SWACHH BHARAT:
Vision to Mission

India Sanitation Coalition
Build Use Maintain Treat

sustainable sanitation alliance

Swachh Bharat: Vision to Mission

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Foreword

The India Sanitation Coalition (ISC) and Sustainable Sanitation Alliance (SuSanA) are pleased to present this report of the Swachh Bharat Mission (SBM), two and a half years after its launch.

Prime Minister Modi launched this flagship program on 2nd October 2014, and it has brought about significant changes in the way the nation perceives and deals with the sanitation problem of India. Open-defecation free has become a catch-phrase. Thanks to mass media and high-level political commitment, sanitation is now a key development topic amongst government and other stakeholders, and every stakeholder is working to create a citizen's movement.

SBM is not the first sanitation program that the government has launched, but this time a few critical aspects have not been overlooked: community ownership, and technology-enabled accountability. With these tools, development partners, media, government, and companies are being able to plan on a scale like never before. The potential is immense.

Many players have been in sanitation for fulfilling their CSR mandate, for their own business interests, to act as catalysts, or for promoting company values through employee engagement. There are many avenues of engaging. Some have been able to achieve scale through collaboration with other stakeholders such as government, other corporate houses, or development partners, and some have continued to achieve small pockets of success. These interventions may have started with infrastructure development, but have expanded to weave in other activities along the sanitation value chain. Sustainability will be the ultimate litmus test of success; whether communities change their sanitation habits and take ownership, or they revert back to their old habits.

This document captures the ideas from ISC partner experiences, as well as e-discussions on the India Chapter of the SuSanA platform. It builds on these with secondary research to present the status of SBM in a comprehensive manner. We hope that the players in the sector find this publication useful as they move forward.

Naina Lal Kidwai
Chair
India Sanitation Coalition

Message

Sustainable sanitation is a key driver for economic development and sustainable development in general. In recent years this has become more and more evidentand the Sustainable Development Goals (SDGs) clearly enforce the important role of sanitation to ensure healthy livelihoods end to eradicate poverty.

With the launch of Government of India'sflagship programme"Swachh Bharat Abhiyan", efforts to provide sanitation have taken up speed on all levels in India. With this mission the government of India sets the goal for an open-defecation free India by 2019, with construction of toilets and sanitation systems as well as behavior change activities.

To achieve these ambitious goals, implementation of sanitation in a sustainable manner will be of greatest importance. To be a sustainable sanitation system it must not only protect and promote human health by providing a clean environment and breaking the cycle of disease, but also be economically viable, socially acceptable, and technically and institutionally appropriate while protecting the environment and the natural resource base.

To support the political drive towards sustainable sanitation in India, the international network Sustainable Sanitation Alliance (SuSanA), has set up a regional chapter for India. The India Chapter serves as a platform for exchange and discussion and links the Indian discourse about sanitation with the global community. As of today, most of the SuSanA members come from India and provide important contributions to the international network.

I am very happy that the India Sanitation Coalition is organising regular and vibrant thematic online discussions under the umbrella of the India chapter. Sanitation professionals from India and around the world are brought together to discuss the challenges and opportunities along India's pathway to sustainable sanitation.

The following publication is an output of the online discussions about the Swacch Bharat Mission that took place in 2016 on the SuSanA Discussion Forum and is based on the input of several SuSanA members.

Enjoy reading!

Arne Panesar
Secretariat of the Sustainable Sanitation Alliance
hosted at the Sector Programme 'Sustainable Sanitation', GIZ

"Sanitation has to become everyone's business whether it's the Pradhan or the collector or the Member of Parliament."
PARAMESWARAN IYER,
Secretary, Ministry of Drinking Water and Sanitation

"With the launch of new urban development initiatives like the Smart City Mission, Atal Mission for Rejuvenation and Urban Transformation, Heritage City Development Mission and Swachh Bharat Mission, the focus of the Ministry now shifts to effective and timely implementation of the schemes by the states and urban local bodies through effective coordination with them."
RAJIV GAUBA, Secretary, Ministry of Urban Development

"Too often we depend on an individual without making the change systemic. I believe this is one of the challenges we must overcome if we are to have a truly 'swachh' and open defecation-free country in three years."
NAINA LAL KIDWAI, Chairperson, India Sanitation Coalition

"The Prime Minister, Mr. Narendra Modi has ignited the candle of cleanliness among Indians to make India clean. He has asked Indians to restore the culture of sanitation which Indians had during Harappan civilization. We should join hands with the Prime Minister with all the might and resources, to make India clean and free from defecation in the open. Be civilized, be cultured, be clean, make India clean and standout in the row of civilized, cultured and clean nations."
DR. BINDESHWAR PATHAK, Sociologist and Social Reformer, Founder, Sulabh Sanitation Movement

"At the Toilet Board, we believe that delivering smart, sustainable and resilient sanitation to all is the business opportunity of the decade; a wild west of golden business opportunity which has been left virtually untapped. Unleashing this potential and catalysing a robust new business sector will require new kinds of business partnerships, between innovative entrepreneurs who understand their local market failures, and large or multinational corporations that know how to deliver products, services and fulfil consumer aspirations at scale. #WeCan'tWait for organic growth, that's why we've created the Toilet Accelerator program in 2016. We facilitate private sector engagement and bespoke mentorship to sanitation businesses and entrepreneurs serving low-income markets. More than toilet product and service innovation alone, we are supporting commercially viable businesses at every point in the sanitation value chain, and looking ahead to future sanitation systems of business opportunity, including circular economy waste management (or toilet resource) models, digital and mobile applications for sanitation and e-health. #nextbigthing

CHERYL HICKS, Executive Director, Toilet Board Coalition www.toiletboard.org

Adequate sanitation is not only a hygienic imperative but also a basic pre-condition of a life lived with dignity. Swachh Bharat Mission and the Indian Sanitation Coalition are ideas that will lift millions of lives and are the first steps towards building a sustainable ecosystem for our country.

PARUL SONI, Think Through Consultants

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Abbreviations

AMRUT	Atal Mission for Renewal and Urban Transformation
CAPEX	Capital Expenditure
CLTS	Community Led Total Sanitation
CRSP	Central Rural Sanitation Programme
CSP	City Sanitation Plan
CSR	Corporate Social Responsibility
FSM	Faecal Sludge Management
FSSM	Faecal Sludge and Septage Management
GDP	Gross Domestic Product
GoI	Government of India
IAS	Indian Adminsitrative Service
IEC	Information, Education and Communication
IHHL	Individual Household Latrine
ILCS	Integrated Low-cost Sanitation Scheme
JNNURM	Jawaharlal Nehru National Urban Renewal Mission
MDWS	Ministry of Drinking Water and Sanitation
MoUD	Ministry of Urban Development
NBA	Nirmal Bharat Abhiyan
NGO	Non-Governmental Organization
NGP	Nirmal Gram Puraskar
NUSP	National Urban Sanitation Policy
ODF	Open Defecation Free
OPEX	Operational Expenditure
RALU	Rapid Action and Learning Unit
SBM	Swachh Bharat Mission
SHG	Self Help Group
SLWM	Solid and Liquid Waste Management
STP	Sewage Treatment Plant
TSC	Total Sanitation Campaign
ULB	Urban Local Body
WASH	Water, Sanitation and Hygiene

Abstract

This document is based on the inputs received from SuSanA members and secondary research on Swachh Bharat Mission (SBM) Rural and Urban. The purpose of this document is to help ISC inform the Government sanitation schemes at the national and state levels, and examine the significance of sustainability, knowledge flows, community-led approaches, sanitation technology, media, and financial innovations. SBM has ushered in changes in the way sanitation is perceived and sanitation programmes are executed. It has got the bureaucratic and political priority required for adequate planning and execution. This has in most places translated into people's movements for sanitation as well. However, there are many issues and challenges for effective implementation in terms of behaviour change initiatives for promoting toilet usage, quality and sustainability, lack of localized and affordable technology, and lack of inclusiveness. Some of the recommendations are to have an integrated approach, utilizing private sector human resources and expertise for project management and financing, bridge financing, operationalizing RALUs (Rapid Action and Learning Units), and pragmatic district-level planning.

