuring long-term sustainability of the CTB in terms of institutional and financial arrangements.

As discussed in the location and technology choice driver, the CTB’s running costs include:

- i. Electricity;
- ii. Water supply;
- iii. Sewerage and septage clearance;
- iv. Cleaning tools and equipment;
- v. Cleaning materials;
- vi. Salaries of cleaners, caretakers, and so on;
- vii. Minor repairs;
- viii. Major repairs; and
- ix. Other contingency costs.

The above costs are determined by the design, size, location and type of management model adopted. As mentioned earlier, water and electricity costs can be prohibitive in cases where the number of users is low and/or user charges are low. In such cases, the city corporation may choose to reduce the burden of operational costs on the CBO/maintenance groups by taking care of these costs. However, care needs to be exercised that such actions do not disincentivize efficient management or rationalize user charges leading to dilapidation of toilet blocks.

In most successful community sanitation initiatives, these costs are sought to be recovered from users by either charging:

- Monthly membership and usage pass fee – usually for unlimited use by members of the family; and
- A per use fee that could, in turn, be different for using the toilet, using the bathing facilities, washing clothes, and so on.

As individual households use and look after their own toilets, the simplest management method for CTBs could be some division of roles and responsibilities amongst users themselves to actually clean the toilets, manage the finances and undertake other related tasks. Such a simple arrangement is, however, rarely used in most CTBs of significant size. CBO members may themselves be busy with their own occupations, thereby, unable to devote too much time for actual management tasks. In most cases, CBOs opt for employing sweepers and cleaners to do the cleaning tasks. In most cases, the CBO keeps the management task to itself. These include setting the tariff, collecting revenues (monthly and or per use), paying salaries, purchasing and refurbishing cleaning equipment and materials, paying for services, and so on. Depending on how busy CBO members are and the financial viability of doing so, some CBOs also employ caretakers to man the toilet and keep it running during working hours.

In the Mumbai SSP, the caretakers’ families were incentivized by providing them accommodation located on the top floor of the toilet block – housing being so scarce and expensive in the city.

In Tiruchirappalli, the management of the CTBs was handed over to women SHGs. Apart from managing the toilets, the SHGs were also permitted to sell soap and cleaning materials to users thereby helping improve the financial viability of the management arrangement. A detailed account of the Tiruchirappalli model is provided in the Box 16.

In contrast to the Tiruchirappalli management model, Mumbai SSP (and Pune, to some extent), experimented with a delegated management framework. This involved day-to-day management to be entrusted to the caretaker who would be given a monthly salary by the CBO. The provision of living quarters in the Mumbai SSP’s case would make the job of a caretaker an attractive one (given the high cost of accommodation in Mumbai). Some CBOs in Mumbai

**Box 16: The Tiruchirappalli Model**

Until the end of the 1990s, the slums of Tiruchirappalli, with their sanitation and toilet facilities in an appalling state, had a high incidence of diarrheal cases and water borne diseases, open defecation, improper disposal of garbage and disease transmission, and neglected and abandoned CTs. After 10 years, in 2010, the National Sanitation Rating 2009-10 ranked the city as high as the sixth cleanest in India in the sanitation ranking of Indian cities.

It all started with a major initiative launched by the NGO Gramalaya in 2000, mobilizing women into SHGs and launching an awareness campaign on sanitation through training. Gramalaya's comprehensive approach focused on construction and renovation of CTBs, introducing child-friendly toilets and providing safe drinking water, on one hand, and training and capacity building of CBOs, on the other. SHE teams were set up by the SHGs to propagate the message of sanitation, monitor the behavior of residents, and supervise the maintenance of the toilets. WAVE is a federation of all SHE teams in urban areas. The federation is headed by a president, assisted by a secretary and treasurer, and there are 12 executive committee members. WAVE meets twice a month and discusses matters relating to problems faced by SHE teams and solutions for them. WAVE guides SHE teams in the maintenance of community toilets and assists other SHGs to take over maintenance of CTs. The standardized procedure for keeping accounts and documentation, holding meetings, and so on, assists in ensuring smooth transition between SHE teams. WAVE also takes up issues connected with water and sanitation with the city administration and engages in sanitation promotional activities in other slums. Men also find a role through WatSan committees in monitoring the progress of the overall sanitation status of the slums in the city.

The average monthly expenditure of a community complex is INR 4,800, ranging from INR 550 to INR 15,700 per month. The major regular expenditure is on staffing, electricity charges, cleaning materials and electric motor repairs. Other expenditure includes WAVE membership fees (INR 100 to 500 per month depending on income), street cleaning and garbage collection, informal payment to septic tank cleaners, cleaning drains and blocked underground drains.

On an average, five staff per day work in the well-managed complexes. Two caretakers work each day on a shift basis and are paid between INR 20 and 50 per day, depending on the size and income of the toilet. There are two cleaners per complex who are paid around INR 1,100 each per month. The watchwoman is paid between INR 500 and 1,200 per month. These wages are minimal and there is no scope for saving costs through reducing wages.

Staff	Number	Salary per month (INR)
Caretaker	2	600-1,500
Cleaners	2	1,100
Watchwoman	1	500- 1,200

CT complexes require large amounts of water to maintain hygiene. Where bathing and clothes washing facilities are available, even more water is required. Since water is drawn from borewells using electric motors, the average monthly expenditure on electricity is as high as INR 1,200, and ranges up to INR 5,150.

Initially, the communities managing the CTBs were not required to pay electricity charges and these costs were covered by TCC. A few years ago, TCC began passing on these charges to the communities. Appeals by ward councilors, SHE teams and WAVE to TCC on the grounds of insufficient income have resulted in exemptions in some CTBs. Currently, 65 percent of WAVE complexes pay for electricity. Earlier, commercial rates were being charged but, after much lobbying by ward councilors, SHE teams and WAVE to TCC, domestic rates are charged.

A token system at the pay-and-use toilets has been developed. The typical user charge varies from 50 paise to INR 1 per use, while children, the elderly and the physically challenged have free access. After payment, each user is provided a token. This ensures transparency as it shows how many people used the toilet each day and how much income has been collected. A monthly card system is also followed and the rates set at lower levels – between INR 15 and 30 per family per month. At these rates, communities report that they are able to use the toilets. The average monthly income of a household relying on a daily wage in the slum communities is between INR 1,500 and 3,000. Toilet charges of INR 30 to INR 60 per month are estimated to be between 1 and 4 percent of the monthly income. These details are entered into account books kept in the toilet complex. Accounts are presented by the SHE teams to WAVE and by WAVE to Gramalaya, and are vetted by an external auditor. Having detailed information on the financial status of each toilet enables WAVE to monitor performance and intervene with advice on tariffs structures and loans when necessary.

After covering O&M expenses such as salaries and cleaning material like bleaching powder, soaps and phenol, and so on, the surplus is used for health and sanitation related promotional activities such as provision of street taps, domestic drains, garbage bins and street lights. Major repairs and any other management issues are also discussed at the WAVE meetings. TCC plans to hand over the management of the remaining CTs to communities not yet part of the WAVE federation.

Sources: Sulabhensis (n.d.); WaterAid and Gramalaya (2008); WaterAid India (2006); WSP, 2006.

also experimented with giving the CTB out on “contract” whereby, instead of a salary, they would be allowed to retain a portion of the revenues by the CBO, and manage the revenue collection, cleaning, and other activities from this fund. The outcome of such “outsourced” management models has been mixed, poses the risk of lack of accountability to the user community and the CTB becoming a “business” without accountability.

Management models:

1. Sharing of responsibilities within CBO members;
2. Management by CBO members including supervision of cleaning staff, and so on;
3. Appointment of a caretaker for day-to-day management along with overall supervision by the CBO;
4. Management handed over to SHGs; and
5. Others such as city level women’s group federation such as WASH teams.

Except in cases like Kalyani, where households were mobilized to put in their own financial resources for construction and maintenance of community facilities, most other slum sanitation initiatives have had considerable investment by the project (financed by the ULB, state government and/or

other donors) with limited or no capital contribution from the users. In any case, user contributions to capital cost are constrained by issues of tenure, that is, “ownership” of the CTB in legal terms would have to be retained with the state authority only. Thus, in most cases, capital for the CTB is almost fully financed by the project. In many cases, namely, Tiruchirappalli (for some CTBs), Bhopal and Pune, even the running cost of water supply and electricity is directly borne by the ULB. As the case of Pune shows, however, rationing or scheduling of electricity supply may result in water tanks drying up in the middle of the day (in Pune, the power supply from the street lights was diverted at night to pump water). Hence, utilities such as power water and sewage cleaning services need to have dedicated provision for smooth functioning of CTBs. The “utilities’ subsidy” is targeted to improve the financial sustainability of the CTB as a viable enterprise. However, the revenues raised from the monthly pass, in combination with the per use charges, would have to be adequate to meet at least the O&M costs in order for the CBO and CTB to be sustainable entities.

In the case of Tiruchirappalli, a monthly rate of INR 300 is charged for regular member user households and INR 1, 2 and 5 charged for every use of the toilet, bathing and washing, respectively. The Tiruchirappalli experience suggested that

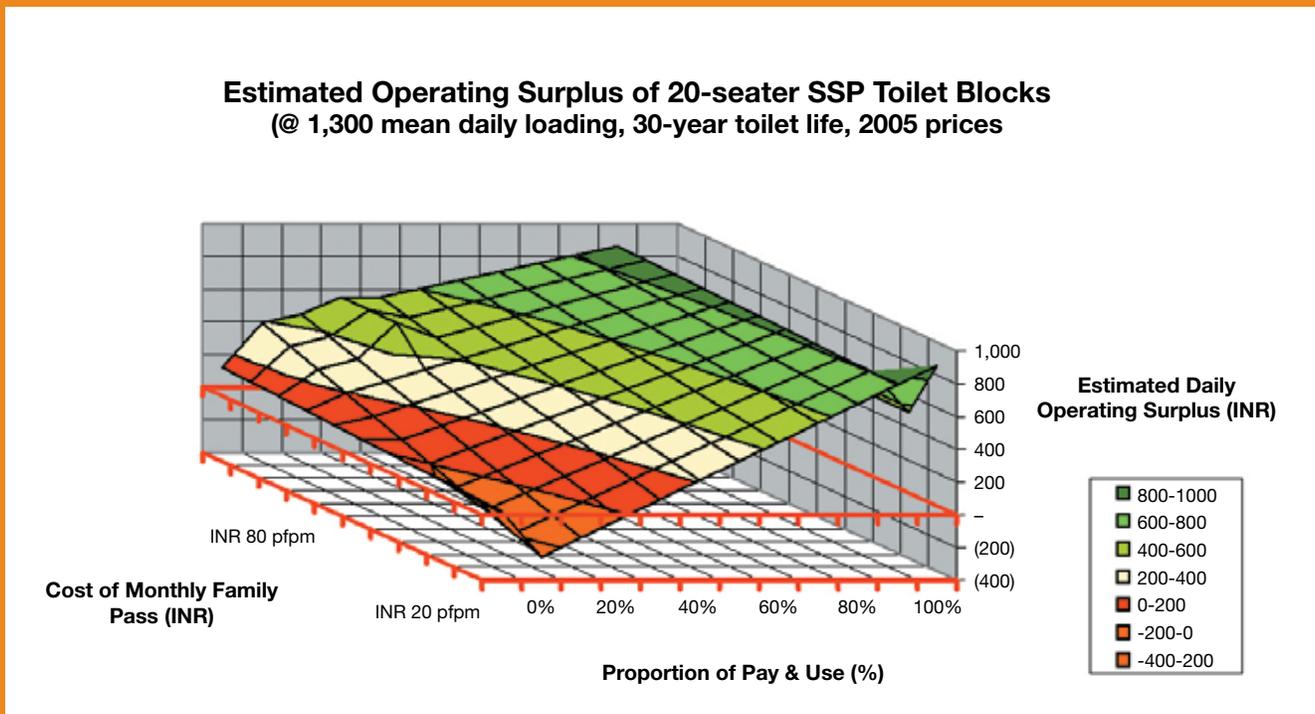
charging a monthly rate was not as effective a model as pay per use, as only a few users renewed monthly memberships whereas pay per use was deemed more convenient perhaps. Similarly, member households in Bhopal are charged at the rate of INR 75 per month, up from INR 30 per month earlier. In Pune CTBs, member households were charged between INR 20 and 30 per household per month. This is reported to be still too low to cover all the costs, but communities perceive anything higher than this unaffordable.

Following a careful consideration of capital and O&M costs, the Mumbai SSP CBOs initially set an average monthly pass rate of INR 30 per household for unlimited use by all its members. The pay per use rate ranged from INR 0.50 to 3 depending on the location of the CTB. An analysis carried out of the different combinations of revenues from monthly pass holders and pay per users compared to the structure of costs revealed the most likely combination for achieving financial sustainability.

**Box 17: Estimated Daily Operating Surplus in Mumbai SSP**

The first step in the sustainable management of CTBs in Mumbai will be an operating surplus which enables CBOs to run their blocks without making a loss. This analysis was simulated at the main daily loading of 1,300 users for a 20-seater toilet block at 2005 prices. The figure presents an operating surplus surface that is defined by two variables: the proportion of pay and use users (from 0 to 100 percent) and the cost of a monthly family pass (ranging from INR 20 to 120). The operating surplus for a typical toilet block ranges from a loss of INR 400 to a surplus of INR 1,000 per day depending on where the toilet block lies on this surface. The operating surplus line (dashed green) separates those conditions in which a loss is made (orange and yellow) from those in which a marginal surplus is made (white) and those in which a moderate and substantial surplus is made (various shades of green).

**Estimated Operating Surplus of a 20-seater SSP Toilet Block**



From this graph, it is clear that surplus is strongly influenced by the proportion of pay and use users. A minimum of 40 percent of pay and use users is required for an existing toilet block with a monthly family pass of INR 20 and close to 100 percent recovery to show an operating surplus. Similarly, it would require a raise in the monthly family pass fee to over INR 120 to enable a toilet block with no pay and use users to have an operating surplus.

Currently, the toilet blocks are financed with 100 percent capital subsidy (and in some cases, O&M subsidy) and have the potential to earn borderline to super normal profits. But a significant proportion of toilets in the city will be located in peripheral areas where the proportion of pay and use users will be limited or close to nil. If these toilet blocks are to survive financially, some elements of capital as well operational subsidies may be necessary.

