





TRANSFORMING URBAN LANDSCAPES OF INDIA

Success Stories in Sanitation

SWACHH BHARAT MISSION (URBAN)





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हरदीप एस प्री HARDEEP S PURI





आवासन और शहरी कार्य राज्य मंत्री (स्वतंत्र प्रमार) भारत सरकार MINISTER OF STATE(I/C) HOUSING AND URBAN AFFAIRS GOVERNMENT OF INDIA

The Swachh Bharat Mission, launched on 2 October 2014, has as one of its stated objectives the achievement of Open Defecation Free (ODF) status in all Urban Local Bodies (ULBs) in India, by October 2019. This is probably the best tribute the country can pay to the father of our nation Mahatma Gandhi. On this front, we are well on track to achieve our objectives, with 19 states already ODF in their urban areas and more than 90% of our cities having achieved ODF status.

This commendable progress has been made possible through numerous good practices and stories of success scripted across states and cities and brought to fruition through the collective efforts of local governments, private entities, NGOs and citizens working collaboratively.

The SBM-Urban division of the Ministry has embarked on a noteworthy initiative of documenting and compiling success stories from across the country on various components of the Mission, for wider dissemination. The compilations are being brought out under the broad title "Transforming urban landscapes of India". The first edition of the series, focussing on success stories in the area of Solid Waste Management in cities and towns was released by the Hon'ble Prime Minister of India and was appreciated by all.

I am happy to see the second edition of this series, focussing on Success stories in Sanitation which documents best practices in the sanitation value chain, including transportation, containment and safe disposal of faecal waste through onsite processing.

It is my firm belief that similar to the previous edition, this compilation of lighthouse states and cities in the area of sanitation will also inspire other states and cities to emulate these best practices and in the process will also help to build the capacities of local governments and related stakeholders to sustain the ODF outcomes, so that we are able to realize our collective dream of a "Swachh Bharat" by 2 October 2019.

New Delhi 12 November 2018 (Hardeep S Puri)

MESSAGE

HARDEEP S PURI

Hon'ble Minister of State (Independent Charge), Ministry of Housing & Urban Affairs

दुर्गा शंकर मिश्र सचिव **Durga Shanker Mishra** Secretary



भारत सरकार आवासन और शहरी कार्य मंत्रालय निर्माण भवन, नई दिल्ली-110011 Government of India Ministry of Housing and Urban Affairs Nirman Bhawan, New Delhi-110011



Foreword

With Swachh Bharat Mission having completed a journey of 4 years, there has been lot of learnings in making urban areas cleaner, greener and healthier. Substantial progress has been made, especially when it comes to making our cities open defecation free (ODF). It is very heartening to witness this fight against open defecation becoming a collaborative effort with more and more citizens joining.

Some of the States and cities have done exemplary work in supporting activities across the sanitation value chain. We have attempted to collate and put forward these success stories for the larger audience in the form of this book 'Transforming urban landscapes of India'. The book focuses on the torch bearers of effective sanitation practices. The States and cities chosen for this edition are Jharkhand, Chhattisgarh, Madhya Pradesh, Leh, Warangal, Gangtok, Bhopal, New Delhi Municipal Council, Navi Mumbai and Maharashtra.

Transforming urban landscapes of India will be a continuous series from the Ministry of Housing and Urban Affairs focusing on best practices in several areas of Swachh Bharat Mission. I hope this compilation will motivate other States/Cities and stakeholders to follow various models for effectively increasing the sanitation coverage.