Chapter 1

1. Introduction

While India is home to 17.5 percent of the world's population, close to 60 percent of the number of people globally who do not have toilets and defecate in the open, live in India (see Figure 1). A World Bank study indicates that inadequate sanitation costs India economic losses equivalent to 6.4% of GDP in 2006 (World Bank, 2006).

Swachh Bharat Mission (SBM) was launched by the Government of India on October 2, 2014 as a national development priority and a flagship programme. It has two sub-missions, the Swachh Bharat Mission – Gramin (SBM-G) for rural areas and the Swachh Bharat Mission – Urban (SBM-U) for urban areas. The Ministry of Drinking Water and Sanitation (MWDS) and the Ministry of Urban Development (MoUD) are the nodal ministries of Central Government for implementing the SBM-G and SBM-U, respectively.

The objective is to improve quality of life in India by eliminating open defecation by October 2019. This is an ambitious target because attitudes towards sanitation are deeply embedded, and changing them is challenging. Convincing people to make and use a toilet, wash hands with soap or ash, and maintain hygienic conditions around drinking water is an uphill task. Shortages of funds, human resources, as well as the scale of coordination between various stakeholders, needed is huge. There is a social and economic impact to all of this and it affects all of us.

As per the Census of India, 2011, 67 percent of the rural households did not have toilets and were defecating in the open. SBM-G aims to create swachh villages by accelerating sanitation coverage through construction of Individual Household Latrines (IHHLs) through community-led approaches, community sanitary complexes in rural areas, and improve solid and liquid waste management. It emphasises awareness generation and capacity building of communities and Panchayati Raj Institutions to adopt sustainable sanitation practices.

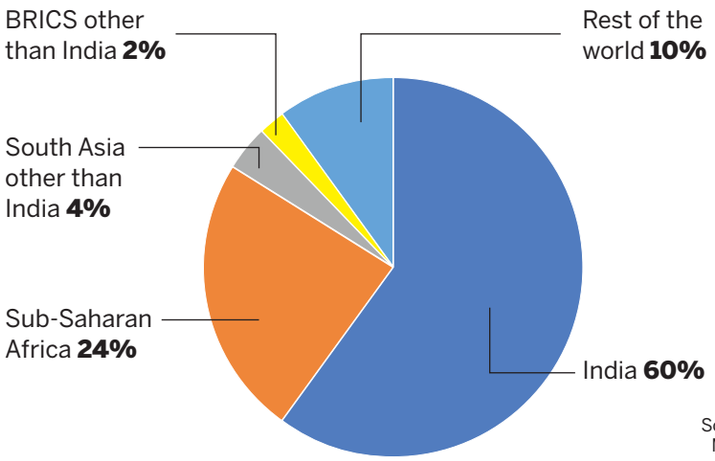
It also focuses on creation of rural sanitation marts and production centres for supply and availability of sanitary materials in villages. For construction of IHHLs, Rs. 12,000 is given as incentive to the beneficiary by the government in instalments. Sanitation coverage has increased from 42 percent in 2014 to 62 percent now. Over 39 million household toilets have been built and more than 190,000 villages have declared themselves open defecation free (ODF) (MDWS, 2017).

Currently, 32 percent people live in 4,041 statutory towns. Out of this, close to 8 million households (HHs) do not have access to toilets. A third have access to network sewerage, 38% rely on septic tanks, while the rest of population either uses common facilities, unsafe sanitation or defecates in the open (Census, 2011). Downstream issues, such as collection and treatment of sewage and faecal sludge and garbage management have become major problems.

SBM-U aims to eliminate open defecation by targeting 80 percent of these households for the construction of IHHLs and community toilets for the remaining 20 percent. The overall target of the mission is to construct 1.04 crore units of IHHLs and 5.08 lakh units of public and community toilets. Apart from these toilets, solid waste management, Information Education and Communication (IEC) and capacity building of ULBs are integral components of the SBM (U) programme. There is a government subsidy of Rs 4,000 to beneficiaries for the construction of IHHLs. So far, 595 cities have declared themselves open defecation free and over 3 million IHHLs and 1 million public toilets have been built (MoUD, 2017).

Figure 1:

Open defecation in India compared to other countries/regions of the world (%)



Source: WHO-UNICEF Joint Monitoring Program, 2015

2. Progress and Achievements

2.1 Rural Sanitation in India: A Recap

After Independence, rural sanitation was handled by public health engineering departments or their equivalents in most states. The primary task of these departments was rural water supply, and they gave very low priority to sanitation. India launched the Integrated Low-Cost Sanitation Scheme (ILCS) in 1980 and the Central Rural Sanitation Scheme (CRSP) in 1986, where modest targets were assigned solely for making toilets for beneficiaries, identified simplistically by the poverty line. These were made without much consultation with the end-user and a token subsidy was paid to the contractor who made the toilet. Quality was generally poor, usage not considered and behaviour change activities were mostly non-existent. For decision-makers at all levels, sanitation remained a peripheral concern.

In 1999, the situation changed remarkably as the Total Sanitation Campaign (TSC) was started as a demand-led programme with a focus on Information, Education and Communication (IEC), and capacity building. The *Nirmal Bharat Abhiyan* (NBA) was launched in 2012 to replace the TSC. The focus here was on the principle of community-led total sanitation (CLTS) in rural areas. In 2003, Government of India raised the bar by introducing *Nirmal Gram Puruskar* (NGP) as part of TSC, a reward for the panchayats that had become open defecation free (ODF). However, NGP was a one-off assessment and failed to provide any incentives for sustaining ODF. The assumption was that people who have toilets will use them. However, without effective behaviour change to match construction, many of these toilets fell into disuse and ruin (TARU, 2008). In five years, NGP was discredited by scams, where agencies misreported coverage, and finally, it was discontinued. In 2012, the NBA sought to rectify some defects of finance and the lack of synergy between rural development programmes. It provided for subsidy through sanitation funds as well as the Mahatma Gandhi National Rural Employment Guarantee Scheme.

India through almost three decades of rural sanitation programmes failed to make any noteworthy progress and sanitation coverage remained abysmal. It is significant to note the differences between neighbouring South Asian countries. In the decade since 2003, Bangladesh has eliminated open defecation. Despite several years of civil war and impeded development, Sri Lanka has no open defecation but is now facing a few second-generation problems of water contamination from septic tanks. Nepal has made impressive strides by using district-level community-led approaches and by involving school children as agents of change.

2.2 Swachh Bharat Mission - Rural

SBM-G aims at construction of 111 million toilets at the cost of Rs. 136,000 crores by October 2019. Figure 2 gives the progress in sanitation coverage (in percentage) for past five years.

SBM-G has brought a paradigm shift in the rural sanitation coverage which has increased from 41.5% in 2014 to 64% in 2017. Figure 3 depicts the number of toilets constructed each year from 2002-17.

The asking rate is 22.2 million toilets per year. In 2016-17, 21 million toilets were made. A total of 25.5 million have been made since October 2014. The trend shown in Figure 3 is very uneven. After a dip from 2012/13 to 2014/15, the construction rate has picked up in 2015/16, and further in the current year. Construction has accelerated from 2014-2015 when 5,858,331 toilets were built to 22 million in 2016-17.

This raises two concerns. One is about the quality of construction. There is evidence that many states have used contractors to ramp up construction rather than adhering to the spirit of SBM i.e., to be a demand-led (people centric) programme.

The other is inadequate attention and expenditure on behaviour change. Figure 4 shows how IEC expenditure as a percentage of the approved funds for any given year has dropped precipitously while expenditure on hardware—construction of individual toilets—has jumped. If corrective measures are not taken, SBM will become a hardware- and toilet-target driven programme like its predecessors.