Recently, new models of social entrepreneurship have sprung up whereby caretakers maintain the CTBs on individual basis. However, one constraint is that such individuals may be willing to take up maintenance of CTs only in viable and profitable areas. However, the SHGs or WatSan/SHE teams may have incentives to maintain toilets even in less profitable areas/no-loss-no-profit. The maintenance groups in the loss-making units is cross subsidized by the WAVE federation from the monthly contribution fees collected from SHGs across the city, in case of Tiruchirappalli.

Source: TARU-WEDC, 2005; Gramalaya, 2014.

As has been noted in some slum initiatives, there may be a temptation to price the monthly pass much lower than the pay per use rate in effective terms. This could involve retaining the benefit of low-cost usage amongst a very small group and forcing other users, even if they are tenants, to pay per use, resulting in the latter having to pay more than three times that the other families pay. This kind of pricing may cause perverse behavior. Another concern noted in some CBOs is a very aggressive pricing of the monthly pass itself – sometimes in excess of INR 100 per family (for example, some CTBs in SSP Mumbai), approximating the pricing of public toilets. This may defeat the very purpose of the CTB in making available access to affordable and wholesome sanitation for slum dwelling households. Therefore, it is extremely important that issues of affordability are carefully assessed along with the structure of costs locally. As some of the CTBs in Pune experienced a mismatch between costs, affordability and expectations of service levels can pose considerable challenges for the CTBs being managed sustainably.

The above account clearly shows that the nature of the CTB (as discussed in the location, technology choice and design section above), management model adopted, pricing of monthly pass and per use charges and amount of subsidy available from the ULB together determine the financial

sustainability of the CTB. There are options too for the management model that may be suitable for the slums and cities in question.

To summarize, the considerations in determining the management models and financial viability thereof include:

1. The type and design of the toilet and attendant capital cost options must be evaluated for the O&M management and O&M cost implications that they have in the planning stages.
2. The maturity and capacities of the CBO in undertaking management tasks – the training and capacity building required for enabling them to do so.
3. Affordability of different sub segments in the community, and the potential “markets” of floating pay and use population.
4. Estimation of regular O&M costs, and contingencies for repairs, to arrive at monthly and per annum costs; the possibility of ULBs taking care of part of the utility costs may be explored.
5. Assessment of the match between revenues and costs and detailed discussions with community members on the pricing and necessary contributions.
6. Agreement with ULB/local ward offices about cleaning of septic tanks, major repairs and maintenance needs,

and sharing/contribution to water, electricity, and so on, bills as necessary.

7. Projection and agreement of the CBO with the community on time bound increases in membership/ user fees.
8. Regular review and evaluation of the management model and changes as needed.

### Critical Stages

Management models and financial viability considerations lie at the heart of any slum sanitation initiative and must, therefore, be at the center of discussions throughout the project cycle. While the preparatory and planning stages will afford the opportunity for the project/ULB to explore the options and draw out their implications for the CBO and community members at large, the implementation stage will require some of these to start being tested. By the time of commissioning and handover, there should be absolute clarity on the model to be adopted while the later stages must review these and make corrections as necessary.

### 9. Performance Monitoring and Evaluation

<b>Preparatory and planning stage</b>	<b>Implementation stage</b>	<b>Monitoring and evaluation stage</b>
---------------------------------------	-----------------------------	--

The long-term sustainability of benefits from improved sanitation can only be ensured if households continue to use their individual toilets or the CTBs are properly maintained and managed. In either case, there needs to be a robust mechanism to track use behavior and monitor whether the upkeep arrangements are satisfactory. Even in case of individual household toilets, many first-time user households may have difficulties in changing all members' behaviors to using toilets (rather than defecating in the open); or some may abandon use after a break-down in the toilet occurs. Hence, some light-handed community-based monitoring is required even for individual households; also it can offer avenues to reach out with health and hygiene promotion communication too.

The Kalyani initiative was dependent on the key roles of NIs and HVs not only for initial mobilization but also for

monitoring the behavior of community members. A weekly meeting of these leaders and volunteers was convened at the municipality to take stock of the results of mobilization, progress of uptake of ideas among people, and behavioral aspects of toilet use, hygiene, and so on. At another level, the elected members of the municipal body had color codes to mark and display the status of slums in their wards; depending on the proportion of open defecation slums, the color code would change for their wards, and this was on display.

M&E of the performance of CTs takes on a more serious character since it needs to be organized, resources provided for, and incorporated ideally in the core service delivery function of the ULB or the responsible agency. The reasons for a formalized monitoring system of CTBs are manifold:

- i. The physical systems of the CTBs may break down requiring minor and major repairs – these have to be addressed immediately as communities cannot afford to go without using toilets or using toilets that may be partially dysfunctional;
- ii. Disputes regarding management, or amongst users, can jeopardize the use of the CTBs by users, and hence need to be resolved immediately;
- iii. Stoppage of services/utilities, for example, water, power, septage clearance can severely affect the functioning of the CTBs, and hence issues related to these will have to be addressed in consultation with the respective service providers; and
- iv. Changes in project rules and policies may be possible to incorporate based on actual experience of use and management in various CTBs, especially when these are in large numbers in the city, and provide basis for improvements in the same and other CTBs.

Therefore, the project cell, or ideally the ULB, needs to put in place mechanisms by which regular and independent monitoring of the different aspects of the CTBs' and CBOs' performance can take place, and corrective actions taken on time.

In Mumbai, the MoU signed between the ULB and toilet managers lists minor repairs as the responsibility of the

managers and major repairs as that of the ULB. After a passage of time, this MoU triggered actions as some CBOs came forward with their problems with services, for example, high electricity bills, septage clearance problems, and so on. While the SSP Cell responded to these support requests, the BMC later institutionalized some of these support functions to the respective Ward Offices. As outlined elsewhere, timely repairs and maintenance are crucial for the system not to fall into disrepair and, more importantly, for users to not lose faith in the credibility of the system.

In order to monitor performance of SSP CTBs centrally through, its SSP Cell, BMC has put a monitoring mechanism in place in recent years. Based on tendering, the

two implementing agencies have won commissions to carry out monitoring of the other agency's CTBs using a standard monitoring protocol and present results on a monthly basis.

In Bhopal, a more formal user satisfaction and impact study was reported to have been carried out in 2008. Numerous studies and reviews conducted on Ahmedabad's SNP and Pune and Mumbai initiatives also highlighted the achievements and limitations – leading to corrective actions, new program initiatives using modified approaches as well as informing policies in turn.

It is important to design a monitoring and assessment system that is economical and easy for stakeholders to use. While end of project assessments and evaluations may be

**Figure 1: A sample MoU**

**Scope for Minor and Major Repair Described in MoU to be signed between MCBM and CBO**

<b>CBO</b>	<b>MCBM</b>
1. Maintain the overhead RCC/HDPF water storage tank	1. Major structural repairs: Structural repairs include i) Collapse of external wall ii) Or collapse roof slab due to corrosion, etc. iii) Repair to sewer lines, maintenance of manholes, de-silting of sewers, etc., which are located outside the boundary of the settlement
2. Water charges and electricity charges will be borne by the CBO	Fees for initial electricity and water connection will be borne by MCGM
3. The CBO will cooperate with MCBM for any major structural repairs/maintenance of the drainage and utility services	–
4. The CBO shall use effective disinfectant and deodorants for cleaning of PSC/urinals	–
5. The CBO shall replace of defective and damaged wiring and electrical fittings, replacement of worn out pipes, drainage pipes or other fittings to maintain clean conditions	–
6. The CBO shall remove drain choke in the PSC and sewage disposal system	–
7. CBO shall carry out repairs/replacement of doors, windows/broken tiles, plaster RC jallies, wiremesh, ground channels soil, urinal fixtures, traps, flushing cisterns, collapsible door, etc.	–

Source: MoU between CBO and MCGM. SSP, MCGM, 2014.

possible to carry out only at some points in the project cycle, the daily, weekly and monthly monitoring must be simple, and devolved to community members, CBOs, and the ULB – and incorporated in their work schedules so that these are most useful in operational management. Of course, the importance of independent validation of results cannot be denied. Monitoring of the physical condition

of the CTBs can be done by the CBO but, sometimes, validation may be needed by random visits and exercises by the project cell/ULB. Similarly, it is necessary that there is periodic verification of accounts, and financial records of CBOs. Hence, a mix of self-reporting, exception reporting (especially when repairs are needed), and validation will make the monitoring process robust and reliable.

### **Box 18: Tiruchirappalli's Approach to M&E**

The Tiruchirappalli initiative showed another approach to monitoring and assessments, whereby the federations of the SHGs carry out active monitoring of CTBs' performance and related indicators.

The community latrines in the slums were totally abandoned by the local residents since there was no proper maintenance system. The damaged septic tanks and toilet pans filled with feces made the CTs unusable. The slum dwellers were unaware of the dangers of open defecation and water borne diseases. With the involvement of CBOs, Gramalaya started its urban intervention in sanitation, focusing on the provision of a sanitation facility to the slum dwellers of Tiruchirappalli.

SHE teams manage the CTBs on a daily basis and present account books kept in the toilet block to the WAVE federation. WAVE guides SHE teams in maintenance of CTs and assists other SHGs to take over toilet maintenance of CTs. Having detailed information on the financial status of each toilet enables WAVE to monitor performance and intervene with advice on tariffs structures and loans when necessary.

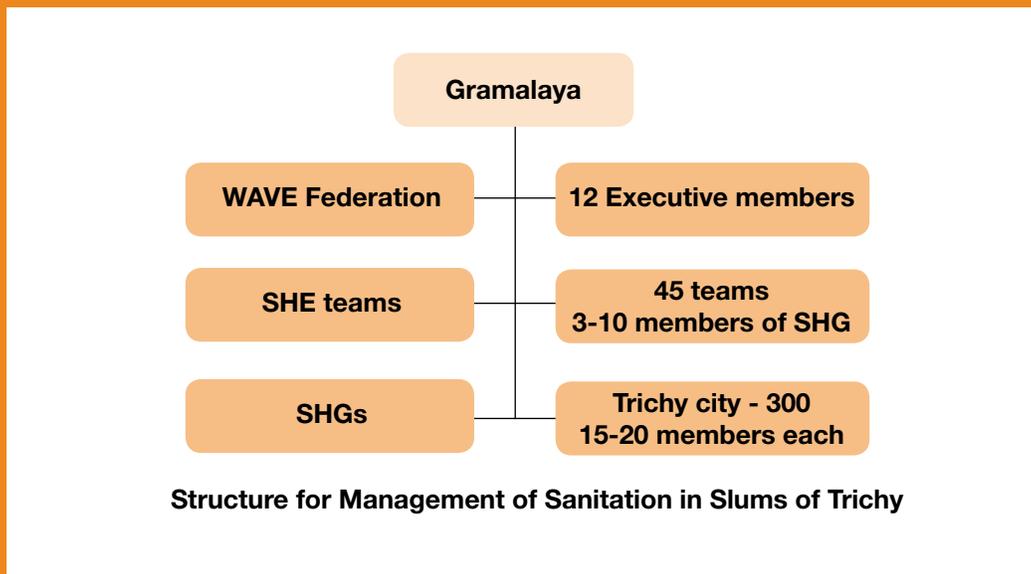
Seeing the success of the CTBs under Gramalaya, the TCC has committed to outsource the management of all of its 390 CTs with a total of 4,643 seats to provide access to slum dwellers that do not have toilets in their homes. TCC is scaling up the work done by SHGs (that have formed WAVE federations) in 148 CTs and replicate CTs across the remaining 237 slums. TCC maintains 390 CTs. Tiruchirappalli will be the first city in the state to engage user members in O&M of CTs across the city.

TCC not only provides funding support for CT renovation and supports the CBOs in repair and maintenance works of CTs, it jointly monitors the CTBs under Gramalaya. TCC, in its monthly review meetings, has brought on board WAVE members who provide their inputs and suggestions as part of the City Sanitation Taskforce. The TCC sanitation inspectors and junior engineers are also involved in monitoring of the CTBs.

In certain cities such as Tiruchirappalli, it is a combination of the ULB and NGO that ascertains the maintenance of the CTBs. The municipal corporation is expected to carry out major repairs to CTBs once in three years. TCC not only provides funding support for CT renovation but also covers electricity costs in some toilets and provides piped water supply in some toilets.

Gramalaya's workers regularly visit the toilet blocks that are managed by the SHGs it supports. They have prepared a pro forma that lists aspects of cleanliness and condition of toilets to be checked. The information collected guides the SHGs in determining what action needs to be taken by toilet managers and the ULB. If any action is required at the ULB level, toilet managers may pursue the matter directly with the ULB. If toilet managers, especially of toilet blocks that have few users, are short of funds for undertaking repairs, they can borrow money from the SHGs. This ensures that repairs are not neglected for want of funds; at the same time, there is a cross subsidy for repairs from economically viable toilet blocks to those that are not.

The WAVE federation of SHGs provides support not only in training on sanitation issues, but also in M&E. The WAVE members are already members of the City Sanitation Taskforce constituted by TCC. TCC has also introduced City Hope Centers (Nagara Nambikai Maiyangal) since March 2014 to maintain the CTBs and parks, and assist authorities in collection of taxes. For every six wards, one City Hope Center will be formed.



Source: Sulabhenvis, n.d.

Sources: Sulabhenvis (n.d.); WaterAid and Gramalaya (2008); WaterAid India (2006); WSP, 2006.

Poor monitoring of the performance of CTBs and/or CBOs can cost the initiative dearly since the causes of failure set a downward spiral of poor performance, poor credibility and willingness to pay, leading to reduced viability, and so on. In some cases, the responsible cells may not enjoy the ULB's priority and, hence, performance feedback may not be taken seriously.

In summary, the key consideration in instituting a M&E/assessment framework involves:

1. Identification of different critical aspects and levels of monitoring during the preparatory and planning phases – this include project monitoring at one level (usually done by the project/ULB) but identification of indicators of use, physical condition, CBO management, accounts and finance, health and hygiene behavior changes, inclusion of stakeholders, and so on.
2. Incorporation of some key monitoring indicators in the MoU between parties so that these indicators become action items for specific partners.
3. Some monitoring indicators may need standards to be set out to measure actual performance against. For instance, what would be the indicator of “cleanliness” comprise? This could be “no spit”, “no slime”, “no yellow pans”, and so on.
4. Identification of penalties and rewards, however soft or hard, for achieving certain performance standards.
5. Periodic studies and assessments on user behavior, satisfaction, management and financial indicators of CBOs, condition assessment of physical features and fixtures of CTBs, and so on.
6. Systematic and rapid sharing of the results of monitoring and assessments with all stakeholders including CBOs, communities, ULBs, NGOs, and others members of the public. For example, Yearly Public Toilet Surveys on the condition of assets, usage and maintenance management,

revenue situation, users' satisfaction, and household surveys for behavioral changes, and so on, could be undertaken.