Any feedback to improve the presentation is most welcome on e-mail: sbmurban.moud@gmail.com

(Durga Shanker Mishra)

New Delhi 09 November, 2018

FOREWORD

DURGA SHANKER MISHRA

Secretary, Ministry of Housing & Urban Affairs



PREFACE

VINOD KUMAR JINDAL

Joint Secretary & National Mission Director, Swachh Bharat Mission (Urban) Ministry of Housing & Urban Affairs

Hon'ble Prime Minister of India, Shri, Narendra Modi Jaunched the Swachh Bharat Mission on 2nd October 2014. The cleanliness mission was launched to fulfill two objectives

- Achieving an open defecation free India
- 100 % scientific management of solid waste

Right from its inception, the Swachh Bharat Mission has seen some very inspiring stories among states, cities, civil society organizations, large establishments and individuals. In our endeavor to bring inspiring stories to people, we are releasing the book, 'Transforming urban landscapes of India', which focusses on the best practices followed by cities in the area of Sanitation. In our first series, we have covered 4 states and 9 Cities excelling in various elements across the sanitation value chain.

The first set of stories include, Jharkhand for setting a great example for adopting innovative yet simple approaches to make the state ODF, Chhattisgarh for presenting an excellent model of convergence for toilet construction, Maharashtra for sustaining ODF status and Madhya Pradesh for executing a community led total sanitation campaign. The second set of stories features the stories of Leh and Warangal, who have the distinction of being one of the very few cities to have efficiently running Faecal Sludge Treatment Plants in the country. The plant in Leh is catering to 100% of the urban population. The third set of stories are covering stories of Gangtok for constructing and adopting O&M models for sustainability of different types of Public and Community toilets, Bhopal for running a very effective information, education and communication campaign for becoming ODF and Maharashtra's story for becoming ODF through a collaborative approach and also including safe disposal of faecal waste as a part of their strategy. The section also presents cases on various new designs of toilets like, smart toilets in New Delhi Municipal Council, She lounges and toilets for trans-gender in Bhopal, Electronic toilet in Navi Mumbai, Innovative toilet running model in Gangtok and toilet for senior citizens in Ambikapur.

I would like acknowledge the details and photographs made available by the states of Madhya Pradesh, Maharashtra, Chhattisgarh and Jharkhand and cities and UTs of Leh, Warangal, Gangtok, Bhopal, Ambikapur, Navi Mumbai, New Delhi Municipal Corporation and Panchgani so as to bring out the book in this format. I will also like to thank members of my team, particularly, Ms. Pooja Lahri, for making untiring efforts in conceptualization, compilation and presentation of these stories.

I am extremely happy to see urban India achieve its ODF objectives, well within the time frame. We are sure, that there are more such stories which need to be brought forward, due to which, Transforming urban landscapes of India will be a continuous series from the Ministry of Housing and Urban Affairs. The series in its next edition will cover more cities to enable emulation of these good practices all over the country.



12

JHARKHAND

Journey to ODF

20

CHHATTISGARH

Construction through convergence

28

MADHYA PRADESH

Engaging Communities

36

LEH

India's highest FSTP

44

WARANGAL

Model City sanitation

52

GANGTOK

Toilets for difficult terrains

CONTENTS

60

BHOPAL

Changing behavior, one household at a time

68

TOILET TECHNOLOGIES

Innovative toilet designs

76

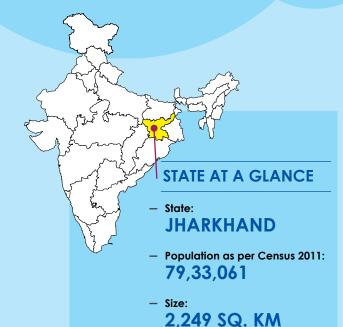
MAHARASHTRA

Effective IEC for ODF status sustainability

JHARKHAND

Journey to ODF

Jharkhand is located in the eastern part of India and is enclosed by Bihar to the northern side, Chhattisgarh and Uttar Pradesh to the western side, Odisha to the southern part and West Bengal to the eastern part. It accounts for more than 40% of the mineral resources of India.