History has shown that this does not generate sustainable outcomes. The SQUAT Survey of 2014, showed over 40% of households with a working latrine have at least one member who defecates in the open (Coffey, Gupta et. al., 2014). This indicates that the presence of a toilet is not enough of a deterrent to defecating in the open.

Figure 2:

Progress of rural sanitation in terms of coverage (%)

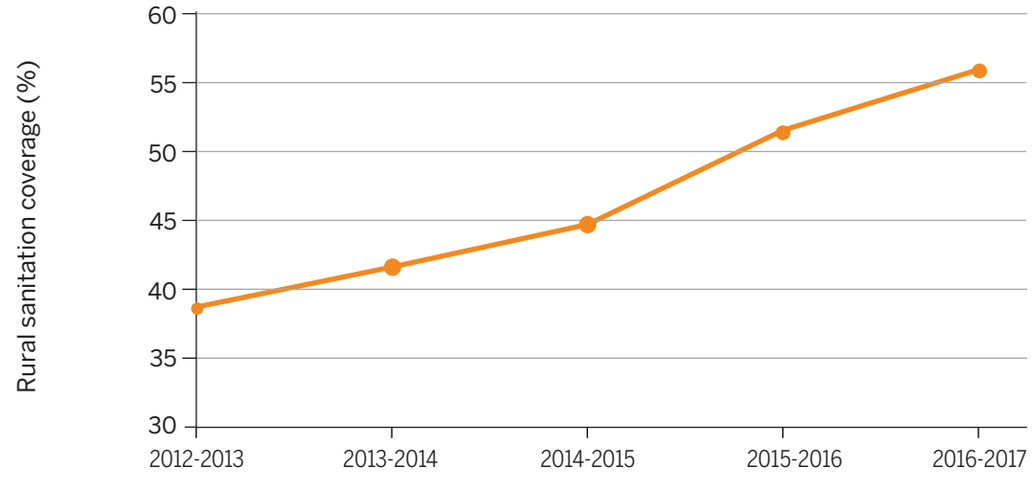


Figure 3:

Total number of rural toilets constructed from the FY 2001-02 to FY 2015-16

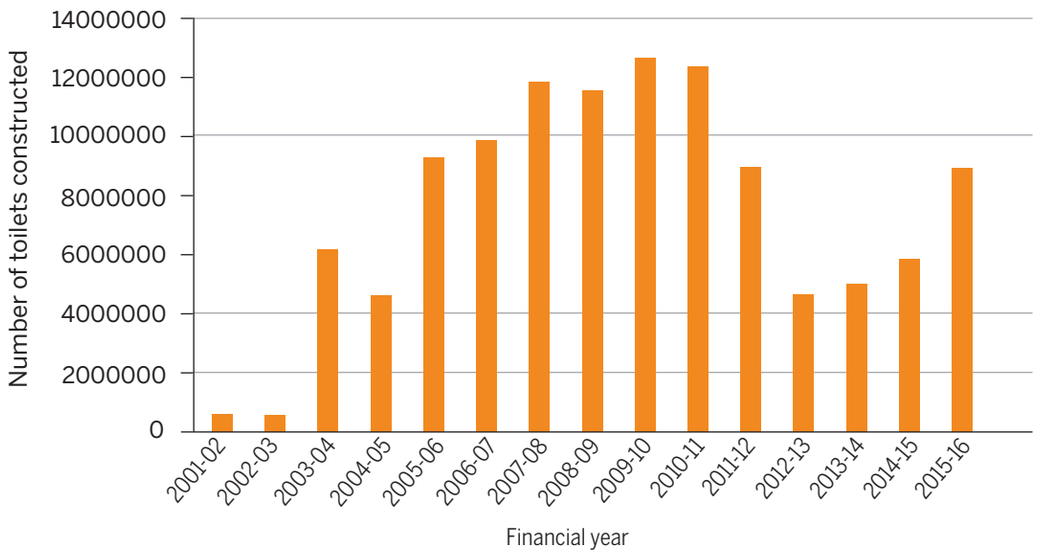
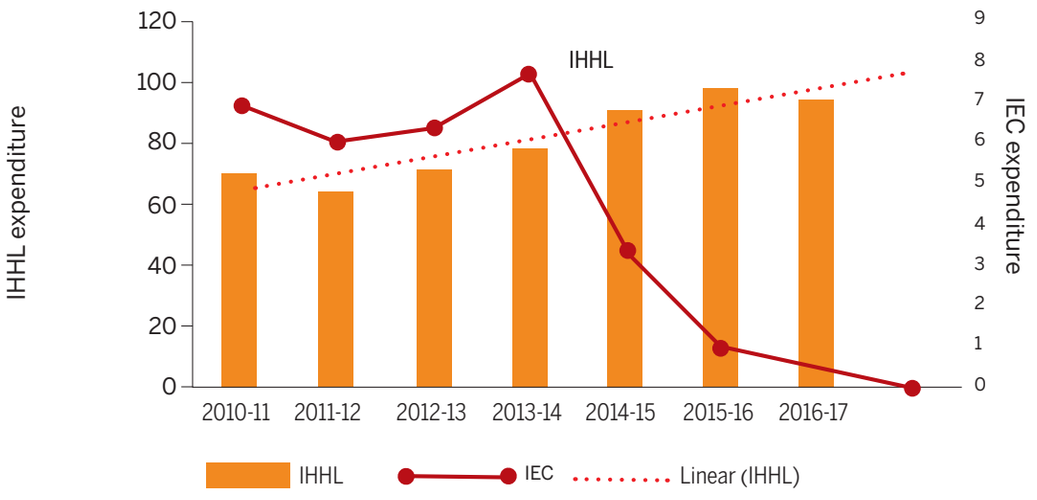


Figure 4:

Expenditure on IHHLs and IEC (% of total approved funds)



Source: MDWS (2017)

2.3 Urban Sanitation in India: A Recap

With around 11% of the world's urban population, India accounts for 43% of global urban open defecation (WHO-UNICEF JMP, 2015). The situation is particularly abysmal in small cities as they account for more than 91% of total urban open defecation in the country.

Urban sanitation in India started receiving attention only after the Pune Declaration titled "Provision of Universal Sanitation in India" in 2004 which ultimately in 2008, culminated to a National Urban Sanitation Policy (NUSP). NUSP sets out a vision of totally sanitised, healthy and liveable cities and ensure and sustain good public health and environmental outcomes for all their citizens with a special focus on urban poor and women. Several cities also prepared City Sanitation Plans (CSPs) as mandated in NUSP.

In 2005, a large-scale government programme called Jawaharlal Nehru National Urban Renewal Mission (JNNURM) was launched which gave a big boost to sanitation infrastructure in cities particularly underground sewerage network. However, there was no urban sanitation government programme that focussed on building toilets and ensuring usage to eliminate open defecation. This reflects how urban sanitation was subsumed in the general urban development agenda.

The conventional approach was to provide 'planned' colonies with sewers, allowing all the rest to use septic tanks or directly discharge grey and black water into drains. People in slums and 'unplanned' colonies had to defecate in the open or connect their toilets to drains. Several cities set up slum development boards to provide common sanitation facilities with little success. A commonly cited problem was slums were on government land and could not be provided any sanitation facilities without legal land title or tenure. Unplanned colonies were also treated the same way.