### Critical Stages

The formulation of roles and responsibilities in the planning and preparatory stages needs to identify the method and agency/agencies responsible for M&E at different levels. Project level monitoring of activities will need to continue through the full cycle but, in different phases, different aspects become critical to monitor. The implementation phase is one in which the framework for monitoring of the CTBs' and CBOs' functioning, can be established and activated at handover and commencement of the maintenance management phase. The experiences and results of monitoring and periodic assessment need to feed back into corrective actions, changes in project rules, policies and programs. These could also help in taking stock, periodically, at the city or state levels, and sharing information with stakeholders.

## 10. Integration of Slums with Sustainable Services in City-wide Services

As the drivers above show, a number of approaches and entry points are possible for slum sanitation services delivery to be successful and sustainable. In practice, not all drivers are possible to pay equal attention to. In fact, strategic entries may be from unexpected opportunities that present themselves.

However, the ultimate goal of services provision should be to ensure that households and communities themselves are empowered to deal with the service providers directly as citizens and customers. Where private services are provided to customer households directly, many of the roles of services provision change for state agencies and ULBs to those of enablers and regulators. With the Parivartan project as an entry point, the electricity supply to slum households in Ahmedabad showed a successful and sustainable model of services delivery directly.

### Box 19: Torrent Power AEC leads in Slum Electrification

Ahmedabad with a population of 5 million and an area of 190.84 square kilometer is India's fifth most populous (2011 Census) and seventh largest city. This initiative started with the electrification of five slums in 2001 and scaled up to 710 slums in a span of seven years.

The slum electrification project was a result of a multi-stakeholder collaboration between AMC, which is responsible for the civic infrastructure and administration of the city of Ahmedabad, the United States Agency for International Development (USAID) and Ahmedabad Electricity Company Ltd. (AEC).

A very small proportion of households in the informal settlements in Ahmedabad had legal electricity connections in 2001. This meant high losses for the Torrent Power AEC, a private utility distributing power in Ahmedabad.

Since 2002, AEC adopted new and innovative methods for maintaining and improving the quality of power supplied to its customers. A viable option of connecting informal settlements to the electricity network was worked out for the AEC after discussions with a local NGO, SAATH, and project partner, the Self-Employed Women's Association (SEWA). A pilot was initiated in 2002 by AEC with financial support from USAID. It provided in-house electrical power in the first phase to each slum household, with its own household meter and compact fluorescent light bulb. Only slums already identified for development under the Parivartan program were eligible to participate in the pilot. Another condition for eligibility was obtaining a NOC from the Ahmedabad Urban Development Authority, which effectively secures protection from eviction to the slum dwellers. Seven slums were included in the pilot project. Working with SAATH, the AEC team disseminated information on its program through announcements by megaphone, cloth banners and handbills distributed door to door. In each slum, they arranged group meetings with participants and constituted local CBOs to implement the program. The costs of connecting the customer and installing internal wiring were split between the household, USAID and AEC; the household paid INR 3,350 and USAID and AEC each contributed INR 2,200.

The role of the NGO was to create awareness and motivate slum dwellers to access legal electrification. Since AEC requires slum dwellers to provide proper documentation regarding land ownership, income levels, proof of payment, taxes, and so on – something that most slum residents do not have – SEWA worked with slum dwellers to help meet the AMC's documentation requirements. Torrent Power AEC used a combination of NGOs and CBOs to perform certain intermediary functions such as customer recruitment, meter reading and bill distribution. Both the NGO and AEC worked with the CBO to identify a member (usually a woman) whom they then trained to read the individual household meters.

SAATH facilitated the process of availability of loans to the slum dwellers through SEWA Bank for payment of one-time connection costs. An account holder with the bank was required to save money for a minimum period of six months to be eligible to receive loans from SEWA Bank. The loans were offered at an interest rate of 18 percent. The CBOs helped AEC identify and target needy families and AEC provided connections to them at a subsidized rate cost of INR 1,700. In the post-pilot phase, AEC offered a connection charge of INR 5,200 for new connections in slums. Later, when more people came forward to acquire connections, the amount was reduced to INR 3,700. Eventually, it was reduced further to INR 2,500.

The pilot project was a great success and as many as 820 households in eight slums were electrified. Enthused by the success of the pilot, AEC scaled-up the initiative to more than 200,000 slum households. Given the scale of the challenge, a slum electrification program that would extend safe, reliable, and legal electricity connections to the informal settlements in the city in a collaborative approach was taken up. The initiative was integrated into a larger development program for slums and informal settlements, called Parivartan (Change) or SNP. The SNP began in December 1995 as a partnership between the government, Arvind Mills, NGOs and the slum community to provide infrastructure services including paved roads, water supply and underground sewerage to individual households, storm water drainage, street lighting, solid waste management and some landscaping.

AMC has helped convert a large number of unsafe and illegal connections into safe ones and reduce the losses incurred by the utility. The incidences of electricity theft decreased, while regular electricity use increased with a reported increase of 200 percent in average electricity consumption per day. The practice of installing meters outside the houses was extended to the entire city, following its immense success in the slum areas. As a result of the innovative methods and mechanisms, Torrent Power AEC's transmission and distribution losses are amongst the lowest in the country (13-14 percent) and customers enjoy a high level of reliability of power supply. This integrated utility has a generating capacity of 500 megawatt and it supplies close to 4 billion units of power to 1.25 million customers in Ahmedabad and Gandhinagar (<http://www.torrentlimited.com/aec.htm>).

Sources: WSP. 2007. Engaging with Citizens to Improve Services. May 2007.  
USAID. 2004. Innovative Approaches to Slum Electrification. December 2004.

# 4. Generic Steps for Slum Sanitation Initiatives

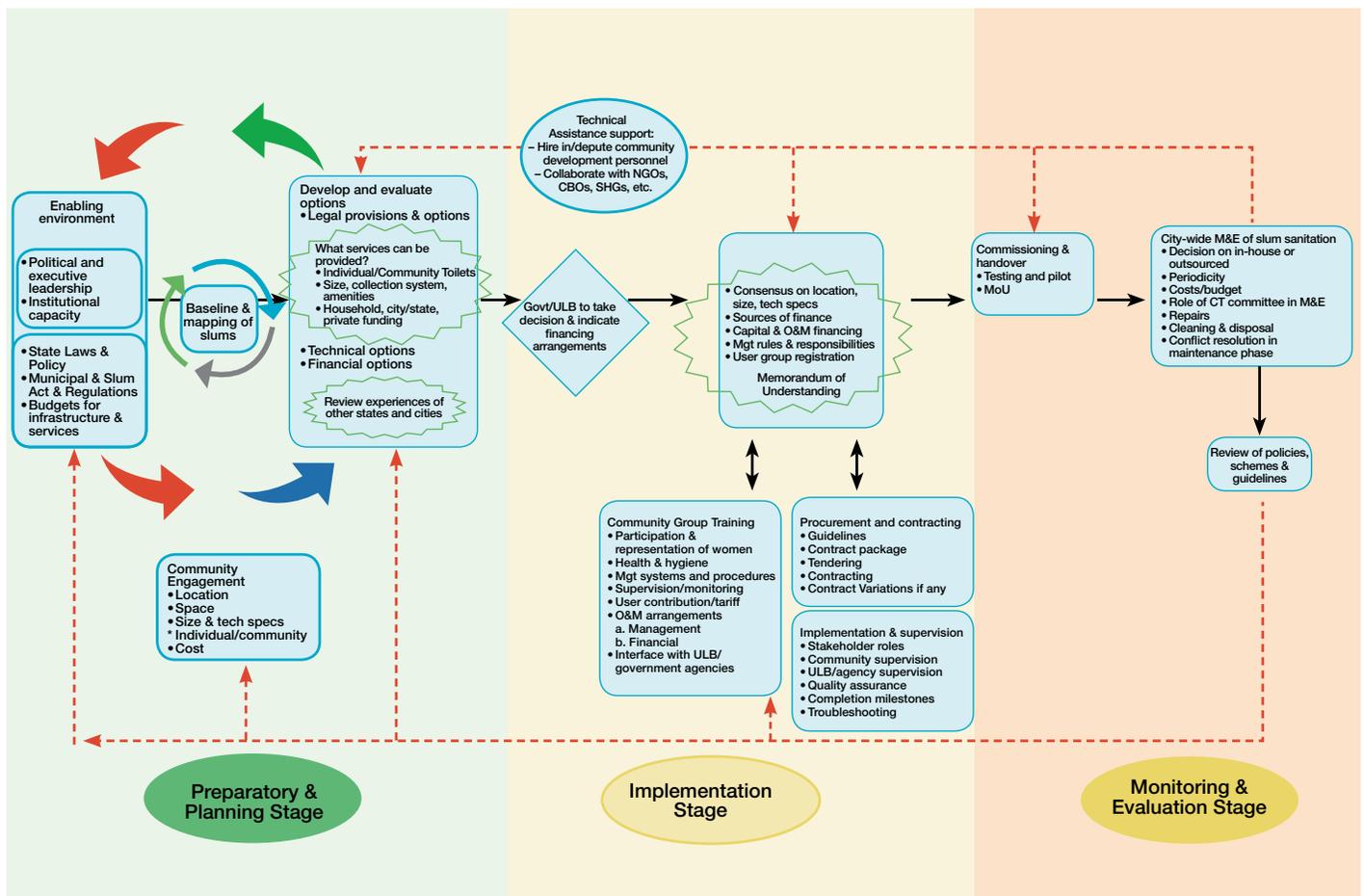
The foregoing sections have outlined the drivers of successful slum sanitation initiatives. This section traces the full cycle of slum sanitation initiatives from the preparatory stage right up to the M&E phase.

Under the NUSP 2008, a series of iterative steps were listed out as an aide to preparing the CSP. One of the detailed tasks in overall city sanitation planning is to dwell upon sanitation in slums and informal settlements of the city.

Even in cities where a CSP has not been prepared, the task of addressing a sanitation crisis in slum areas and informal settlements may be taken up on a priority basis.

The phases and activities for a slum sanitation initiative are presented below:

**Figure 2: Slum Sanitation – Generic Steps**



## A) Preparatory and Planning Stage

The preparatory and planning stage comprises the following blocks of activities:

### i) Gearing up the Enabling Environment

#### (1) Political and executive leadership and institutions:

In the preparatory stage, it needs to be ensured that the idea of sanitation service provision to the slums enjoys full support and priority of, ideally, both the political as well as executive leadership of the ULB/city agencies. The institutional capacity of the proposed nodal agency to conceptualize and manage such an initiative needs also to be assessed and areas that need strengthening identified. In many of the larger cities, slum sanitation initiatives may have already been undertaken that are, at this stage, appropriate to review and develop revised strategies. In cities where such initiatives have not been undertaken in an organized manner, it will be prudent to review the experience of other similar cities. In addition, the city may have to put together secondary data pertaining to slums and informal settlements in the city.

(2) **State law and policy:** Most states have their own municipal acts that provide the legal framework for services provision. In case of some states, sanitation services provision may be vested with a para-statal agency or a water and sewerage board for the state or the city. These agencies would have to be key participants in sanitation services provision along with the ULB as relevant locally. Apart from the municipal acts and regulations, states also have slum acts and rules to govern, “regularize”, and “develop” slums and other informal settlements. Both these sets of acts and rules need to be carefully examined at the preparatory stage, to understand the possible options for service delivery permitted under the law. If there are absolute constraints to service provision in slums under these laws, then legal changes may become necessary to initiate immediately. If executive orders will suffice to provide flexibility to the legal provisions, then this should be implemented on priority since legal changes may take more time and political will.

A related preparatory aspect is the policies that govern the state’s vision and investments in urban development, in general, and water and sanitation services provision, in particular, for slum

settlements. Some states have formulated such policies while others may have precedence in terms of limited government or department orders. In the preparatory stages, it will be appropriate to formalize some sort of policy statement or a comprehensive order on how such services will be provided to slum settlements if legally permissible. Budgetary provision also has to be made for at least supporting the initial activities (for example, baseline studies, awareness generation, planning, preparation of detailed project reports, and so on). It needs to be identified which central and state/ULB schemes may be available for financing capital and other activities for the initiative.

### ii) Baseline and Mapping of Slums

Depending on the availability of secondary/old records about the city’s slums and informal settlements, a study need to be conducted to update the data or, in some cases, carry out surveys of new settlements. Most ULBs have very limited data on the actual situation of individual, shared or community toilets in slums of the city. This poses the risk of preparing completely erroneous plans (including CSPs) that do not reflect the actual situation on ground, leading to implementation that does not adequately address the problems – and errs on the side on constructing more physical assets that users are not interested in using and maintaining. This is a considerable waste of resources and opportunity and, hence, needs to be accorded importance by the ULBs in the preparatory stages.

One of the ways of strengthening the data collection exercises has been the use of mapping by which data are collected and utilized to rapidly put together to build a geographically explicit database of slum settlements and their basic features. This lends itself easily to validation by ULBs, NGOs, and the communities themselves. Sometimes, the task of putting together a comprehensive database and mapping of slums may seem to be a vast and complex task given the limited resources and capacities that ULBs typically have. The strategies adopted to resolve this include: a) in-sourcing NGOs, research agencies, and so on, to assist in carrying out mapping and service; b) breaking down the slums into clusters by region/wards or other indicators of services deficit critical location; and c) involving a wide range of stakeholders such as NGOs, slum community groups themselves, and so on. Breaking down the study into two to three levels of detail, and/or an area-wise phasing can be helpful in efficient management while ensuring the integrity and accuracy of the data collected and validated.

It may be noted that the baseline studies and mapping activities should be able to provide the scope of the proposed initiative to providing services. Therefore, it is important that broad figures of population and households, number of slum settlements by their differential legal status, proximate water and sanitation network availability, and so on, are consolidated along with the key locational features. These should be detailed enough to provide the basis for making preliminary budgetary estimates using thumb-rule rates.

### iii) Develop and Evaluate Options

(1) **Legal provisions and options:** Based on the assessment carried out in the steps above, it should be possible to develop the legal and policy options. The options will involve the following questions:

- What are the options for service provision in slums located on private land, government land, ULB land, and so on?
- What are the options for providing individual, shared, community toilets?
- In settlements where sanitation services cannot be provided, what practical options are available, for example, toilets in their neighborhood?