— ODF Status:

CERTIFIED ODF

सामुदायिक शीचालय ओवर ब्रिज के नीचे नगर पर्षद झुमरी तिलेया,कोडरमा सामुदायिक शौचालय (ओवर ब्रिज के निचे) नगर पर्षद, झु. तिलेया, कोडरमा A public toilet in Jharkhand which also has a wash room

डा. नीरा यादव

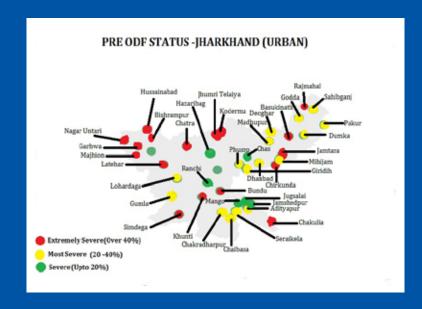
माननीय मंत्री झारखण्ड सरकार के विधायक निधि से निर्मित

कौशल विकास केन्द्र सह सामुदायिक शौचालय A public toilet in Jharkhand having a skill development center to make the model financially sustainable for the agency maintaining the toilet

BACKGROUND

After adopting a clear cut strategy, the state of Jharkhand declared itself ODF in October 2017 and was certified ODF by Quality council of India in March 2018.

When the Swachh Bharat mission was launched in 2014, the open defecation figure in urban areas of Jharkhand was close to 30%. The state was also struggling with the infrastructure requirements to make ULBs free of open defecation. In a survey done by the state, it showed that around 40% ULBs are in the category of extremely severe state of open defecation.





Establishment of PMU and PIU

To form, implement & monitor strategies PMUs and PIUs were established



Capacity building of stakeholders

ULBs all across the state organized rigourous stakeholder training programs



Community led total sanitation activities

CLTS activities were organized to engage and mobilize communities



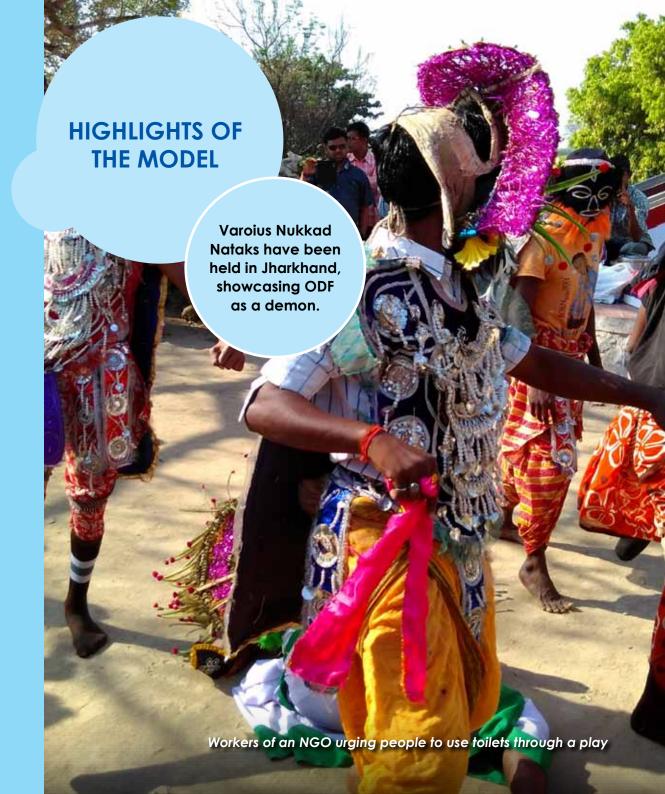
Provision of necessary infrastructure

The state constructed IHHLs, CTs and PTs in a big way to cover the entire population