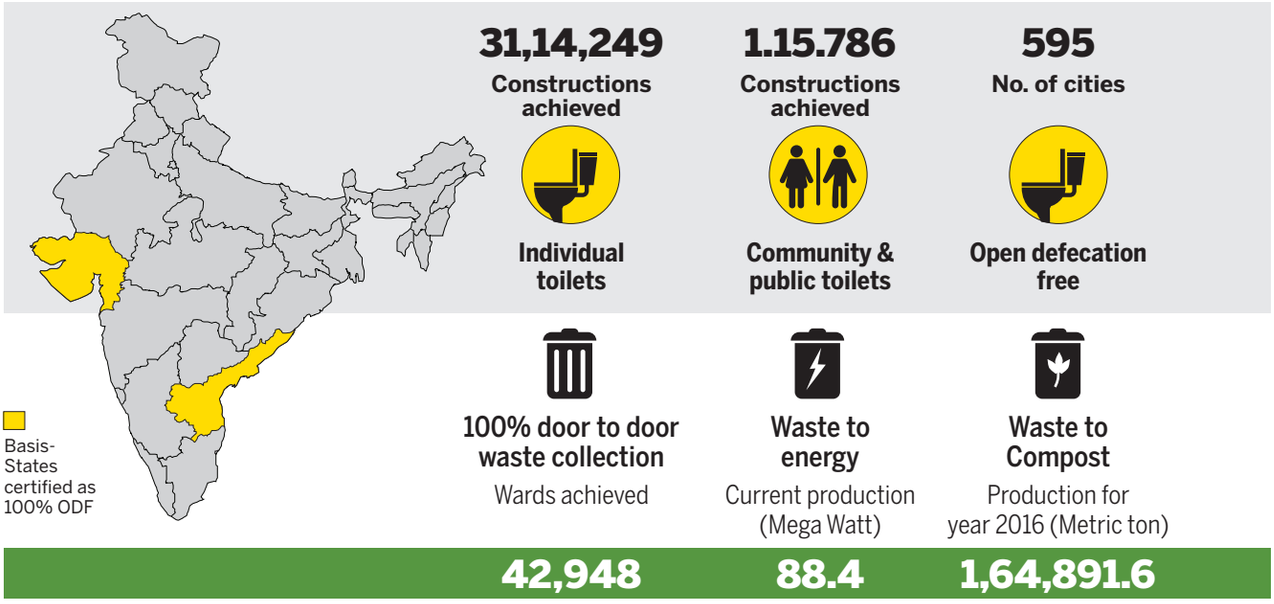
2.4 Swachh Bharat Mission - Urban

In 2014, SBM – Urban repositioned the urban sanitation debate, from the peripheries into the limelight. It offers the poor a better, dignified, healthier and safer future: a window out of poverty with a chance for equal access to sanitation. Urban sanitation has three interconnected pieces: toilets, drains and solid waste, with each having their own value chain.

The goal of SBM was to achieve ODF cities, with adequate solid and liquid waste management and scaling up of waste to energy projects. Figure 5 shows the progress of SBM-U for construction of individual toilets, community and public toilets, ODF towns, numbers of wards achieving 100% door to door waste collection, waste to energy and waste to compost. 595 cities have become ODF so far out of 4041 statutory towns.

Figure 5:

Snapshot of the SBM (U) progress Source: MoUD (2017)



Source: MoUD (2017)

2.5 State and District Level Progress and Achievements

The National Sample Survey- 2015 has ranked 26 States of India based on the percentage of households having access to sanitary toilets and using them. Sikkim has the highest percentage with 98.2, followed by Kerala with 96.4% and Mizoram with 95.8%. Jharkhand has 17.7% population having access to safe sanitation facilities and using them. Figure 6 graphically depicts this ranking.

The Swachh Survekshan (Grameen)—2016 has ranked the districts based on households having access to safe toilets and using them, households having no litter around, public places with no litter in the surrounding, and households having no wastewater around. This is presented in Figure 7.

Swachh Survekshan (Urban)—2016 has 73 major cities (comprising 40% of India's total urban population), including 52 cities with a population of more than one million and all state capitals. This survey has reviewed the sanitation and hygiene conditions in the cities and offers a comprehensive assessment of the level of cleanliness, and the respective Municipal Corporation's level of preparedness in urban India. It would help the government to mentor and guide cities on the basis of needs and gaps. This is presented in Figure 8. MoUD has initiated 'Swachh Survekshan' 2017, which is conducting a survey to rank 500 cities of India. The results of the survey are expected in March 2017.

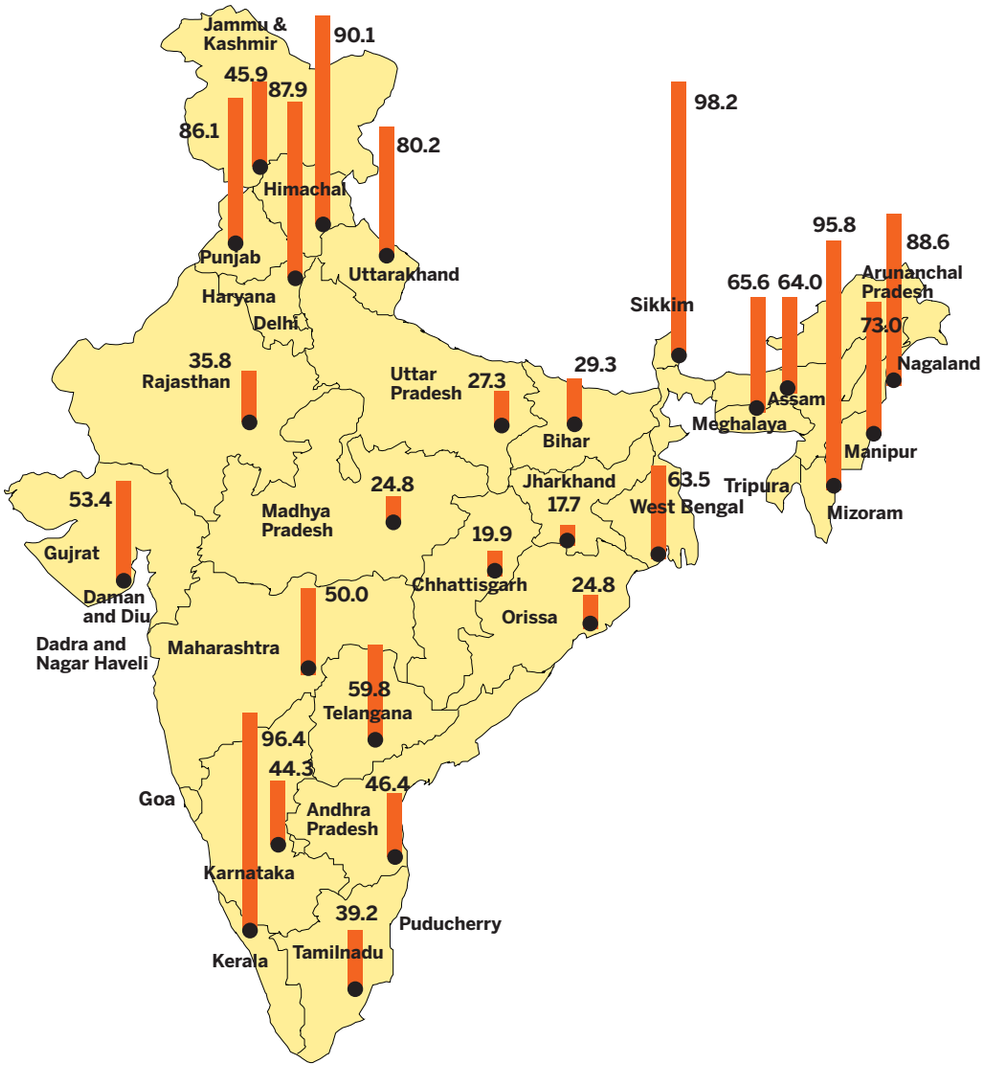


Figure 6:

State-level access to sanitary toilets.

Source: NSSO 2015

Figure 7:

Coverage of Rural Sanitation in districts of India.