(2) **Technical options:** Depending on the availability of space, nature of location/gradient, sub surface conditions, availability of a sewerage network close by, technical options will need to be developed:

- What type of individual toilets will be feasible in terms of size, septic tank/connection to sewerage, superstructure, and so on?
- What kind of CTBs will be feasible in terms of number of seats for women, men, children, differently abled; size and type of structure; number of stores; water, electricity and sewerage disposal services; interiors, fixtures and other features; and so on?

(3) **Financing options:** The sources of financing for the sanitation initiatives need to be identified:

- What kind of resources can the households themselves mobilize for addressing the sanitation deficits?

- Is there a possibility of households being mobilized to fully take ownership of financing of capital costs or at least individual toilets?
- If full contribution is not possible, what is a realistic expectation from households in contributing finances, labor, and time for participating in mobilization and management activities?
- What options exist for financing individual toilets or CTBs from the ULB's own budget, state or union government schemes?
- Is there a possibility of financing from private organizations, foundations and donors through advertisements posted on outer walls or shops/day care centers within the toilet complex?
- What components, for example, capital for individual and community assets, awareness generation/IEC, project management, M&E, training and capacity building, and so on, can be financed utilizing different sources of funds?
- What are the rough estimates of O&M costs associated with the different technical options above?

The above block of activities is a very important cluster since this will clarify to the city agencies the bounds of feasibility of service provision in terms of legality, technical options, and financial feasibility for the ULB. This is also the juncture at which it is recommended that the city undertakes a thorough assessment of experiences in other states and cities with service provision. In states where slum sanitation programs has been implemented, cities will be best positioned to learn from the other cities as state laws and regulations are likely to be similar. This also is a critical milestone after which the initiative can be taken to slum communities for discussions and consultations with them.

### iv) Community Engagement

One of the most effective mechanisms to initiate a slum sanitation project is a systematic set of consultations with community groups. Some of the basic features of the slums would have become available already during the baseline studies and mapping of slums as described in (ii) above.

On the basis of the baseline information, slums may be classified into different categories that could include:

- a) Slums with different legal status, for example, notified, non-notified or not recognized slums. Some state slum acts may permit certain types of services to be provided and/or certain upgradations to be carried out by households themselves;
- b) By availability of space and density: slums in different locations in the city will have different characteristics in terms of density, space available for passage, shape and alignment, and other such physical and locational characteristics. Categorizing slums according to the above features helps understand technical options as well as parameters with respect to access/linkages with citywide infrastructure, that is, water supply, sewerage, ability to use cess-pool trucks for cleaning septic tanks, feasibility of efficient drainage, and so on; and
- c) Socioeconomic characteristics of the slum communities: the community's composition, occupation/livelihoods, demographic, educational and related characteristics are also important parameters to categorize slums. These features may also help determine leadership within the communities through whom the ULB can initiate consultations. Many slum communities may also have women's SHGs, youth clubs and other informal groupings that provide a set of preexisting institutions to initiate discussions with.

The legal provisions are likely to preclude some of the above type of slums (see (a)) whereas a reduced set of technical options may be dictated by the physical characteristics (see (b)). The ULB needs to select those slums first that provide the easiest opportunities for service provision.

In the selected communities, a systematic set of consultations will need to be organized to discuss the technical, financial and other practical dimensions of sanitation services provision.

As some cities have shown, communities may be enthused by triggering and capacity building support to address their sanitation deficits using their own financial resources and/or with minimal state support. This is an especially superior approach when individual household sanitation facilities

are possible to construct and maintain. Households may, however, need to be supported with:

- Technical design;
- Connection of household sanitation arrangement to sewer or communal septic tank;
- Arrangements for upkeep, maintenance, repairs of breakages, and so on; and
- Periodic cleaning of septic tanks, and so on.

Where individual toilets are not possible to construct, shared and community toilet options need to be discussed with the communities. This would involve identifying options for location, technical design, size and cost estimates and, most importantly, the institutional arrangements to implement the construction and operate and maintain the toilet thereafter. The basis for initiating discussions with the community for these options must be grounded in some legal frame or executive/departamental resolution/order. In the absence of this, the process of interaction and consultation with the community can be affected by contestations by various parties. The legal or executive basis needs to be found in the state's or city's laws and policies as outlined in (i.2) above.

The practical considerations of size, location and technical specifications for community toilets then need to be explored with the community groups along with their cost and management implications. At this juncture, it is also important to agree on or stipulate the criteria by which different households may be included for service delivery. Apart from locational barriers such as a road or a drain that may signal a boundary of some sort, there may need to be other criteria agreed for delineating the physical bounds of the community. Different cities adopt different approaches to this – one obvious way is to provide for as many toilet blocks as may be necessary to serve the needs of a community with a certain number of houses. For example, if a five women plus five men toilet block is feasible in a particular location, this will be perhaps sufficient to cater to the needs of about 300 people or about 60 to 75 households, assuming that each toilet seat is used by 25 to 30 users per day. In such a situation, a community with about 200 households will need three sets of such toilets unless there is space for a larger toilet complex with more seats.

The different facets involved in generating options for the above show that the community engagement process needs to be iterative and interspersed with physical verification and field visits to ascertain some of the physical and locational parameters.

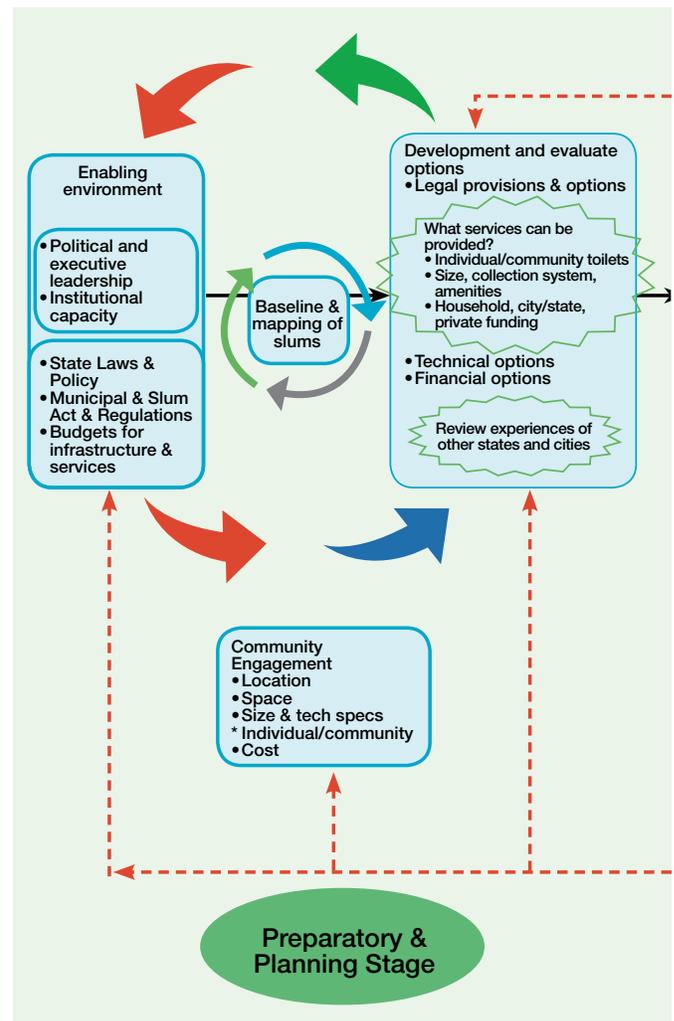
So that there is no confusion and misunderstanding with the community groups about expectations from a sanitation initiative, it is very important that only those options are presented and discussed that the ULB knows are legally tenable, practically feasible and may have the budgetary support of the city or state through some scheme or funding mechanism.

## B) Implementation Stage

The implementation stage has the following block of activities:

- i) **Government/ULB decision and budgeting:** On the basis of the initial discussions, the ULB needs to make a formal decision on the approach that will be adopted for the slum sanitation initiative. This will include listing out eligibility criteria for slums (and households<sup>6</sup> within them). The ULB needs to formally decide on the kind of technical options that will be supported, based on baseline investigations as well as consultations with the communities. As needed, the ULB may either issue on its own or have the state government issue executive orders to formalize the above as required. Finally, the ULB will need to indicate the financing arrangement for the sanitation initiative that could range from provision of training and facilitation to that of capital investment and, finally, support to operating and maintaining sanitation facilities. Again, as outlined above, where individual toilets are feasible, the government/ ULB may just need to trigger behavior change and make available training and capacity building. In cases where CTBs may be recommended, the ULB may need to come up with a more significant role in capital financing and O&M management support both in terms of finances and personnel.

**Figure 3: Details of the Preparatory and Planning Stage**



The above will become the guideline for the frontline personnel of the ULB to progress with consultations and other steps to implement the community sanitation initiative.

- ii) **Technical assistance support:** Many of the ULBs may not have inhouse competence in mobilization of communities, interaction and consultations with households/groups or,

<sup>6</sup> Many government schemes specify BPL households to have a different level of entitlements as compared to above the poverty line households. In some places, the type of house structure (kuccha, pucca) or the area of the dwelling may be used as proxy. However, in slum projects, it is advisable to make the criteria simple to administer and, in case of CTBs, simply make all households eligible to use the facility.

sometimes, even design of innovative options suitable for slums. The options for establishing these competencies include hiring experienced personnel from the open market and formally placing them in a sanitation or slum sanitation cell within the ULB. In some cases, officers may be deputed from other state or ULB departments and agencies to be the specialist team. Where available, NGOs may be commissioned to provide personnel for or assist in fulfilling the role of this technical assistance agency. Since the recruitment and training of such personnel may be time intensive, it is advisable that the recruitment process for this is initiated in the planning and preparatory stage. However, the actual fielding of the team to engage with community groups, on one hand, and to provide feedback and advisory to the ULB/state agency, on the other, will need to be one of the key processes in the implementation stage.

**iii) Community engagement:** At this stage, the ULB commissioned team is in a position to systematically engage with community groups and formalize the roles and responsibilities for the implementation and later stages. Community engagement is an iterative process and can be conceptualized as the following set of tasks:

- Agreement on location, space and technical specifications (including infrastructure, linkages);
- Capital/sources of financing, household/community contribution as “membership, labor contribution, and so on;”
- Formation of management committees along with their roles and responsibilities;
- Registration and legal status of the management committees;
- Agreement on roles and responsibilities of the committee in implementation, management and upkeep; and
- Role of the ULB/state agency in implementation/support in repairs and maintenance.

In most cases, the community engagement process may need to be formalized as a MoU between the ULB and the community/committee. A tripartite MoU may be needed if there is an external support agency, for example, an NGO, is involved.

In the implementation stage, two activity clusters are of paramount importance. One is the procurement and contracting procedure to be followed and, the second is the training and capacity building of the committee to take on the mantle of being the managers.

**iv) Community group training:** Especially in cities where there may be little experience with urban poor communities, it may be necessary to provide for training of community groups to become competent management committees, as also strengthen groups that may be involved directly or indirectly in slum sanitation. As outlined above, slum communities are likely to have preexisting SHGs, youth clubs, cultural and other groups. These provide not only an entry point for discussions but also the potential participants for training programs on the importance of sanitation and linkages to health and hygiene. The legal requirements and practices for efficient functioning of WatSan committees and, of course, the practical steps in proper maintenance management of CTs. Therefore, the training of community groups targets the WatSan committee members directly as well as these other groups in order to prepare the community for an active and effective role during and after implementation. In many cases, the need for such training is not explicitly recognized and, therefore, the full potential of the community sanitation initiatives is not realized.

Community group training can be conducted either by ULB personnel or specialized trainers from other government agencies, NGOs, educational institutions and the private sector. The training programs should be conducted to include key community level stakeholders, including women, poor household and youth; the program needs to accommodate their livelihood necessities in terms of timings of training, duration, and so on. While the training curriculum needs to include information about rules and procedures, supervision and monitoring of maintenance management and rules for the functioning of the WatSan committee, it is important to include the question of user contributions to capital/membership, tariffs for use of the facilities, O&M management and financial arrangements, support roles of the ULB and other agencies, and so on.

v) **Procurement and contracting:** Whether individual toilets or CTBs are constructed, there will be a need for the ULB to commission contractors to implement the construction. Usually, state agencies or ULBs may have their own list of approved/accredited contractors. If the nature of construction is likely to be complicated (not straightforward toilets or septic tanks but, say, CTBs), ULBs may need to enlist contractors afresh for the purpose. Some cities/ULBs have also tried out community contracting where community groups themselves may bid for contracts. Usually, procurement decisions are rife with difficulties including those pertaining to lowest rate contracts or L1, the most common method of contracting in the government. In some cases, further, the exact specifications of the toilet block and associated infrastructure may be difficult to specify especially when site conditions are very different from each other. In such cases, there needs to be the right balance of flexibility in the contract specifications to change to suit specific local contexts.

- **Guidelines** for contracting need to be finalized by the ULB specifying the approach to contracting including eligibility, type of works to be undertaken, and arrangements for centralized/decentralized procurement of materials as may be necessary. The guidelines will also indicate cost ceilings for different types of works and refer to the appropriate schedule offerings. If there are difficulties in following the conventional schedule of rates and contracting methods, a new set of guidelines may be required for slum sanitation projects;
- **Contract package:** Depending on situation on the ground, contract packages may be formulated to distribute the risks of contractor performance and to maximize competition. Sometimes, contract packages may be awarded on regional basis to maximize efficiencies and for ease of monitoring;
- **Tendering:** Normal processes of the ULB/agency may be reviewed and tenders let out to attract the best-in-class vendors and contractors. Apart from conventional tendering, the ULB/agency may consider shortlisting contractors or joint ventures between contractors and NGOs in order for them to develop proposals or detailed

project reports based on which contracts can be awarded after negotiations. A third method is to require bidders to state a basic unit price, for example, based on per seat or some such calculation;

- **Contracting:** The process of contracting can be time consuming and contentious if the criteria and rules are not laid down clearly in the guidelines. Following the above options, therefore, the ULB will need to ensure that the contracting process is timely, valid in law, following a due process, and the clauses enforceable in practice. Some states have procurement regulations that specify the steps in contracting. In the absence of such procedures and/or formats, it is important for the ULB to secure the contracts with the appropriate distribution of risks and liabilities. The contract document should finally be not only comprehensive but also simple and easy to understand by both the contractor and the ULBs. The draft pro forma contract should also be made available to the WatSan committees for them to understand the responsibilities and deliverables of the contractor and the ULB; and
- **Contract variations if any:** In many cases, there may be a need to introduce variations to the agreed contracts to accommodate emerging realities and/or complexities of the local context. Therefore, the contracting guidelines and the contract itself must lay out a simple and transparent process by which such variations will be carried out.