IEC and BCC activities

To change behaviour, ULBs all across the state focused on on-ground activities

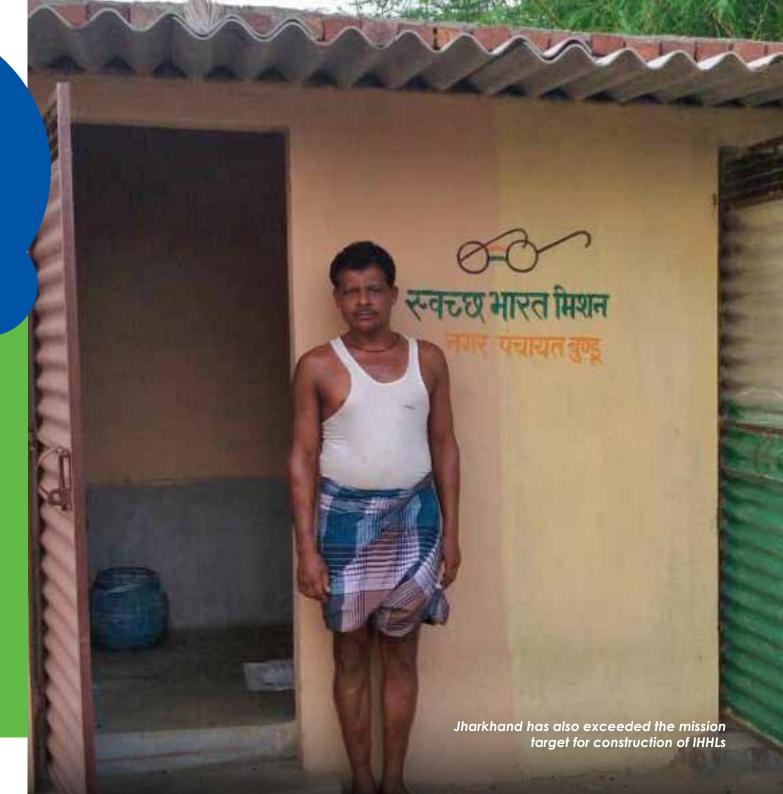






PROVISION OF ADEQUATE INFRASTRUCTURE

- The state has already exceeded its target of 2,09,848 toilets and has constructed 2,10,585 IHHLs
- Jharkhand has also constructed a total of 6137 Community and Public toilets
- The city has also undertaken repair work in all defunct toilets and have ensured supply of waster and
- Community toilets have also been constructed at certain identified OD spots
- Jharkhand has introduced a selfsustainable model of Community Toilets wherein there is a Skill Development Centre along with a few shops







SOME INNOVATIVE APPROACHES

- 'Dhava Kendras' were set up at all OD spots to stop people from defecating in open and also monitor slippages
- Colour coded stickers were stuck on houses basis the number of members using the IHHL constructed. Green: if all members used, yellow: if some members used and red: if no member used the toilet
- Banar Sena comprising children was formed to monitor OD spots and conduct triggering exercises

IEC AND BCC ACTIVITIES

- All ULBs actively took up the task of mobilizing communities to bring a collective behaviour change. Various campaigns were started by the state, some of which are mentioned below
- Gift a toilet- This campaign involved Brothers gifting toilets to their sisters on the occasion of Rakhi
- Swachha toilet competition- State held competitions to award the cleanest toilet in the city with a cash prize
- Gaurav Yatra- Whenever a ward was made ODF, a 'Gaurav yatra' was carried to make the announcement and motivate other wards



सामुदायिक शोचालय चास नगर निगम A community toilet constructed in Chas at an eliminated OD spot

LEARNINGS



Behaviour change communication is one of the most important activities to change the habit of open defecation among people



Becoming ODF is an ongoing process and there can be slippages even after certification. Therefore, the monitoring activity should be strong at all stages



Cities and states should constantly endeavor to think of innovate ways in which they can propagate the message of constructing, using and maintaining toilets



State of Jharkhand not only focused on construction of IHHL, it made sure that all OD spots are covered by community and public toilets



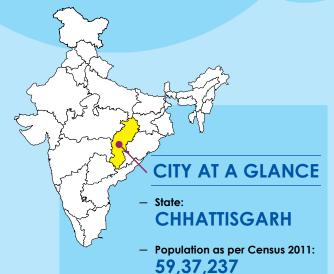
Though construction of toilets is important, it is only one of the activities required to make a state free of open defecation



CHHATTISGARH

Construction through convergence

Chhattisgarh is one of the fastest developing states in India. The capital city of the state is Raipur. A resource-rich state, it is a source of electricity and steel for the country, accounting for 15% of the total steel produced. Chhattisgarh, situated in the heart of India, is endowed with a rich cultural heritage and attractive natural diversity. The state is full of ancient monuments, rare wildlife, exquisitely carved temples, Buddhist sites, palaces, waterfalls, caves, rock paintings and hill plateaus.