Source: Swachh Sarvekshan Grameen Report 2016

- Below 60
- 60-70
- 70-80
- 80-90
- 90-100

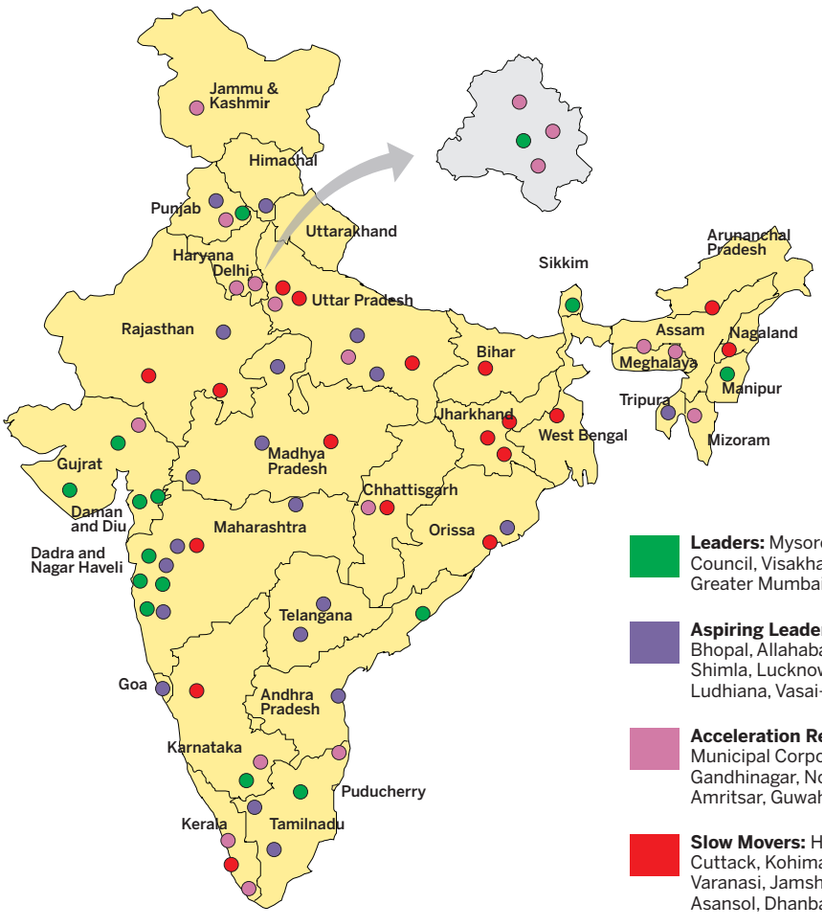


Figure 8:

Sanitation ranking of Indian cities

MoUD (2017)

- **Leaders:** Mysore, Chandigarh, Tiruchirapalli, New Delhi Municipal Council, Visakhaptanam, Surat, Rajkot, Gangtok, Pimpri Chinchwad, Greater Mumbai, Pune, Navi Mumbai, Vadodara, Ahmedabad, Imphal
- **Aspiring Leaders:** Panaji, Thane, Coimbatore, Hyderabad, Nagpur, Bhopal, Allahabad, Vijayawada, Bhubaneshwar, Indore, Madurai, Shimla, Lucknow, Jaipur, Gwalior, Nashik, Warangal, Agartala, Ludhiana, Vasai-Virar
- **Acceleration Required:** Chennai, Gurgaon, Bengaluru, South Municipal Corporation of Delhi, Thiruvanathpuram, Aizawl, Gandhinagar, North MCD, Kozhikode, Kanpur, Durg, Agra, Srinagar, Amritsar, Guwahati, Faridabad, East MCD, Shillong
- **Slow Movers:** Hubli Dharwad, Kochi, Aurangabad, Jodhpur, Kota, Cuttack, Kohima, Dehradun, Ranchi, Jabalpur, Kalyan Dombivili, Varanasi, Jamshedpur, Ghaziabad, Raipur, Meerut, Patna, Itanagar, Asansol, Dhanbad

Chapter 3

3. Insights on SBM Implementation

3.1 Policy

Under SBM — Rural, MDWS has also issued separate guidelines for ODF sustainability. This was a significant change from TSC and NBA, where sanitation programmes focussed entirely on toilet construction. Influencing people to continue using toilets after construction is now a major part of SBM programmes, behaviour change and the release of incentives. The significant policy changes are in recognizing the need to sustain safe sanitation.

SBM—Urban is incrementally building upon NUSP. It has sharpened some aspects, such as targets and approaches and has assigned responsibilities and recognized the role of local government institutions. All households lacking toilets, irrespective of their legal status of land tenure, whether they are in planned, unplanned colonies, or slums, are covered. Urban local bodies (ULBs) manage the programme. SBM-U is increasingly looking at alternative service delivery models beyond conventional models. It has recently released a National Policy on Faecal Sludge and Septage Management (FSSM) for urban areas to cater to the households having septic tanks.

Some of the states, such as Maharashtra and Tamil Nadu have an arrangement of providing subsidies by clubbing contributions of Government of India, the State Government and the ULB, thereby making the subsidy moderate to substantial.

3.2 Institutions

Over recent years, some states shifted responsibility for rural sanitation to the Panchayati Raj and Rural Development (PRRD) departments and urban sanitation to Urban Development and Municipal departments. Better staffed, these departments also have a people-centric approach that helped improve results to some extent. In the decades of government-led sanitation schemes, this has been the single most effective institutional shift. Along with this, the Union and state governments have realized the need for trained human resources. Their problem was building a pool of sanitation motivators and masons without giving them permanent government positions that increases their salary bill. With development partners, several States developed training procedures for competent men and women and hired consultants at the state, district, and block levels to coordinate sanitation.

Most states have an officer of the Indian Administrative Service (IAS) as Project Director at the State level assisted by five to six officials dedicated for rural sanitation. In District, the Collector/Magistrate, Chief Executive Officer, and District Panchayati Raj Officer lead the programme assisted by a Coordinator, and two to three staff members. Many of the blocks in the country have a Sanitation Coordinator as well. Several states have trained sanitation motivators called "*Swachhta Doots*" who go from village to village, triggering behaviour change and working on follow-up activities to ensure people make and use toilets. The government aims to have half a million of these trained volunteers soon. Except for the regular government officers, these people are consultants paid from the administrative budget of SBM while motivators are paid from the IEC budget. The result of this has been that sanitation has become a national and local priority and there are people to give effect to the programme.

Weak supply chain was another problem with SBM and earlier sanitation programmes. After creating the demand for toilets, it was crucial to meet this quickly. However, the shortage of materials in remote villages hampered construction. In the well-performing districts and states, the administration has paid attention to tying up with local vendors to ensure there are enough cement, sand, iron rods, pans, and doors available. In many cases, they have set the prices at which these materials will be made available for making toilets and established depots in hard-to-reach areas.

ULBs are tasked with executing SBM—U. In NUSP, the Central Government recognizes that sanitation is a state subject and calls all state governments in India to prepare state-level sanitation strategies and ULBs to prepare City Sanitation Plans. The NUSP is a comprehensive framework that not only defines the specific goals to be attained but also indicates how the Central Government will be supporting the states in developing and implementing innovative strategies to accord priority to urban sanitation.

At the national, an Advisory and Review Committee headed by the Ministry of Urban Development (MoUD) Secretary has been set up to approve state plans and budgets. A national mission directorate executes the programme. In States, a high-powered committee headed by the Chief Secretary oversees the programme, strategies, and state plans. State mission directorates are directed to create a uniform structure across the state for project implementation, design, appraisal,

and monitoring. ULBs work through a dedicated cell or division along with local level organizations, such as resident welfare associations, ward committees, etc.

At the local level, ULB currently handle both liquid and solid waste rather poorly. They lack the information on volumes of waste generated and points of generation. They do not have trained people for the job but instead employ engineers who have other portfolios as well. They have limited finances and are largely dependent on state or central government grants for sanitation infrastructure and service delivery. A major constraint has been lack of reliable data for which ward-level waste collection (solid waste, sewage or faecal sludge) could be organized. This will help in planning, choosing technology, pricing, and ultimately tell on the sustainability of any urban sanitation scheme.

3.3 Finance

The financial incentive for making toilets has been raised to Rs. 12,000 from a few hundred rupees in the early days of TSC. The idea is to encourage people to make and use toilets, not cover the cost of making a toilet. Payments are made in one or two instalments after people apply for a toilet and provide proof of construction. Till recently, these were made by cheque, but now electronic fund transfers have become almost universal. This eliminates corruption to some extent and limits the number of the visits a beneficiary needs to make to the block or district office.