#### vi) Implementation and Supervision

The actual implementation of the community sanitation initiative begins right from the stage that consultations with communities are initiated and runs through the activity clusters of participatory development of options, training and strengthening of the committees functioning. The final stages of implementation pertain to the actual construction and commissioning of the sanitation facilities. For construction at the household level, some basic coordination and supervision may be needed, whereas for community infrastructure and/or CTBs, a formalized mechanism for implementation and its supervision is required.

- **Stakeholder roles:** While the contract would specify the roles and responsibilities of the contractor, the ULB and its relevant divisions/units need to further clarify roles and responsibilities within their organizational set up. The role of the community needs also to be formalized in terms of monitoring of the construction activity and for troubleshooting, and so on, as needed. Sometimes, community members may not like contractors from “outside” to come and work in their communities and hence such issues will need to be resolved by the ULB.
- **Community supervision:** There are a number of mechanisms by which the committees, especially the WatSan committee, may be involved in supervision. These could range from informal feedback on the pace and quality of contractors’ work to somewhat formalized roles in which the committee signs off on a number of observation parameters. This could mean okaying contractors’ claims on progress of construction, for example, plinth, lintel, roof, septic tank, finishing, and so on. It is advisable to have a mix of informal and formal mechanisms but be selective about these so that there are no risks of delay because of “approvals not being timely.” Retaining only informal roles for the Watsan committee is also not advisable as these would cause difficulties of validation and compliance by contractors. Community monitoring could also be carried out through women’s groups’ federation/s.
- **ULB/agency supervision:** The contracting guidelines would need to specify the method by which the ULB and its departments would be involved in supervision. Straight supervision by the ULB slum/sanitation division is an obvious method. The ULB may, in case of a large volume of such contractual works, commission a third party engineering consultancy or educational institution to carry out supervision or monitoring on its behalf. Another option is to request another competent government department to provide personnel to do this. The purpose of the supervision is to ensure timely, good quality construction and, therefore, a judgment needs to be made about how frequent and formal the ULB’s supervision process needs to be.
- **Quality assurance:** As indicated above, support from specialist agencies may be sought on or near completion of works to carry out quality audits. A protocol needs to be developed that will specify parameters for these audits and also provide resources to do sample tests of different aspects of construction and material used. Some simple indicators of supervision and monitoring, for example, that are easily observable, also need to be developed and made available to the WatSan committee and frontline personnel responsible for routine monitoring of implementation. This will prevent a late and potentially irreversible discovery of deficiencies and defects. Rather, the system should be able to detect such deficiencies early on and implement corrective measures. A formal system of quality assurance, therefore, would comprise such smaller incremental checks adding to one or two formal audits in the construction cycle.
- **Completion milestones:** The contract guidelines as well as the contract itself may list out the milestones for construction progress. These need to be converted to specific events or reporting points for all stakeholders to take stock. These could also be linked to triggering off contract installment payments, and so on. It is very important that the implementation and supervision cycles are closed before each such milestone. In case the contract is based on parameters other than completion of milestones, the ULB, WatSan committee and the contractor must agree to a framework of such completion milestones.
- **Troubleshooting:** Being located in unplanned areas and having complications about unclear titles, imprecise boundaries and locations suffering from flooding, and do on, slums do not offer the comfort of “planned” construction schedules. Rather, in many locations, some of the above may cause stoppage of work and/or necessitate rethinking some of the design elements. The narrow passage ways and dense crowded location of slum houses/huts also may necessitate convincing households to “adjust” their structures or at least the conduct of their chores and activities. The actual implementation process is likely to demand

quick resolution of disagreements, conflicts or even confusion amongst community members about the above issues.

### C) Monitoring and Evaluation Stage

The M&E stage comprises the following blocks of activities:

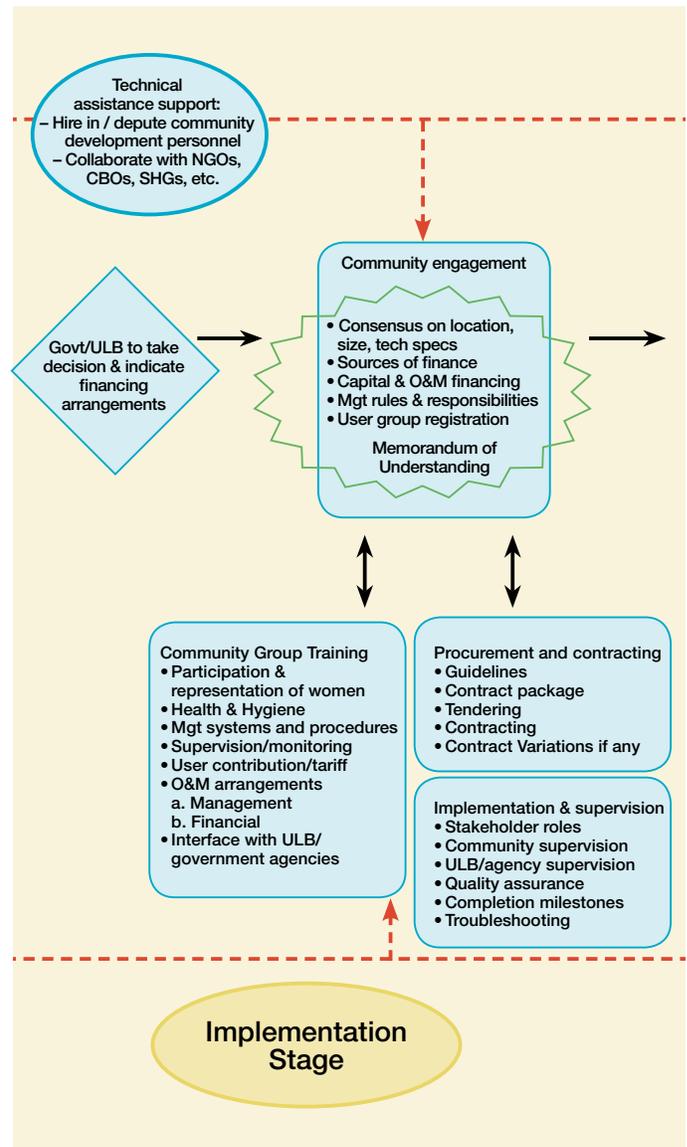
#### i) Commissioning and Handover

1) **Testing and pilot:** The culmination of activities in the implementation phase is the testing and commissioning of the infrastructure created along with all its services and systems. The toilets in individual households are tested simply by using them whereas a CTB or other community level infrastructure may require a more elaborate protocol for testing before it is commissioned for regular use. A protocol for testing each of the significant components of the toilet block and associated infrastructure needs to be developed and implemented. This protocol should include visual indicators, for example, no cracks, proper painting and joinery, and so on, as well as testing operational components such as valves, taps, flush systems, lighting and, so on. These tests should confirm that the assets are in excellent condition and shall be able to provide the services designed. Usually, a commissioning or a completion sheet is issued at the end of the process to the contractor. The role of the WatSan committee in this is invaluable and the ULB must ensure its participation in the testing process.

2) **MoU:** The commissioning process usually involves handover of the facility to the WatSan committee. The relationship between the WatSan committee and the ULB needs now to be formalized for O&M. The community engagement cluster of activities in the implementation phase may have already formalized the roles of stakeholders into an MoU, in which case it needs to be revisited to ensure their suitability for detail in the M&E stage.

3) The MoU must spell out the roles and responsibilities of the WatSan committee in proper upkeep and maintenance of the toilet block. It usually contains some division of obligations for repairs – minor and

**Figure 4: Details of the Implementation Stage**



major – that the WatSan committee and the ULB are expected to fulfill. For instance, the WatSan committee may need to pay for getting the septic tank cleaned periodically, whereas the ULB may undertake to make good any major damage to the toilet structure as a result of, for, say, a natural disaster. It is advisable to devolve decisions regarding tariff and user charges to the WatSan committee in order that it is able to collect and expend resources for proper upkeep and

maintenance of the toilet. In a few instances, the cost of maintaining toilets may turn out to be prohibitive and unaffordable by local users. In such cases, the ULB/state may have to provide some financial support to take care of such operational deficits. In general, such subventions are not recommended. Payment for water and electricity services can pose difficulties for some CTBs in becoming financially sustainable. This may need the government to create new tariff categories and rates so that sanitation service provision in slum areas becomes easy and affordable. Water and sewerage bills may be relatively easier to address in this context compared to the electricity services bills because those may be regulated and have a different sort of institutional arrangement.

The testing, commissioning and handover of assets and operationalizing the MoU signify the commencement of the M&E stage.

ii) **City-wide M&E of slum sanitation:** Whereas the task of proper maintenance and upkeep of a CTB needs to follow a protocol as described above, the slum/sanitation cell of the ULB has the additional task of monitoring the performance of slum sanitation installations across all slums in the city. If the number of slum communities is large, this task can become onerous and resource intensive too. The following aspects need to be considered to accomplish this in an effective manner.

1) **Decision on inhouse or outsourced monitoring system:** If the slum/sanitation wing has trained environmental/civil engineers and social/community specialists, then a combination of this kind of personnel may be deployed to routinely monitor and evaluate the CTB's performance. They could also monitor how the associated services (water, electricity, and so on) and infrastructure (drains, septic tank cleaning systems) are faring. Since this is unlikely to be a full time activity, it could be in combination with their other duties, for example, mobilization and implementation of new CTBs, or their other municipal responsibilities. In some of the larger cities, support, both technical and managerial, may be entrusted to the territorial

divisions or ward offices and their personnel. A third option that has been tried out includes commissioning of NGOs or specialized monitoring agencies to concurrently study and make results available on the performance of the different CTBs. Many cities may face considerable difficulty in doing this because there may be very little internal capacity and low or no presence of NGOs and academic institutions, and so on. In such cases, the options include bringing in external third party agencies to help set up the systems. In the medium run, however, these kinds of cities need to allocate resources to build their inhouse capacities and/or support NGOs and educational institutions to develop such capacities. The methods of M&E typically take the form of formal measurement of indicators and the data are collected through a combination of quantitative and qualitative parameters. Some of these indicators may be based on performance parameters of the WatSan committees operating the CTBs. In addition, customer satisfaction, surveys and qualitative discussion may also be used to elicit feedback from time to time;

2) **Periodicity:** Depending on the number of slums and resources available for performance monitoring, the ULB needs to decide on the periodicity for the M&E cycle. At least an annual cycle of performance monitoring needs to be done for the management/institutional parameters (WatSan committee, financials, meetings, and so on) as well as physical aspects such as the condition of toilets and fixtures, utilities, that is, water, power and clearance of septic tank, and so on. Exception reporting may be the preferred and economical means of collecting performance data. This means that any breakage or disfunctionality, whether in physical systems or disruptions/conflicts in management, is systematically recorded and responded to as soon as it occurs. A preferred approach, however, is that of scheduling preventive and pre-emptive check on a rolling sample basis. For example, in a quarter, the financial parameters of 20 percent CTBs may be assessed along with expenditures incurred on various budget heads. Similarly, the condition of taps and connections to septic tanks and sewers may be physically inspected

in another sample of 15-20 percent toilets. In this way, it should be possible to cover all the toilet blocks over a period of a year without the process being too resource intensive;

3) **Costs/ budget:** Monitoring of maintenance and upkeep of toilets is often neglected and adequate budgets are not provided for this activity. If the ULB wishes to ensure sustainable service delivery to all its slum residents, it must dedicate a reasonable amount of resources to M&E. Even though this is not always obvious, these investments pay off in reduced cost for repairs and often savings of capital resources by extending the life of the assets created. Depending on the city, the cost of hiring professional agencies and NGOs to carry out monitoring may be high. Hence, the ULB needs to use such mechanisms selectively, for example, once in one to two years, whereas routine monitoring activities could be devolved to its own staff, ward offices and/or personnel from other schemes such as health workers and education extension workers who may be visiting these slum communities regularly. One of the most cost-effective ways of monitoring is to give the WatSan committees a greater role by federating them and providing institutional support to them. Finally, use of technology can economize on resources for M&E. Many applications have been developed and are being tested for rapid capture and transmission of real time data to servers using which the cost of data collection and validation can be cut down tremendously. As seen in cases of market research, another option is to curate a panel of toilet block users;

4) **Role of WatSan committees:** As outlined above, the WatSan committee is the central institutional mechanism for maintenance management of the CTB. Therefore, the more systematized and streamlined the systems followed by these communities, the easier it will be to swiftly collate M&E information and act on it. In respect to some parameters, the committee may be able to make its self-reported data available easily. In instances like breakages or physical damages requiring repairs, the WatSan committee may have incentives to report quickly in expectation that these will be

addressed by the ULB speedily. Hence, some of these data collection points could be devolved to the WatSan committee itself to report on a monthly or bi-monthly basis. The other type of data, for example, revenues, may not be reported with accuracy by the committee and may need studies to be commissioned to external agencies. The incentive for the WatSan committee to report on the performance will, of course, depend on the response it gets from the ULB. Therefore, the ULB needs to clearly agree with the WatSan committee, in the MoU, the aspects of performance that the WatSan committee will report regularly on;

5) **Repairs:** Toilets, both individual as well as community, quickly fall into disrepair and disuse if there are any breakages that are not attended to immediately. As soon as a toilet or a seat therein is dysfunctional, WatSan committees need to take immediate action and fix the problem. Else, users start losing faith in the facilities and their management and the whole system may start spiraling down into a vicious cycle of broken, poorly maintained, dirty toilets that no one will pay for. This is why, in the planning and implementation stages, one needs to be explicitly mindful of the different components and features of CTs and their expected life, vulnerability to breaking down and so on. This needs to be further reviewed at the time of testing and commissioning of the CTB. Based on the above, the ULB needs to agree with the WatSan committee on the list of breakages and repairs that each will be responsible for. Some cities list these out as minor and major repairs to be taken care of by the WatSan committee and the ULB, respectively. Items such as cracks, breakdown of pumps, leakages and breakages in the sewerage pipeline or the septic tank and other such big-ticket items are usually kept in the list for the ULB to remedy. The WatSan committee may be responsible for repairs and replacement of minor items such as taps, valves, wall and floor tiles, and so on. A protocol for preventive maintenance needs to be implemented by the ULB in partnership with the WatSan committees for the latter to appreciate the higher likelihood of trouble-free operations and reduced need for repairs, if maintenance management is undertaken properly. The

WatSan committee also needs to maintain a basic stock of consumables and routine repair items;

6) **Cleaning and disposal:** The CTBs that are not connected to sewer systems have the additional challenge of getting their septic tanks cleaned periodically. It needs to be ensured that there is ample access for cess-pool trucks to approach and carry out periodic cleaning from these installations right from the design stage. Secondly, the cost implications for hiring such cesspool trucks may be serious if not already planned for by the WatSan committee. The ULB needs to ensure that, where septic tank based toilet blocks are constructed, a strict schedule for periodic cleaning needs to be enforced. If expensive, the ULB will also need to provide grant support to the ULB or send its own cesspool vehicles to carry out the cleaning. Septic tanks may be the only solution, especially in medium and small towns where sewerage systems are not commonly available. In such cases, regular cleaning will be critical to the smooth functioning of CTBs. The ULB also needs to ensure that the septage cleared by the cesspool trucks is disposed of in a safe manner in a designated septage management or sewage treatment facility; and

7) **Conflict resolution:** At times, CTBs become the victims of conflict between community groups and this can cause assets to fall into disrepair. Yearly repair and maintenance of CTBs is necessary to ensure sustainable operations of the units. Hence, apart from carrying out repairs with alacrity, social and institutional conflicts also need to be resolved immediately. The legal basis for sanitation service provision and the executive guidelines thereof come in handy to refer to in situations where these conflicts arise. The ULB and respective sanitation cell will, in addition, need to use practical strategies for amicable resolution of these disputes.

iii) **Review of policies, schemes and guidelines:** During the implementation stage, some of the innovations or new ways of doing things are formulated. In the M&E stage, some of these are actually tested and validated. For instance, the method of registration of the WatSan

committee or a particular approach to preventive maintenance or a particular set of tariff rules may or may not work well in the M&E stage. This provides the evidence to not only change some of those approaches and practical strategies, but also to have these reflected in the policies and guidelines. Therefore, the M&E stage truly becomes that of learning and feedback as well, that would provide inputs into how the preparatory and planning stage activities are structured; how the implementation process and modalities can be improved; and what specific process changes need to be implemented.