- Size:3,382 SQ. KM
- ODF Status:
 CERTIFIED ODF



SPL/005/PTB/002 A well equipped public toilet in Chhattisgarh

BACKGROUND

Urban Chhattisgarh was declared free of open defecation on 2nd October 2017. The city has also successfully met its toilet targets for the period of 2014-2019.

Like other states, prior to the launch of Swachh Bharat Mission, a considerable proportion of urban households in Chhattisgarh were dependent on public latrines and some also used to defecate in open. Hence, the officials of the state had a massive challenge in front of them.

Today, the urban areas of the state have 100% coverage of toilets. The city officials have not only come up with innovative approaches to convince people, they have also constructed several toilets with innovative designs.

The state has also focused on overall improved habits among its people. For this sanitation an aggressive information, education and communication campaign has been carried on through various channels. For maximum outreach of the campaign the state has adopted the policy of targeted communication. The cartoon Character of 'Chhota Bheem' has also been declared as the Swacchata Mascot of the state. The state has also derived models to monitor the progress of Swachh Bharat Mission, effectively.



Dovetailing SBM with Bhagirati Nal Jal Yojna

Launched the Har Ghar Shauchalaya, Har Ghar Nal program



Provision of 100% sanitation infrastructure

The state has already exceeded its mandate for toilet construction in the mission period



Standardized Model Estimates & Drawings

Standardized models have been shared to ensure uniformity in construction of toilets all over the state