There is a major problem is providing the extremely poor with bridge finance. Most States give incentives only after the toilet is completed and the beneficiary has submitted proof. In some cases, the incentive is released to individuals only if the community/village or ward has become ODF, which can take several months. This acts as an impediment for increasing coverage. Some innovations are being tried: differential rate of interest loans, where certain categories of people get bank loans at 4% interest; loans from micro-finance institutions or self-help groups; loans from private foundations; etc., are some of these. The person repays the loan when s/he gets the incentive. What has helped is the spurt in rural bank accounts under various schemes to provide banking services. However, other paper processes remain, such as applying for a toilet, submitting photographs and other documents; these can also be done through the electronic *seva* centres that exist in most panchayats now. Banks are reluctant to lend to people who lack any collateral. The link with Self-Help Groups (SHG) federations is not well-established in most states even though these federations are well founded.

For urban sanitation, the government incentive is lower. However, municipalities are required to raise funds (either from other government programmes such

The experience from SBM—Rural on subsidies has not been good and many practitioners have expressed that subsidies are counter intuitive and extending them to SBM—Urban will hamper progress in the sector.

make and run sewerage networks, or handling faecal sludge from septic tanks that are currently emptied by informal operators or in some cases by municipalities themselves. While several levy a fixed or volumetric charge on water supply with a sewage cess, very few ULBs recover the costs of operation from domestic consumers. Tamil Nadu recovers a substantial portion of capital expenditure (CAPEX) and operational expenditure (OPEX) through cost of connection and user charges. Municipalities use different means to cover these costs, such as cross-subsiding water tariffs by charging industrial consumers more and selling treated waste water to industries.

Potential sources for funds are not only limited to GoI or donors but also new sources are evolving. A great opportunity to increase funding for sanitation is CSR from private sector as per the provision of the new Companies Act. Crowd funding or social impact investors are also emerging as a potential new source. Another innovative way of creating investment opportunities are debt funds for on-lending by lenders at affordable and competitive rates, for example, micro finance institutions (PAS, 2015)

The experience from SBM—Rural on subsidies has not been good and many practitioners have expressed that subsidies are counter intuitive and extending them to SBM—Urban will hamper progress in the sector.

3.4 Technology

The SBM guidelines do not specify the kind of toilet to be made except that it must safely separate excreta from human contact and be of an acceptable standard. However, the approach has been dogmatic, with beneficiaries and masons instructed to make the twin leach pit toilet with a brick superstructure. These are not suitable for all soil types, especially rocky soils and places where the water table is high.

Local adaptations are costly. Entrepreneurs have introduced ready-made toilets of varied materials, ranging from low-density composites to stainless steel. Instead of leach pits, bio toilets are available where well-made septic tanks are impregnated with an inoculum of bacteria to hasten and improve degradation of faeces.

These are much more expensive. Their use calls for changes in planning, financing, and behaviour change training so frontline motivators, masons, and end-users know what they are, how to make or get them, and how to use them properly.

Urban technical solutions are well-defined. Some of the technologies that have been tried and can be used elsewhere include septic tanks, bio-toilets, constructed wetlands, bacterial remediation, and soil biotechnology for the decentralized options. Bio-toilets can be provided either for individual households or clusters of households to lower unit costs.

For centralized sewage treatment options, sewage treatment plans starting from basic oxidation ponds through secondary treatment systems (Sequencing Batch Reactor, Activated Sludge Process, Membrane bioreactor, etc.) up to tertiary treatment plants (ultra-filtration based systems) are being used. These are used together or separately depending on factors, such as costs, electricity, and land availability. The choice of technology depends on the type and volume of waste, ability to pay, and technical competence of the managing agency. However, most existing sewage treatment plants (STPs) use primary or secondary treatment options. Very few STPs have tertiary treatment technology where treated wastewater could be recycled and reused.

The current state of sanitation technology used, maintained, and merchandized is however not quite desirable. STPs operate below their design capacities due to lack of maintenance or electricity availability. Most of the toilets are not built properly without any disposal mechanism. Even where septic tanks are built, they are leaking and not functioning properly. City-level guidelines for faecal sludge and septage management are still lacking. Faecal sludge is often transported to the next river or field outside the city, which obviously does not contribute to a healthy city environment (Down to Earth, 2016). For garbage, segregation followed by processing is the only solution. Only material that cannot be reused should be consigned to landfills after compaction.

The safe disposal of faeces is a problem that will need to be addressed simultaneously with toilet access. The SBM guideline addresses this by recommending a twin pit design, but the fact is that in many places single pit toilets are being built and can sooner or later lead to overflowing pits, defunct toilets, and even contamination of water sources. Faecal sludge management (FSM) continues to be a missing link in the sanitation value chain and creative solutions need to be developed for this.

3.5 Behaviour Change

SBM continues the demand-led philosophy of its predecessors. Behaviour change triggered by village motivators is supposed to provoke people to stop defecating in the open and build and use toilets. The government and development partners (World Bank, UNICEF, WaterAid, NGOs, and private foundations) use community-led approaches in villages.

The triggering and follow-up combination has worked well with institutions in several places. For the first time a considerable number of Gram Panchayats, blocks, and districts have started becoming ODF. The focus has also shifted from construction of individual toilets to making communities ODF.

However, there are challenges in achieving ODF. District sanitation planners set ambitious targets for making the district ODF in an unrealistic time. The problem becomes acute in large and heterogeneous villages. The proximity of toilets to water sources, especially hand pumps and village ponds, is of concern.

Thus, while community approaches are now used in most places, there is an inherent contradiction in setting a time-bound target, such as making a large geographical area like a district ODF. This also militates against ensuring usage rates increase along with construction. Follow-up actions, such as visits by motivators and district officials to panchayats that have completed construction of toilets, are required over four to six months.

In urban settings, participatory data collection is the first step towards behaviour change. Involving people in identifying and enumerating their sanitation problems gets them thinking about solutions. Solutions are varied and depend on the local situation—population density, areas available, water table, etc., and are therefore best decided consultatively. An example of this is the work of 'Water for People' that used software called *Akvo Flow* to collect sanitation-related data for its projects in municipalities in West Bengal. *WaterAid* also collects baseline data prior to embarking on a project. Other organizations, such as Shelter Associates based in Pune, use satellite imagery and ground-level data collection to prepare maps of slum areas for sanitation interventions. The MoUD is using a self-assessment mobile app to get public responses to its on-going *Swachh Survekshan 2017* that is ranking 500 cities on their sanitation parameters.

Behaviour change is not a one-time or one-dimensional activity, and hence, it will require intense investments in terms of time, money, and human resources.

Behaviour change is not a one-time or one-dimensional activity, and hence, it will require intense investments in terms of time, money, and human resources. Even if the focus shifts to behaviour change and a large mass of people are influenced to change their behaviours, there will remain a group of people for whom it may not be a matter of behaviour but who may have other reasons or barriers to building and using a toilet. The reasons could range from lack of funds or lack of space, to rocky terrain, high water table, living in a rented space, etc. These groups will require case by case stocktaking and problem resolving to attain 100% toilet access.

3.6 Knowledge Management

There are several portals and repositories of information on sanitation. India Sanitation Coalition's website, **http://www.indiasanitationcoalition.org/**, is one such that is growing rapidly. SuSanA's website is an international repository and the India Chapter's (**http://www.susana.org/en/regional-chapters/indian-chapter**) library are two other resources.

Documenting, organizing, and sharing case studies or good practices has been the weakest link in most development activities, and WASH is no exception. Thus, we end up repeating mistakes and miss duplicating successes. The few initiatives and networks working in this area have fragile institutional memories and certainly no systematic way to access or disseminate their experiences. This activity remains peripheral instead of being mission critical.