#### D) List of Recommended Reference Material for Practitioners

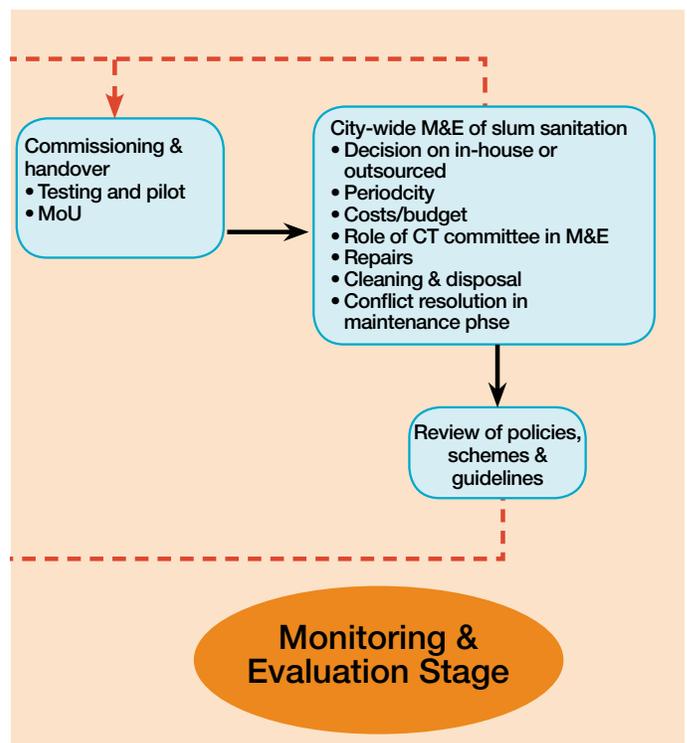
For further information, readers are encouraged to refer to the following documents:

1. NUSP 2008

<http://www.urbanindia.nic.in/programme/uwss/NUSP.pdf>

Accessed on November 2, 2014.

Figure 5: Details of the M&E Stage



1. Revised CPHEEO Guidelines

There are four manuals on:

Water supply and treatment

Sewerage and sewage treatment

Municipal solid waste management

Operation and maintenance of water supply systems

<http://cpheeo.nic.in>. Accessed on November 2, 2014

2. Technology Options for Urban Sanitation in India

[http://www.wsp.org/sites/wsp.org/files/publications/Urban\\_Sanitation.pdf](http://www.wsp.org/sites/wsp.org/files/publications/Urban_Sanitation.pdf) Accessed on November 2, 2014.

3. Septage Management in Urban India

[http://www.cseindia.org/userfiles/document\\_sm.pdf](http://www.cseindia.org/userfiles/document_sm.pdf)

Accessed on November 2, 2014.

4. Advisory on Recycle and Reuse of Wastewater (MoUD forthcoming)

The Guide is recommended for use by states and city agencies as well as by NGOs, private sector, and so on.

---

# Selected References

---

Almansi, F. *et al.* 2003. *Everyday Water Struggles in Buenos Aires*. International Institute for Environment and Development – Latin America, Buenos Aires.

Asthana, Sheena. 1998. Integrated Slum Improvement in Visakhapatnam, India. In R. L. Sehgal (Ed.), *Slum Upgradation: Emerging Issue and Policy Implications*, Bookwell Publications, New Delhi.

Bangalore Water Supply and Environmental Sanitation Master Plan Project: Overview Report on Services to Urban Poor. Stage 2. March 2002. BWSSB/SKM-EGIS-BCE-Feedback-STUP-TARU Leading Edge

Central Pollution Control Board. Status of water supply, wastewater generation and treatment in Class-I cities and Class-II towns of India. Control of Urban Pollution Series: CUPS/70 /2009–10). Delhi, India: CPCB, Ministry of Environment and Forests, Government of India; 2009. Retrieved 2014 from ([http://www.indiawaterportal.org/sites/indiawaterportal.org/files/Status%20of%20Water%20Supply%20and%20Wastewater%20Generation%20and%20Treatment%20in%20Class-I%20cities%20and%20Class-II%20towns%20of%20India\\_CPCB\\_2009.pdf](http://www.indiawaterportal.org/sites/indiawaterportal.org/files/Status%20of%20Water%20Supply%20and%20Wastewater%20Generation%20and%20Treatment%20in%20Class-I%20cities%20and%20Class-II%20towns%20of%20India_CPCB_2009.pdf))

Centre for Environmental Planning and Technology. 2002. Wealth and Well-being Impacts of Slum Upgrading and Improved Service Delivery to the Poor – A Case of Slum Networking Project, Ahmedabad. Report of School of Planning, Ahmedabad.

Kolkata Metropolitan Development Authority. 2012. An Impact Evaluation Study of BSUP Programme Intervention in Kolkata Metropolitan Area (KMA). Available at: [http://www.kmdaonline.org/whats\\_new/new\\_revised-f\\_report-bsup\\_impact\\_study-0212.pdf](http://www.kmdaonline.org/whats_new/new_revised-f_report-bsup_impact_study-0212.pdf)

Dieterich, B. 1998. *Health and Environment – Priorities over the Course of Time*, WHO Environmental Newsletter, Special 50th Anniversary Issue, No. 28.

Krishnamurty, A. N. and Solomon Benjamin. 1998. The Indian Experience of Community Participation – Public Projects and the Grassroots. In R. L. Sehgal (Ed.), *Slum Upgradation: Emerging Issues and Policy Implications*, Bookwell Publications, New Delhi.

Kundu, Amitabh. 1993. *In the Name of the Poor - Access to Basic Amenities*. Sage Publications, New Delhi.

Madras School of Social Work. 2004. Evaluation of Integrated Sanitation Programme (ISP), Tamil Nadu Urban Development Project II (World Bank aided TNUDP-II).

Ministry of Housing & Urban Poverty Alleviation, Report on Environmental Improvement of Urban Slums, Schemes to Improve Slums – Progress and Feedback Chapter 9. Available at: <http://mhupa.gov.in/ministry/housing/11thplanChapter-IX.pdf>

Ministry of Housing & Urban Poverty Alleviation. 2011. Rajiv Awas Yojana: Towards a Slum-Free India Guidelines. Available at: <http://mhupa.gov.in/ray/02-RAY-Guidelines.pdf>

Ministry of Urban Development (MoUD). National Urban Sanitation Policy. New Delhi: MoUD, Government of India, 2008 [cited 2014]. Available from: <http://www.urbanindia.nic.in/programme/uwss/NUSP.pdf>

Ministry of Urban Development, Government of India, 2008 [cited 2014]. Available from: <http://www.urbanindia.nic.in/programme/uwss/NUSP.pdf>

Ministry of Urban Development (MoUD) and Water and Sanitation Program (WSP). 2008. Technology Options for Urban Sanitation in India. Available from: [http://www.urbanindia.nic.in/programme/uwss/slb/urban\\_sanitation.pdf](http://www.urbanindia.nic.in/programme/uwss/slb/urban_sanitation.pdf).

National Sample Survey Organization (NSSO). 2013. NSS 69th Round (June-December 2013). National Sample Survey Office. National Statistical Organisation. Ministry of Statistics and Programme Implementation. Government of India. December 2013.

National Sample Survey Organization (NSSO). 2010. Some Characteristics of Urban Slums, 2008-09. NSS 65th Round (July 2008-June 2009) NSS Report No 534. National Sample Survey Office. National Statistical Organisation. Ministry of Statistics and Programme Implementation. Government of India. May 2010.

Ministry of Urban Development (MoUD). 2010. National Urban Sanitation Policy. Rating of Cities 2010: Towards city wide sanitation.

Payne, G. 2000. Urban Land Tenure Policy Options: Titles or Rights? World Bank Urban Forum: Virginia, USA.

Payne, G. 2002. (Ed.) *Land, Rights & Innovation: Improving Tenure Security for the Urban Poor*, ITDG, London.

Planning Commission, Government of India, Steering Committee on Urbanisation. 2011. Report of Working Group on Urban Poverty, Slums and Service Delivery System. [cited 2014]. Available at [http://planningcommission.nic.in/aboutus/committee/wrkgrp12/hud/wg\\_Final\\_Urb\\_Pvt.pdf](http://planningcommission.nic.in/aboutus/committee/wrkgrp12/hud/wg_Final_Urb_Pvt.pdf)

Planning Commission, Government of India, Fifth Plan Steering Group on Housing, Urban Development and Water Supply, 1972: Report of Working Group of Slums

Planning Commission, Government of India. 1983. Task Force on Shelter for the Urban Poor and Slum Improvement.

Rakodi, C. 1995. Rental Tenure in the Cities of Developing Countries, *Urban Studies*, Vol. 32, No. 4, pp.791-811.

Registrar General of India, GoI. 2011. Census of India 2011.

Rusling, Sara. 2010. Approaches to Basic Service Delivery for the Working Poor: Assessing the Impact of Mahila Housing Trust's Parivartan Slum Upgrading Programme in Ahmedabad, India. Urban Policies Briefing Note, No. 1. WIEGO/MHT/SEWA. April 2010

SEWA Academy, Shree Mahila Housing Trust. 2009. Evaluating the Impact of Sahbhagi Yojana 2 Support Project (SY2SP) Endline report. March 2009.

Stevens, P. 1998. *Water Supply and Sanitation – The Foundation of Public health*, WHO Environmental Newsletter, Special 50th Anniversary Issue, No. 28.

SPARC. 2014. Emergence of Community Toilets as a Public Good: The work of Mahila Milan, NSDF and SPARC India in the area of sanitation 2014.

TARU-WEDC. 2005. Study of the World Bank-Financed Slum Sanitation Project in Mumbai. WSP/World Bank. September 2005.

UNICEF. India Statistics: Demographic Indicators. Average annual growth rate of urban population 1990-2012. UNICEF, India; 2012 [cited 2014]. Available from: [http://www.unicef.org/infobycountry/india\\_statistics.html#78](http://www.unicef.org/infobycountry/india_statistics.html#78))

World Bank. 2003. Nitti, Rosanna, and Shyamal Sarkar. Reaching the Poor through Sustainable Partnerships: The Slum Sanitation Program in Mumbai, India. Urban Notes: Upgrading Experiences, No. 7, January 2003. The World Bank. Washington, DC.

WSP. 2006. The Mumbai Slum Sanitation Program – Partnering with Slum Communities for Sustainable Sanitation in a Megapolis. Sarkar, Shyamal, Ghosh Moulik, Soma, and Sen, Somnath. Water and Sanitation Program Report Sept 2006.

WSP. 2007. *Engaging with Citizens to Improve Services*. May 2007.

WSP. 2009. Global Experiences on Expanding Services to the Urban Poor. Accompanying Volume to the Guidance Notes on “Improving Water Supply and Sanitation for the Urban Poor in India”. Water and Sanitation Program. March 2009.

Jatkar, Ujjwala. Undated. The Wave way in Tamil Nadu, Communication for development and Learning, Bangalore, Women and Sanitation Papers, Gramalaya.

---

# Annex 1: Article 243 of Constitution (Seventy-fourth Amendment) Act

---

**THE CONSTITUTION (SEVENTY-FOURTH AMENDMENT) ACT, 1992**  
**Statement of Objects and Reasons appended to the Constitution**  
**(Seventy-third Amendment) Bill, 1991 which was enacted as**  
**the Constitution (Seventy-fourth Amendment) Act, 1992**

## **STATEMENT OF OBJECTS AND REASONS**

In many States local bodies have become weak and ineffective on account of a variety of reasons, including the failure to hold regular elections, prolonged supersessions and inadequate devolution of powers and functions. As a result, Urban Local Bodies are not able to perform effectively as vibrant democratic units of self-government.

2. Having regard to these inadequacies, it is considered necessary that provisions relating to Urban Local Bodies are incorporated in the Constitution particularly for-
  - (i) putting on a firmer footing the relationship between the State Government and the Urban Local Bodies with respect to-
    - (a) the functions and taxation powers; and
    - (b) arrangements for revenue sharing;
  - (ii) Ensuring regular conduct of elections;
  - (iii) ensuring timely elections in the case of supersession; and
  - (iv) providing adequate representation for the weaker sections like Scheduled Castes, Scheduled Tribes and women.
3. Accordingly, it is proposed to add a new part relating to the Urban Local Bodies in the Constitution to provide for-
  - (a) constitution of three types of Municipalities:
    - (i) Nagar Panchayats for areas in transition from a rural area to urban area;
    - (ii) Municipal Councils for smaller urban areas;
    - (iii) Municipal Corporations for larger urban areas.