Vigilant monitoring of OD Spots

New tools were developed to closely watch the OD Spots



Targeted IEC Campaign

Launched a Swachh Bharat Mascot to promote swachhata among various groups

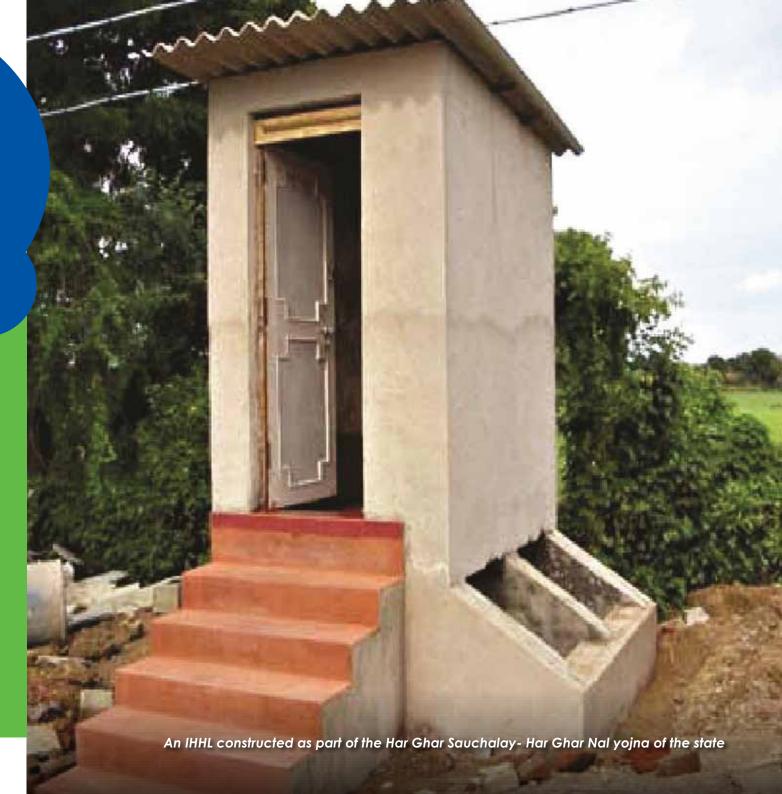






HAR GHAR SAUCHALAY-HAR GHAR NAL

- water in all IHHLs
- D2D survey for Individual toilet beneficiary selection was conducted in all 168 ULBs. The engineer also assisted them in identifying location for construction of toilets
- to people
- contractors etc. was created to ensure timely construction of toilets
- Standardized Model Estimates & Drawings were circulated to all ULBs to ensure uniformity in construction of toilets all over the state
- beneficiary share, were asked to provide limited assistance in the construction process, so that their share can be recovered through the labour charge paid to them
- Till date 3,17,505 IHHL have been constructed throughout the state for easy accessibility of the toilets







FOCUS ON COMMUNITY AND PUBLIC TOILETS

- 17.796 CTs and PTs have been constructed in the state up till now
- To resolve the problem of 24/7 toilets, rooms have been made for caretakers and their families. adjacent to the toilets
- Innovative toilets- Several innovative toilets have been constructed in the state, such as
- 24 Hour toilets
- Pink Toilets
- Toilets for senior citizens
- Toilets with feedback mechanism
- The O&M expenses of the CT/PT were covered by setting up advertisement boards on the walls of the toilet
- Each public toilet has been given a unique identification number, which helps the municipality in maintenance of adequate records



- Along with development of Infrastructure to achieve ODF, Chhattisgarh State gave equal importance to IEC to create awareness among people regarding ill effects of open defecation
- Due to its mass appeal, Chhota Bheem was selected as the Swachhata ambassador
- To encourage participation, activities were organized at school, college and ward level. Feedback was taken from the citizens and corrective measures were taken immediatelv
- A dedicated communication campaign was carried on radio to deter people from defecating in open
- Extensive visits were held by Cabinet ministers and senior officials to ULBs to monitor the progress of SBM
- Various monitoring committees were devised to keep a check on the progress of the campaign against open defecation



A toilet specially designed for the use of senior citizens.

LEARNINGS



Stakeholder Participation- The movement against open defecation in Chhattisgarh was a public movement. It saw people participating actively from all walks of life



IEC Campaign with mass appeal- To give a mass appeal to Swachh Bharat Mission in Chhattisgarh, the department has chosen the cartoon character, Chhota Bheem as its Swachhata Mascot. The Swachhata rallies have seen extensive participation from children, as they are able to relate with it



Upliftment of status of sanitation workers- The sanitary workers are now called as Captain Clean in Chhattisgarh, The state is also running several initiatives to reward the workers



Provision of infrastructure- The state of Chhattisgarh has achieved its target of construction of IHHLs and CT/PTs much before the completion of the mission



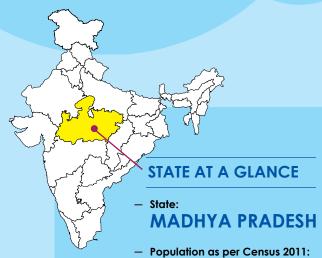
Effective monitoring- Rigourous and extensive monitoring mechanisms have been established by the state to keep a check on the progress of Swachh Bharat Mission, as desired results cannot be achieved without proper tracking



MADHYA PRADESH

Engaging Communities

Madhya Pradesh's capital is Bhopal, and the largest city is Indore, with Jabalpur, Gwalior, and Ujjain being the other major cities. Rich in mineral resources, MP has the largest reserves of diamond and copper in India. More than 30% of its area is under forest cover.



Size:7,746 SQ. KM

2,00,69,405

ODF Status:CERTIFIED ODF



The 'Dabba' gang raising awareness on the ill effects of open defecation in Madhya Pradesh

BACKGROUND

From only one city declared free of open defecation in September 2016, Madhya Pradesh has come a long way and has become one of the very few states that have been certified ODF by a third party.

It took immaculate planning, daily monitoring, constant motivation, quick problem solving and extensive community outreach for the administration to achieve its objectives.