The new commitments and drives under the SBM provide an opportunity to continuously learn from past and present governmental and non-governmental efforts to find out 'what works and what does not'. Such learning could be possible only by cross-learning and sharing. One of the most important initiatives advised in SBM is setting up of Rapid Action and Learning Units (RALU) at national, state, and district levels. These units are supposed to act as catalysts for facilitating cross learning and sharing. However, research in urban sanitation remains comparatively inadequate even though several organizations work in this area. Operationalizing RALUs has been one of the biggest challenges and various discussions on modalities of taking it forward has taken place.

Recently, the Government of India felicitated 25 district magistrates from 20 states for scaling up sanitation access in their respective districts. These 25 districts could contribute different approaches and strategy for remaining districts in the country. A process documentation of these 25 district WASH champions will be of great help.

One of the most important initiatives advised in SBM is setting up of Rapid Action and Learning Units (RALU) at national, state, and district levels. These units are supposed to act as catalysts for facilitating cross learning and sharing.

Some of the potential best practices related to documentation that could be taken up are as follows:

Motivators Model to Accelerate Sanitation in Rural India: *Nirmal Bharat Abhiyan* introduced *swachhata doots* as motivators to accelerate demand for sanitation facilities in rural India. However, due to poor selection, lack of effective training, weak implementation, and inefficient monitoring mechanisms *swachhata doots* did not contribute to the set objectives. During SBM, CLTS-trained motivators are working in many districts in India. In Rajasthan, Madhya Pradesh, Bihar, Odisha, Uttar Pradesh, Maharashtra, and Andhra Pradesh, these motivators have been trained and sent into the field

Providing Incentives to beneficiaries is a reality. Some districts have taken steps for faster disbursement of incentives. This has further motivated to speed up sanitation acceleration in many districts. However, in some states disbursement of incentive is one of the major hurdles to achieve universal access. Documenting some of these experiences will surely help further.

One of the major hurdles for sanitation acceleration in the country is myths about sanitation technology. Due to over exposure to urban areas, people in rural areas are opting for septic tanks than leach pit models. Successful implementation of leach pit models will help to improve sanitation coverage.

Generally, data and reality might not match all the time. Declaring a district ODF does not mean this status holds forever. Some national campaigns have raised awareness for the sanitation sector, such as 'no toilet, no bride', but measurements of success and goal achieving as well as general information about the implementation of this campaign are missing.

3.7 Sustainability

The SBM—Rural guidelines have released separate guidelines for ODF sustainability as part of the programme lifecycle. In earlier programmes, action stopped after construction with the assumption that people will use toilets. As has emerged, behaviour

change and scale in sustainability go hand-in-hand.

At a meeting in December 2016, Ministry of Drinking Water and Sanitation recognized sustainability as a distinct set of activities. Accordingly, over nine months following ODF declaration, district administrations have been advised to engage panchayats with several activities to keep the spotlight on sanitation. Referred to as ODF+ activities, these activities deal with water, cleanliness of water sources, Solid Liquid Waste Management (SLWM), maintenance of school and *anganwadi* toilets, etc. Motivators can be reoriented to lead or facilitate these activities. An annual sanitation day, walk of pride, block and district task forces, staggered payment of the subsidy, and including sanitation in all *gram sabha* meetings are some activities.

In SBM—Urban, sustainability is implicit. It is assumed people who get toilets under SBM—Urban will use them given the shortage of space for defecation. However, there is nothing like a sustainability phase specified. This would be a useful addition to SBM—Urban guidelines.

3.8 Corporate Sector Engagement

The Corporate Social Responsibility (CSR) Act mandates private companies (with at least Rs 5 crore net profit or Rs 1,000 crore turnover or Rs 500 crore net worth) to spend 2% of their annual average net profits of the preceding three years on community development. The Government has set up the *Swachh Bharat Kosh* (SBK) so that corporations could provide support to SBM by donating funds in the form of their CSR and to attract funds from individuals.

Private sector participation in management of FSM is also increasing, and there are interesting business models and entrepreneurship cases that have emerged over the years.

Private sector employs a variety of financing instruments and structures which range from financial intermediation for asset creation, private risk capital for developing innovations, funding under public-private partnership arrangements, raising project

Cairn India executed a public–private partnership project to provide sanitation facilities by making 20,000 household toilets in Barmer district of Rajasthan. This endeavour started in February 2013, under the Nirmal Bharat Abhiyan. Cairn adopted nine villages of the Beriwala Tala Gram Panchayat of Barmer district. A model was chosen where the Zila Parishad contributed 12,000 Rs. per toilet and Cairn contributed an additional amount of 4,000 Rs. towards construction of as many as 20,000 toilets. The beneficiary households also contributed 1,000 Rs. each to ensure their ownership of the facility constructed. The programme resulted in the panchayat becoming ODF status, one of the first such panchayats in Barmer to do so. It was extended to 19 more villages of the panchayats of Bhadkha and Mundhon ki Dhani. The project is being implemented by the RDO Society under the guidance of the Zila Parishad. After a review, the project model was reoriented by picking panchayats based on availability of water, possibility of ODF, making a bathroom along with the toilet, engagement of motivators, monitoring committees, deploying children as sanitation ambassadors, a call centre to contact beneficiaries, rewards for the best-maintained toilets, and planting sacred trees where people went for open defecation. The incentives were modified to encourage use rather than construction. This resulted in demand generation, investments of as much as 30,000 Rs. by beneficiaries, better toilets, support from local leaders, and higher usage.

This example shows how an integrated approach built on behaviour change can work better than just making hardware.

Source: SuSanA–ISC Discussion on 'Corporate Engagement in Sanitation'

based funding from operations including user charges, application of CSR funds.

3.9 People's Movement

A middle ground needs to be found in SBM where the government engages an NGO capable of working at scale to run behaviour change campaigns preceding and succeeding its construction drive. NGOs for their part need to raise the bar and work outside their comfort zones. IEC funds can be used for paying the expenses incurred in both phases. NGOs can subsequently be engaged for monitoring, separating the roles of the implementing and monitoring agency. School students, local youth, and women's engagement as 'change makers' in their community is another strategy for awareness, information, education and communication, and for behaviour change in their respective areas of influence. A mix of community-led approaches and government enforcement is needed to improve the usage of toilets.

District administrations have mobilized funds and people for sanitation from their staff or villages, trained them in community-led approaches, and deployed them strategically. The often-repeated constraints on funds flows, supply chain bottlenecks, and quality of construction have been systematically addressed in some places. Funds flows have been streamlined by electronic payments directly to beneficiary accounts in some cases. Similarly, Supply chains have been sorted out through negotiations with vendors of bricks, cement, and other items. Quality of construction has been assured by training masons and beneficiaries. Motivators responsible for triggering and follow-up actions, and engineers, have been oriented in toilet construction.

A mix of community-led approaches and government enforcement is needed to improve the usage of toilets.

Municipal service providers must be answerable to communities; this can be ensured by having local- and city-level committees with people and elected representatives. The process can be incentivized by rewarding well-performing wards with additional development grants. The poorly performing wards can be penalized, on the other hand.

A greater focus is required on issues arising post-toilet construction and its usage as stipulated. There are families who have single-pit toilets that will usually get filled in 4 to 5 years—even quicker in the high-water table areas. Hence, FSM and pit life extension are the two crucial factors to ensure the maintenance of ODF status. The state governments need to adopt the sustainable approaches so that there is sustained toilet usage by everyone in a family.

Chapter 4

4. Issues and Challenges

Sanitation sector in India has many challenges including uneven implementation, a general lack of understanding about sanitation-linked behaviour change, using the incentive as a lure, targets as opposed to outcomes, supply chains, bridge finance, and targeting the incentive. Some other issues and challenges are as follows:

- It has been observed that SBM, like its predecessors, remains a largely individual-driven programme. State missions are as effective as their director; district missions are effective if the Collector is committed; blocks are driven by enthusiastic Block Development Officers and; panchayats are led by committed *Sarpanchs/Pradhans*. The institution of sanitation remains moribund and has not heightened to complement individual efforts. Therefore, when an individual leaves or priorities change, sanitation falls by the wayside. The challenge is institutionalizing sanitation processes so that the administration supports the process and local government institutions can plan and monitor it.