The broad criteria for specifying the said areas is being provided in the proposed article 243-0;

- (b) composition of Municipalities, which will be decided by the Legislature of a State, having the following features:
  - (i) persons to be chosen by direct election;
  - (ii) representation of Chairpersons of Committees, if any, at ward or other levels in the Municipalities;
  - (iii) representation of persons having special knowledge or experience of Municipal Administration in Municipalities (without voting rights);

- (c) election of Chairpersons of a Municipality in the manner specified in the State law;
- (d) constitution of Committees at ward level or other level or levels within the territorial area of a Municipality as may be provided in the State law;
- (e) reservation of seats in every Municipality-
  - (i) for Scheduled Castes and Scheduled Tribes in proportion to their population of which not less than one-third shall be for women;
  - (ii) for women which shall not less than one-third of the total number of seats;
  - (iii) in favour of backward class of citizens if so provided by the Legislature of the State;
  - (iv) for Scheduled Castes, Scheduled Tribes and women in the office of Chairpersons as may be specified in the State law;
- (f) fixed tenure of 5 years for the Municipality and re-election within six months of end of tenure. If a Municipality is dissolved before expiration of its duration, elections to be held within a period of six months of its dissolution;
- (g) devolution by the State Legislature of powers and responsibilities upon the Municipalities with respect to preparation of plans for economic development and social justice, and for the implementation of development schemes as may be required to enable them to function as institutions of self-government;
- (h) levy of taxes and duties by Municipalities, assigning of such taxes and duties to Municipalities by State Governments and for making grants-in-aid by the State to the Municipalities as may be provided in the State law;
- (i) a Finance Commission to review the finances of the Municipalities and to recommend principles for –
  - (1) determining the taxes which may be assigned to the Municipalities;
  - (2) Sharing of taxes between the State and Municipalities;
  - (3) grants-in-aid to the Municipalities from the Consolidated Fund of the State;
- (j) audit of accounts of the Municipal Corporations by the Comptroller and Auditor-General of India and laying of reports before the Legislature of the State and the Municipal Corporation concerned;
- (k) making of law by a State Legislature with respect to elections to the Municipalities to be conducted under the superintendence, direction and control of the chief electoral officer of the State;
- (l) application of the provisions of the Bill to any Union territory or part thereof with such modifications as may be specified by the President;
- (m) exempting Scheduled areas referred to in clause (1), and tribal areas referred to in clause (2), of article 244, from the application of the provisions of the Bill. Extension of provisions of the Bill to such areas may be done by Parliament by law;
- (n) disqualifications for membership of a Municipality;
- (o) bar of jurisdiction of Courts in matters relating to elections to the Municipalities.

4. The Bill seeks to achieve the aforesaid objectives.

NEW DELHI;  
The 11th September, 1991.

SHEILA KAUL.

**THE CONSTITUTION (SEVENTY-FOURTH AMENDMENT) ACT, 1992**  
**ACT, 1992**  
**[20th April, 1993.]**

An Act further to amend the Constitution of India.

BE it enacted by Parliament in the Forty-third Year of the Republic of India as follows:-

1. Short title and commencement.-

- (1) This Act may be called the Constitution (Seventy-fourth Amendment) Act, 1992.
- (2) It shall come into force on such date\_681 as the Central Government may, by notification in the Official Gazette, appoint.

2. Insertion of new Part IXA.-After Part IX of the Constitution, the following Part shall be inserted, namely:-

‘PART IXA THE MUNICIPALITIES 243P. Definitions.-In this Part, unless the context otherwise requires,-

- (a) “Committee” means a Committee constituted under article 243S;
- (b) “district” means a district in a State;
- (c) “Metropolitan area” means an area having a population of ten lakhs or more, comprised in one or more districts and consisting of two or more Municipalities or Panchayats or other contiguous areas, specified by the Governor by public notification to be a Metropolitan area for the purposes of this Part;
- (d) “Municipal area” means the territorial area of a Municipality as is notified by the Governor;
- (e) “Municipality” means an institution of self-government constituted under article 243Q;
- (f) “Panchayat” means a Panchayat constituted under article 243B;
- (g) “population” means the population as ascertained at the last preceding census of which the relevant figures have been published.

243Q. Constitution of Municipalities.-

(1) There shall be constituted in every State,-

- (a) a Nagar Panchayat (by whatever name called) for a transitional area, that is to say, an area in transition from a rural area to an urban area;
- (b) a Municipal Council for a smaller urban area; and
- (c) a Municipal Corporation for a larger urban area, in accordance with the provisions of this Part:

Provided that a Municipality under this clause may not be constituted in such urban area or part thereof as the Governor may, having regard to the size of the area and the municipal services being provided or proposed to be provided by an industrial establishment in that area and such other factors as he may deem fit, by public notification, specify to be an industrial township.

(2) In this article, “a transitional area”, “a smaller urban area” or “a larger urban area” means such area as the Governor may, having regard to the population of the area, the density of the population therein, the revenue generated for local administration, the percentage of employment in non-agricultural activities, the economic importance or such other factors as he may deem fit, specify by public notification for the purposes of this Part.

243R. Composition of Municipalities.-

(1) Save as provided in clause (2), all the seats in a Municipality shall be filled by persons chosen by direct election from the territorial constituencies in the Municipal area and for this purpose each Municipal area shall be divided into territorial constituencies to be known as wards.

- (2) The Legislature of a State may, by law, provide-
- (a) for the representation in a Municipality of-
    - (i) persons having special knowledge or experience in Municipal administration;
    - (ii) the members of the House of the People and the members of the Legislative Assembly of the State representing constituencies which comprise wholly or partly the Municipal area;
    - (iii) the members of the Council of States and the members of the Legislative Council of the State registered as electors within the Municipal area;
    - (iv) the Chairpersons of the Committees constituted under clause (5) of article 243S:  
Provided that the persons referred to in paragraph (i) shall not have the right to vote in the meetings of the Municipality;
  - (b) the manner of election of the Chairperson of a Municipality.

243S. Constitution and composition of Wards Committees, etc.-

- (1) There shall be constituted Wards Committees, consisting of one or more wards, within the territorial area of a Municipality having a population of three lakhs or more.
- (2) The Legislature of a State may, by law, make provision with respect to-
  - (a) the composition and the territorial area of a Wards Committee;
  - (b) the manner in which the seats in a Wards Committee shall be filled.
- (3) A member of a Municipality representing a ward within the territorial area of the Wards Committee shall be a member of that Committee.
- (4) Where a Wards Committee consists of-
  - (a) one ward, the member representing that ward in the Municipality; or
  - (b) two or more wards, one of the members representing such wards in the Municipality elected by the members of the Wards Committee, shall be the Chairperson of that Committee.
- (5) Nothing in this article shall be deemed to prevent the Legislature of a State from making any provision for the constitution of Committees in addition to the Wards Committees.

243T. Reservation of seats.-

- (1) Seats shall be reserved for the Scheduled Castes and the Scheduled Tribes in every Municipality and the number of seats so reserved shall bear, as nearly as may be, the same proportion to the total number of seats to be filled by direct election in that Municipality as the population of the Scheduled Castes in the Municipal area or of the Scheduled Tribes in the Municipal area bears to the total population of that area and such seats may be allotted by rotation to different constituencies in a Municipality.
- (2) Not less than one-third of the total number of seats reserved under clause (1) shall be reserved for women belonging to the Scheduled Castes or, as the case may be, the Scheduled Tribes.
- (3) Not less than one-third (including the number of seats reserved for women belonging to the Scheduled Castes and the Scheduled Tribes) of the total number of seats to be filled by direct election in every Municipality shall be reserved for women and such seats may be allotted by rotation to different constituencies in a Municipality.
- (4) The offices of Chairpersons in the Municipalities shall be reserved for the Scheduled Castes, the Scheduled Tribes and women in such manner as the Legislature of a State may, by law, provide.
- (5) The reservation of seats under clauses (1) and (2) and the reservation of offices of Chairpersons (other than the reservation for women) under clause (4) shall cease to have effect on the expiration of the period specified in article 334.
- (6) Nothing in this Part shall prevent the Legislature of a State from making any provision for reservation of seats in any

Municipality or offices of Chairpersons in the Municipalities in favour of backward class of citizens.

243U. Duration of Municipalities, etc.-

- (1) Every Municipality, unless sooner dissolved under any law for the time being in force, shall continue for five years from the date appointed for its first meeting and no longer:  
Provided that a Municipality shall be given a reasonable opportunity of being heard before its dissolution.
- (2) No amendment of any law for the time being in force shall have the effect of causing dissolution of a Municipality at any level, which is functioning immediately before such amendment, till the expiration of its duration specified in clause (1).
- (3) An election to constitute a Municipality shall be completed,-
  - (a) before the expiry of its duration specified in clause (1);
  - (b) before the expiration of a period of six months from the date of its dissolution:  
Provided that where the remainder of the period for which the dissolved Municipality would have continued is less than six months, it shall not be necessary to hold any election under this clause for constituting the Municipality for such period.
- (4) A Municipality constituted upon the dissolution of a Municipality before the expiration of its duration shall continue only for the remainder of the period for which the dissolved Municipality would have continued under clause (1) had it not been so dissolved.

243V. Disqualifications for membership.-

- (1) A person shall be disqualified for being chosen as, and for being, a member of a Municipality-
  - (a) if he is so disqualified by or under any law for the time being in force for the purposes of elections to the Legislature of the State concerned:  
Provided that no person shall be disqualified on the ground that he is less than twenty-five years of age, if he has attained the age of twenty-one years;
  - (b) if he is so disqualified by or under any law made by the Legislature of the State.
- (2) If any question arises as to whether a member of a Municipality has become subject to any of the disqualifications mentioned in clause (1), the question shall be referred for the decision of such authority and in such manner as the Legislature of a State may, by law, provide.

243W. Powers, authority and responsibilities of Municipalities, etc.- Subject to the provisions of this Constitution, the Legislature of a State may, by law, endow-

- (a) the Municipalities with such powers and authority as may be necessary to enable them to function as institutions of self-government and such law may contain provisions for the devolution of powers and responsibilities upon Municipalities, subject to such conditions as may be specified therein, with respect to-
  - (i) the preparation of plans for economic development and social justice;
  - (ii) the performance of functions and the implementation of schemes as may be entrusted to them including those in relation to the matters listed in the Twelfth Schedule;
- (b) the Committees with such powers and authority as may be necessary to enable them to carry out the responsibilities conferred upon them including those in relation to the matters listed in the Twelfth Schedule.

243X. Power to impose taxes by, and Funds of, the Municipalities.-The Legislature of a State may, by law,-

- (a) authorise a Municipality to levy, collect and appropriate such taxes, duties, tolls and fees in accordance with such procedure and subject to such limits;
- (b) assign to a Municipality such taxes, duties, tolls and fees levied and collected by the State Government for such purposes and subject to such conditions and limits;
- (c) provide for making such grants-in-aid to the Municipalities from the Consolidated Fund of the State; and
- (d) provide for constitution of such Funds for crediting all moneys received, respectively, by or on behalf of the Municipalities and also for the withdrawal of such moneys therefrom. as may be specified in the law.

243Y. Finance Commission.-

- (1) The Finance Commission constituted under article 243-I shall also review the financial position of the Municipalities and make recommendations to the Governor as to-
  - (a) the principles which should govern-
    - (i) the distribution between the State and the Municipalities of the net proceeds of the taxes, duties, tolls and fees leviable by the State, which may be divided between them under this Part and the allocation between the Municipalities at all levels of their respective shares of such proceeds;
    - (ii) the determination of the taxes, duties, tolls and fees which may be assigned to, or appropriated by, the Municipalities;
    - (iii) the grants-in-aid to the Municipalities from the Consolidated Fund of the State;
  - (b) the measures needed to improve the financial position of the Municipalities;
  - (c) any other matter referred to the Finance Commission by the Governor in the interests of sound finance of the Municipalities.
- (2) The Governor shall cause every recommendation made by the Commission under this article together with an explanatory memorandum as to the action taken thereon to be laid before the Legislature of the State.

243Z. Audit of accounts of Municipalities.-The Legislature of a State may, by law, make provisions with respect to the maintenance of accounts by the Municipalities and the auditing of such accounts.

243ZA. Elections to the Municipalities.-

- (1) The superintendence, direction and control of the preparation of electoral rolls for, and the conduct of, all elections to the Municipalities shall be vested in the State Election Commission referred to in article 243K.
- (2) Subject to the provisions of this Constitution, the Legislature of a State may, by law, make provision with respect to all matters relating to, or in connection with, elections to the Municipalities.

243ZB. Application to Union territories.-The provisions of this Part shall apply to the Union territories and shall, in their application to a Union territory, have effect as if the references to the Governor of a State were references to the Administrator of the Union territory appointed under article 239 and references to the Legislature or the Legislative Assembly of a State were references in relation to a Union territory having a Legislative Assembly, to that Legislative Assembly:

Provided that the President may, by public notification, direct that the provisions of this Part shall apply to any Union territory or part thereof subject to such exceptions and modifications as he may specify in the notification.

243ZC. Part not to apply to certain areas.-

- (1) Nothing in this Part shall apply to the Scheduled Areas referred to in clause (1), and the tribal areas referred to in clause (2), of article 244.
- (2) Nothing in this Part shall be construed to affect the functions and powers of the Darjeeling Gorkha Hill Council

constituted under any law for the time being in force for the hill areas of the district of Darjeeling in the State of West Bengal.

- (3) Notwithstanding anything in this Constitution, Parliament may, by law, extend the provisions of this Part to the Scheduled Areas and the tribal areas referred to in clause (1) subject to such exceptions and modifications as may be specified in such law, and no such law shall be deemed to be an amendment of this Constitution for the purposes of article 368.

243ZD. Committee for district planning.-

- (1) There shall be constituted in every State at the district level a District Planning Committee to consolidate the plans prepared by the Panchayats and the Municipalities in the district and to prepare a draft development plan for the district as a whole.
- (2) The Legislature of a State may, by law, make provision with respect to-
  - (a) the composition of the District Planning Committees;
  - (b) the manner in which the seats in such Committees shall be filled:  
Provided that not less than four-fifths of the total number of members of such Committee shall be elected by, and from amongst, the elected members of the Panchayat at the district level and of the Municipalities in the district in proportion to the ratio between the population of the rural areas and of the urban areas in the district;
  - (c) the functions relating to district planning which may be assigned to such Committees;
  - (d) the manner in which the Chairpersons of such Committees shall be chosen.
- (3) Every District Planning Committee shall, in preparing the draft development plan,-
  - (a) have regard to-
    - (i) matters of common interest between the Panchayats and the Municipalities including spatial planning, sharing of water and other physical and natural resources, the integrated development of infrastructure and environmental conservation;
    - (ii) the extent and type of available resources whether financial or otherwise;
  - (b) consult such institutions and organisations as the Governor may, by order, specify.
- (4) The Chairperson of every District Planning Committee shall forward the development plan, as recommended by such Committee, to the Government of the State.