The problem which MP faced was not that of inadequate construction and provision of toilets, but of lack of habit of using toilets. Hence the state officials had a daunting tasking of brining about large scale behavior change among the people of the state.

One of the key strategies adopted by MP government was aggressive information, education and communication campaign. The administration also followed some methods of the Community Led Total Sanitation (CLTS) to ensure communities are more aware of the Swachh Bharat Mission and the importance of using toilets.

The state is now successfully maintaining its ODF status and is focusing extensively on sustainability. The state has also initiated the mechanism of safe disposal of faecal waste and desires to adopt the ODF + and ODF ++ protocol by December 2018.



Creating Enabling Environment...

Gap analysis and requisite policy and program related decisions/changes to facilitate implementation.



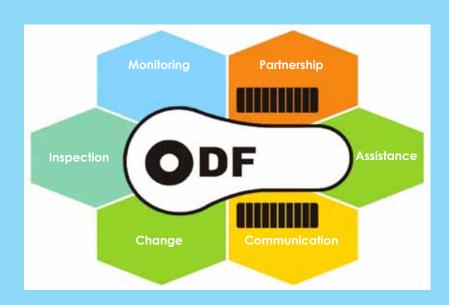
Setting up Infrastructure

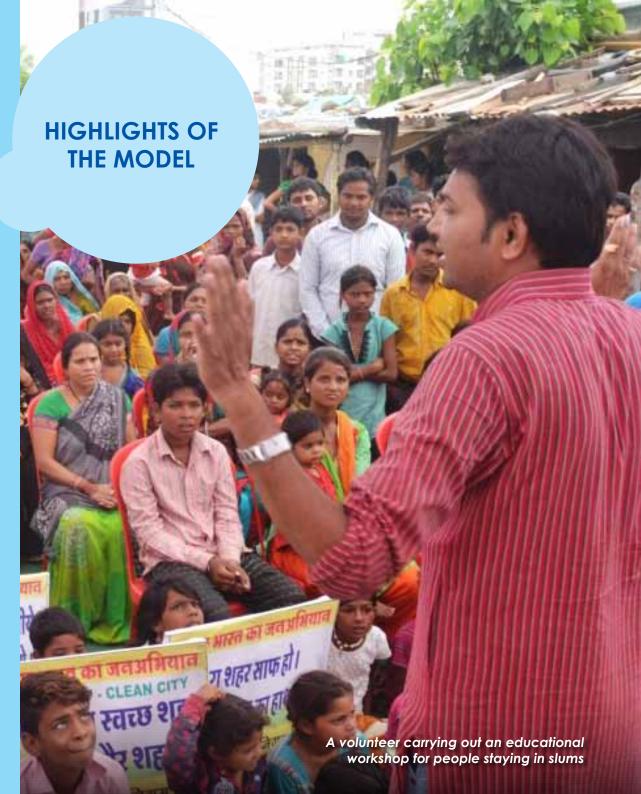
Providing financial assistance and technial know-how to develop required number of individual, community and public toilets.



Engaging Communities

Communication and capacity building interventions to engage community and other critical stakeholders









CREATING ENABLING ENVIRONMENT

- Making 'availability of Individual Household Latrines (IHHL)', a basic criteria for leveraging benefits from different government schemes (like Mukhyamantri Kanya Vivah / Nikah resulted in compounding Yojna) benefits
- 10 percent of total capital cost contribution each by the ULB and the beneficiary created ownership and accountability towards constructed IHHL units
- Many ULBs in the state imposed spotfines on open defecation discouraging the age-old practices.
- relaxed for construction of IHHL, which resulted in sudden increase in IHHL construction







SETTING UP OF INFRASTRUCTURE

- More than 5 Lakh IHHL and more than 12,000 CTs / PTs were constructed in the state in a time-bound manner
- Mobile toilets were provided to ULBs having places of religious importance and tourist attractions
- Sanction of IHHL and CT/PT units was purely based on demand from ULBs. There was neither any target nor any ceiling on number of units to be constructed by ULBs
- Toilets for people with special needs like women, transgender and differently-abled people were constructed to ensure inclusion

APPROACH FOR ENGAGING COMMUNITIES

Development of Guidelines (by State)

- IEC Strategy and Action Plan.
- NGO screening and selection mechanism.
- ODF sustainability guidelines.
- Formation of school sanitation committees their role.
- Nomination of Swachhata Ambassadors and outlining of their role.