- The quality of toilets is another area of concern that has been poorly addressed, even though masons are instructed to make the twin leach pit toilet.

- SBM has laid down some guidelines that states to verify ODF claims. These lean on local government institutions for self-verification and mandate the state government to verify these claims as per a checklist. In rural areas this is simple enough, but in urban areas with multiple agencies, verification is likely to pose challenges. It will be especially hard to validate a municipality's claim that it has satisfactorily handled garbage, excreta, sewage, and waste water. The issues with ODF are the process of declaring a habitation, *panchayat*, block, or district as such. The people who self-declare are the same who have worked on sanitation campaigns. Teams who verify these claims may have a different composition: data collection, transmission, and verification are processes subject to many loopholes, such as misreporting toilets.

- Other challenges are leaving out deserving households, political favouritism in selecting households and sanctioning toilets, corruption in release of funds, sub-standard construction, unsuitable toilet technologies, etc., that discourage people from continuing to use a toilet. Therefore, a habitation or *panchayat* declared and even verified as ODF can quickly 'slip-back' to open defecation once the sanitation spotlight shuts off. Once a *Panchayat* is ODF, their work is to ensure usage, mechanised cleaning of full pits, and maintaining public sanitation. Sanitation ambassadors need to look beyond their immediate campaigns-in-mission mode to a permanent system. ODF itself is a means to an end, and should not become the end itself. It is a milestone towards improving the quality of life. The end could be tangible, such as a clean and green village where open defecation, drinking water, and solid–liquid waste have been properly handled.

- The critical gap in earlier programmes, of low usage, because of a construction-led approach has to be addressed better. There are some sparks of change but lot more need to be done. The low IEC expenditure is evidence that all-important mass media and interpersonal communications are not being run at the scale required. SBM needs to change this otherwise there is risk of hardware going waste, as has happened in *Nirmal Bharat Abhiyan* and Total Sanitation Campaign.

5. Recommendations and Way Forward

It is clear that SBM has ushered in changes in the way sanitation is perceived and sanitation programmes are executed. It has got the bureaucratic and political priority required for adequate planning and execution. This has in most places translated into people's movements for sanitation as well.

Strategic corporate involvement is needed where companies move away from hardware activities to behaviour change and project management support. Behaviour change is a critical gap companies can fill. The India Sanitation Coalition can provide a platform for companies to work with communities in the catchments of their offices or factories to take up ODF+ activities. These are only partly funded by the government. ISC could pool technical resources and make them available on issues, such as SLWM, protection of village water bodies, vermi-composting, etc., that companies could take and deploy where needed.

Policy

- SBM policies should focus equally on solid and liquid waste management and expanding the theme to a clean and green habitation where open defecation, drinking water, and solid–liquid waste has been properly handled to ensure sustainability of ODF.
- Equity considerations must include all sections of people, including economically weaker sections, *Dalits*, religious minorities, women, etc.
- It would be helpful to link treatment to water pollution standards, and bring in the municipal solid waste rules that prescribe how and where landfills can be made.

Institution

- Institutions need to ensure supply chains exist and suppliers do not exploit the spurt in demand for materials.
- Local government institutions—panchayats and urban local bodies—must step up to take the lead from district and state authorities.
- Localized action, at the district or block level, is necessary to secure material in sufficient quantities are the right prices and of the quality needed.

Finance

- Bridge finance for the very poor who cannot afford to pay for the masons or material is an essential prerequisite.
- Priority sector lending by banks can help here as many beneficiaries have bank accounts under various schemes.

Technology

- Toilets and technologies need to be localized and people need to be trained to avoid mistakes while making toilets, such as single-pit toilets, poor substructures, locating toilets near water points, etc.
- If toilets, septic tanks are constructed appropriately and adequately, then it will also reduce groundwater and surface water contamination through untreated waste water or sewage.

Behaviour Change

- Districts are becoming ODF that is a healthy sign of the success of the programme. However, the flip side is competition between them and setting unrealistic, random targets to become ODF. Sustainable sanitation depends on behaviour change that takes time to spread over an area as large as a district with an average population of two million. If districts are to be the unit of action, ODF should be a desirable milestone but an improved quality of life as indicated by better health and education standards should be the goal.

Chapter 5

Knowledge Management

- Rapid Action and Learning Units (RALU) as a means of institutional learning have been proposed in SBM. These can help in systematically generating, organizing, and using knowledge at the central, state, and district levels for better implementation. The processes need to be clear and governments need to own RALU to be successful.

- Some case studies on how community-led approaches are working without incentives would be useful for district administrations. Examples of districts that have achieved and maintained ODF would help others plan better. Cross-learning between districts /states must be encouraged.

- The India Sanitation Coalition has a system of collecting and curating case studies from its members and other stakeholders. People should take this opportunity to share their information.

Sustainability

- Sanitation needs to go beyond ODF and campaigning and monitoring should continue over time at all levels, from communities to the national level. Repeated messages are necessary.

- Sanitation should rather be promoted as an integrated programme and not in isolation and village institutions should be made more viable to sustain ODF.

- Once ODF is achieved practical measures should be taken to avoid slippages including regulation to ensure every new house has a latrine.

- To ensure sustainability of ODF initiatives, we need to stratify the country based on three categories: First, identify districts where we have done badly as a priority to be accorded special attention; second, identify the districts that have an average performance; and lastly, the districts that have done well. There is a need to arrange a series of exposure visits to these places to come out with practical solutions to solve the problems.

- Further, dedicated motivators/NGOs to guide change are essential. Funds are never a constraint if people decide to have a toilet. Technology choices and options to build safe sanitary toilets need to be made available. For example, in rocky terrain, water-logged areas, places with water scarcity, etc., toilet options need to match the local conditions.

Corporate Engagement

- This could be strengthened for managing the supply requirements as the supply–demand gap in production of sanitary ware and production materials is unmet and there exists a huge backlog.

- Companies can bring in human resources through mandating staff time, their project management skills, technical abilities, and motivational abilities. Corporate involvement could supplement government efforts by adopting public–private partnership models.

People's movement

- Community-led approaches are suggested for community-level outcomes and for ensuring peer pressure acts as a deterrent to open defecation by any individual in future.

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About India Sanitation Coalition:

The India Sanitation Coalition (ISC) is an inclusive platform, launched on June 25, 2015 with the vision of enabling and supporting an ecosystem of cross-learning, sharing of good practices, and building of partnerships and collaborations. As an inclusive platform, it encourages multi-stakeholder dialogue and creates interfaces between corporates, government, development partners, media, SMEs, and communities. ISC is currently engaging with over 150 organizations in various capacities to spread the reach of sustainable sanitation.

For engaging with ISC, **please visit www.indiasanitationcoalition.org**

About SuSanA

SuSanA is an open international is an open international alliance with members who share a common vision on sustainable sanitation and are dedicated to understanding viable and sustainable sanitation solutions. It links on the ground experiences with an engaged community made up of practitioners, policy makers researchers, academics from different levels with the aim of promoting innovation and best practices in policy, programming and implementation.

In light of the recent increased political and civil efforts to accelerate sanitation provision in India, SuSanA secretariat, supported by the India Sanitation Coalition, has set up a regional chapter for India with India Sanitation Coalition. The SuSanA Indian chapter contributes to the Indian Government's Clean India Campaign "Swachh Bharat Abhiyan" by strengthening discussion on sanitation and by linking the Indian and the global discourse on sustainable sanitation. The SuSanA Indian chapter is an open and inclusive contribution to activities in India towards more sustainable and accelerated sanitation provision with existing sanitation platforms in India being invited to be a part of the SuSanA Indian chapter. Regular thematic online discussions are organised on the SuSanA Forum.

Please find more information here: http://www.susana.org/en/regional-chapters/indian-chapter

sustainable sanitation alliance

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