243ZE. Committee for Metropolitan planning.-

- (1) There shall be constituted in every Metropolitan area a Metropolitan Planning Committee to prepare a draft development plan for the Metropolitan area as a whole.
- (2) The Legislature of a State may, by law, make provision with respect to-
  - (a) the composition of the Metropolitan Planning Committees;
  - (b) the manner in which the seats in such Committees shall be filled:  
Provided that not less than two-thirds of the members of such Committee shall be elected by, and from amongst, the elected members of the Municipalities and Chairpersons of the Panchayats in the Metropolitan area in proportion to the ratio between the population of the Municipalities and of the Panchayats in that area;
  - (c) the representation in such Committees of the Government of India and the Government of the State and of such organisations and institutions as may be deemed necessary for carrying out the functions assigned to such Committees;
  - (d) the functions relating to planning and coordination for the Metropolitan area which may be assigned to such Committees;
  - (e) the manner in which the Chairpersons of such Committees shall be chosen.
- (3) Every Metropolitan Planning Committee shall, in preparing the draft development plan,-

- (a) have regard to-
    - (i) the plans prepared by the Municipalities and the Panchayats in the Metropolitan area;
    - (ii) matters of common interest between the Municipalities and the Panchayats, including co-ordinated spatial planning of the area, sharing of water and other physical and natural resources, the integrated development of infrastructure and environmental conservation;
    - (iii) the overall objectives and priorities set by the Government of India and the Government of the State;
    - (iv) the extent and nature of investments likely to be made in the Metropolitan area by agencies of the Government of India and of the Government of the State and other available resources whether financial or otherwise;
  - (b) consult such institutions and organisations as the Governor may, by order, specify.
- (4) The Chairperson of every Metropolitan Planning Committee shall forward the development plan, as recommended by such Committee, to the Government of the State.

243ZF. Continuance of existing laws and Municipalities.- Notwithstanding anything in this Part, any provision of any law relating to Municipalities in force in a State immediately before the commencement of THE CONSTITUTION (Seventy-fourth Amendment) Act, 1992, which is inconsistent with the provisions of this Part, shall continue to be in force until amended or repealed by a competent Legislature or other competent authority or until the expiration of one year from such commencement, whichever is earlier:

Provided that all the Municipalities existing immediately before such commencement shall continue till the expiration of their duration, unless sooner dissolved by a resolution passed to that effect by the Legislative Assembly of that State or, in the case of a State having a Legislative Council, by each House of the Legislature of that State.

243ZG. Bar to interference by courts in electoral matters.- Notwithstanding anything in this Constitution,-

- (a) the validity of any law relating to the delimitation of constituencies or the allotment of seats to such constituencies, made or purporting to be made under article 243ZA shall not be called in question in any court;
- (b) no election to any Municipality shall be called in question except by an election petition presented to such authority and in such manner as is provided for by or under any law made by the Legislature of a State.’

3. Amendment of article 280.- In clause (3) of article 280 of the Constitution, sub-clause (c) shall be relettered as sub-clause (d) and before sub-clause (d) as so relettered, the following sub-clause shall be inserted, namely:-

“(c) the measures needed to augment the Consolidated Fund of a State to supplement the resources of the Municipalities in the State on the basis of the recommendations made by the Finance Commission of the State;”.

4. Addition of Twelfth Schedule.-After the Eleventh Schedule to the Constitution, the following Schedule shall be added, namely:-

“TWELFTH SCHEDULE  
(Article 243W)

1. Urban planning including town planning.
2. Regulation of land-use and construction of buildings.
3. Planning for economic and social development.
4. Roads and bridges.
5. Water supply for domestic, industrial and commercial purposes.
6. Public health, sanitation conservancy and solid waste management.

7. Fire services.
8. Urban forestry, protection of the environment and promotion of ecological aspects.
9. Safeguarding the interests of weaker sections of society, including the handicapped and mentally retarded.
10. Slum improvement and upgradation.
11. Urban poverty alleviation.
12. Provision of urban amenities and facilities such as parks, gardens, playgrounds.
13. Promotion of cultural, educational and aesthetic aspects.
14. Burials and burial grounds; cremations, cremation grounds and electric crematoriums.
15. Cattle pounds; prevention of cruelty to animals.
16. Vital statistics including registration of births and deaths.
17. Public amenities including street lighting, parking lots, bus stops and public conveniences.
18. Regulation of slaughter houses and tanneries.”.

Source: <http://indiacode.nic.in/coiweb/amend/amend74.htm>

---

# Annex 2:

## Government Initiatives in Select Indian Cities

---

Rapid urbanization has presented a huge unmet demand for housing and infrastructure leading to settlements that have insecure tenure, are of “quasi-legal” nature, and conventional provision of water and sanitation services to them becomes complex for urban agencies. A large chunk of households can only be afforded (legally or practically) public or community level environmental services (for example, shared or neighbourhood level water supply connections, and community toilets to cater to a group of families) rather than individual piped water supply or household latrines.

The post-independence decades did not accord attention to the issues of slum settlements. In the early 1970s, urban housing shortage increased at a fast pace and the population of unauthorized and under-serviced settlements or slums also began to grow rapidly. This led to a growing recognition of the need to utilize funds in a manner that would cover a greater proportion of the population as compared to conventional subsidized housing programs. A working group constituted by the Planning Commission recommended slum improvement as an interim palliative, but necessary to ensure at least minimum conditions of environmental hygiene for slum dwellers (Planning Commission, 2011).

By 1980s, slum settlements started to be viewed less as “evils and blots” and more as housing solutions as the instance of Mumbai demonstrated (WSP/TARU, 2006). Albeit selectively, other cities in India, especially the metropolises, also mirrored the approach of Mumbai – through State Slum Acts, these settlements were legitimized and their housing and infrastructure provision improved.

During the Fourth Five Year Plan period (1969-74), the GoI supported Environmental Improvement of Urban Slums (EIS) was launched (1972-73) to provide a minimum level of services, water supply, sewerage, drainage, street pavements in 11 cities with a population of 0.8 million and above. This was later incorporated in the Minimum Needs Programme (MNP) during the Fifth Plan. The program intended to combine social development with environmental improvement and was extended to include all cities with populations of over 300,000. In 1979, it was extended to all urban centers irrespective of their size.

Another significant development during the Fifth Five Year Plan (1974-79) was the enactment of the Urban Land (Ceiling & Regulation) Act (ULCRA) that was designed to prevent concentration of land holding in urban areas, and to make available urban land for construction of houses for the middle-and low-income groups.

The rise of public toilets was another major development in parallel. Earlier, these were thought of as “public conveniences” for floating populations in areas such as markets, but this was in the 1990s and 2000s also used to cater to the huge demand for sanitation in slum settlements where individual household toilets were infeasible.

At the city level, states and cities were undertaking a few interventions for slum upgradation. A systematic approach to planning and delivering services to slums had to wait until the 1970s, when initiatives were taken up in Kolkata, followed by Hyderabad and Visakhapatnam.

The Basti Improvement Programme (BIP) in Kolkata sponsored by GoI marked the shift in policy from slum clearance to slum upgrading in situ. It was perceived as an interim arrangement and not as a viable strategy. Basti improvement “was conceived and implemented as a sanitation and clean environment drive, rather than as an entry point of social and economic upliftment leading to the integration of marginalized communities. The effect was that the community did not participate and did not perceive itself as a part of the upgrading process” (Krishnamurty and Benjamin, 1998). This led to poor maintenance of facilities and non-payment of service charges by users.

### **Box: Basti Improvement Program in Kolkata**

The program proposed:

- (1) The immediate implementation of a major program of basti improvement covering 400,000 slum dwellers within the next five years;
- (2) That all future slum clearance be concentrated and accelerated as much as possible in the basti areas of the central city, and that specific rehousing programs for the 170,000 basti dwellers in those areas be expeditiously developed;
- (3) The total acquisition of all basti lands outside the central city by 1971;
- (5) The preparation of a systematic program for the eventual clearance and redevelopment of all basti lands acquired, and the use of these lands to meet the present and anticipated social needs for such essential community facilities; and
- (8) The establishment of a strong administrative arrangement for the coordination and execution of the management functions essential to the improvement program and social management to enlist the effective voluntary participation of the basti-dwellers themselves in a vigorous effort toward basti community development.

Bastis are registered slums that have been recognized by the Municipal Corporation on the basis of the land title handed over to the slum dwellers on lease or are let out on rent. Bastis are legally recognized settlements that the Kolkata Municipal Corporation supplies with services such as water, latrines, trash removal, and occasionally electricity. Basti huts typically are permanent structures that the government will not demolish, which allows basti communities to develop a sense of permanency and to focus on issues of poverty beyond shelter availability.

*Source:* Calcutta Metropolitan Planning Organisation, Basti Improvement Programme: Calcutta and Howrah (Calcutta: Calcutta Metropolitan Planning Organisation, 1967), ii-iv.

### **From Interim Palliative to Long-term Strategy**

Slum improvement through the Urban Community Development (UCD) program was another government initiative that has been attempted in a few cities in India. Hyderabad (UCD started in 1967) and Visakhapatnam (UCD started in 1979) were conceived as integrated urban development programs. The key concepts involved are ‘self-help’ and ‘felt needs’. “Therefore, initially the success of the project depends almost entirely upon the work of each community organiser who has to stimulate, guide and sustain the whole process by working with individuals and groups in the slums, learning about their most commonly felt needs, and motivating them to help themselves. UCD moves in to help only when the slum dwellers show a certain degree of interest and enthusiasm.”

The UCD program in Visakhapatnam replicated many features of the program in Hyderabad. It provided some positive lessons, but also drew attention to difficulties in sustaining the integrated approach. These difficulties arose because of the tension that exists between the short-term goal of infrastructure and housing provision and long-term process of social development and empowerment. The experience of UCD pointed out that the inability to change through the program, the existing power structure

and, political patronage and brokerage systems has put limitations on its achievement. It stressed the importance of ensuring that “community and social development programs provide an entry point for project involvement, housing and infrastructure only being implemented after community organization has been strengthened.” (Asthana, 1998)

While the experience of initiatives such as BIP and UCD stressed the importance of community organization and their involvement and participation in ensuring effectiveness and sustainability of physical improvements in slums, the EIS has continued to concentrate only on the engineering aspect of service provision. A Task Force appointed by the Planning Commission, GoI, reviewed the progress of the scheme in 1983. It mentioned in its report that in the 10 years since the launch of the EIS scheme, it had achieved a very limited coverage and only 27 to 34 percent of the estimated slum population was provided basic services (Planning Commission, Government of India, 1983).

Another study titled “In the Name of the Poor – Access to Basic Amenities” (Kundu, 1993) pointed out the persisting and acute lack of facilities for the poor. The study stated that nearly a third of urban households did not have access to a latrine facility. In a large number of cities, public authorities have provided low-cost toilets that are not connected to the city sewers. In many cases, they are poorly maintained and pose a threat to the micro-environment.

The Task Force (1983) identified a number of problems in the implementation of the scheme for the environmental improvement of slums. They were primarily related to insufficient budgets, lack of adequate administrative arrangements, legal problems in improving slums on private and central government land, and lack of proper maintenance of the facilities provided. The report noted that the scheme is implemented purely as a public works project. Slum dwellers were not involved in the program and there is no financial participation of the local bodies.

From its recommendations it is clear that the Task Force moved away from treating the EIS as a short-term palliative and suggests measures to make it a long-term program. Significantly, it suggested measures that go beyond engineering aspects and include community participation and creating workable arrangements for maintenance of assets. These aspects were emphasised by WHO in the 1950s. In order to make the scheme for environmental improvement more effective, the Task Force recommended:

- The setting of realistic norms;
- Full involvement of local bodies in the project;
- Firm linkage of improvement program with security of tenure and house improvement loans;
- Full involvement of the people through community development projects, voluntary agencies and community organizations
- A certain amount of cost recovery; and
- Workable arrangements for maintenance of assets and services.

Other than raising expenditure norms by a small extent, the other recommendations made by the Task Force have, however, remained largely unimplemented.

### **UBSP, ILCS AND VAMBAY Programs**

In the Sixth Plan period (1981 to 1985), the Urban Basic Services (UBS), a collaborative project of GoI and UNICEF, was launched. The project was proposed to be implemented through the community volunteers to be selected from each slum and trained to increase their awareness and capacity to participate.

The scheme was introduced across the country during Seventh Plan period as the Urban Basic Services for the Poor (UBSP). The objectives of the program were to extend child health services, water and sanitation facilities, pre-school and other learning opportunities outside schools and provide income generation opportunities for women.

In 1981, GoI launched the Integrated Low Cost Sanitation (ILCS) program with an aim to abolish manual scavenging. In 1996, GoI initiated the National Slum Development Programme (NSDP) with the objective of upgrading urban slums by providing physical and social<sup>7</sup> amenities and shelter upgrading (<http://muepa.nic.in/>).

By combining the three poverty alleviation schemes, the UBSP, Nehru Rojgar Yojana and Prime Minister's Integrated Urban Poverty Eradication Program, a new scheme, Swarna Jayanti Shahari Rojgar Yojana (SJSRY) was launched by GoI in 1997. The objective of the scheme was to provide gainful employment to the urban unemployed or underemployed, through self-employment ventures or provision of wage employment.

The SJSRY consisted of two schemes: the Urban Self Employment Programme (USEP), and the Urban Wage Employment Programme (UWEP). The basic aim of this program was to improve the quality of life of BPL families.

In 2001, GoI launched Valmiki Ambedkar Malin Basti Awas Yojana (VAMBAY) with the primary objective of facilitating construction and upgrading of dwelling units in slums and providing a healthy environment by constructing community toilets under the Nirmal Bharat Abhiyan (Clean India Campaign).

---

<sup>7</sup> Physical amenities include water supply, storm water drains, community bath, widening and paving of existing lanes, sewers, community latrines, and streetlights. Social amenities include pre-school education, non-formal education, adult education, maternity, child health and primary health care including immunization.



Water and Sanitation Program  
The World Bank  
Hindustan Times House  
18-20, Kasturba Gandhi Marg,  
New Delhi 110001, India

Telephone: (91-11) 41479301, 49247601  
E-mail: [wpsa@worldbank.org](mailto:wpsa@worldbank.org)  
[www.wsp.org](http://www.wsp.org)  
[worldbank.org/water](http://worldbank.org/water)  
[@WorldBankWater](https://twitter.com/WorldBankWater)