Convergent **Actions**

- Involvement of field functionaries from line departments.
- Health, Education and Women & Child Development were roped in.
- Departmental functionaries reached out to various sections of society to disseminate safe sanitation messages.

Capacity Building

Councilors. • Training of masons.

Sensitization of Ward

- Orientation sessions for field functionaries and NGO representatives.
- Series of workshops for women SHGs.

Communitybased Monitoring

- Development of monitoring kit to track functioning and maintenance of toilets.
- Checklist for CT/PTs and toilets in schools. aanganwadis, hospitals and govt. buildings.
- Constant community monitoring to prevent open defecation.

Series of outreach activities were conducted to optimize the impact of the above efforts...



LEARNINGS



The behavior change in the city is a result of sustained joint efforts by the community



A collaborative effort is required from the municipal corporation, residential welfare associations and civil society organizations to bring about the change



Swachh Bharat Mission in Madhya Pradesh has seen collaborative effort being put in my all its staff

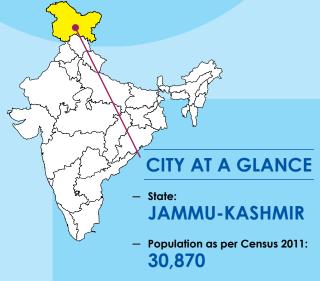


Most Urban Local Bodies of Madhya Pradesh have also exceeded their infrastructural targets for the mission period

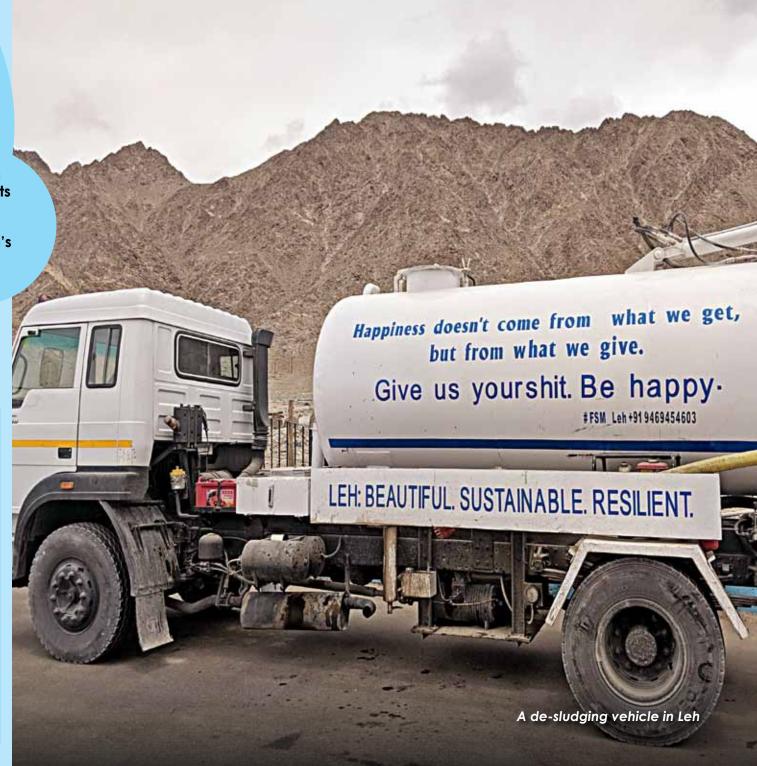


India's highest FSTP

Leh district has a population of 1.33 lakh (2011 Census). The district is famous for its rich culture and heritage, along with its scenic beauty. It is popularly known as land of monks and monasteries. Ladakh's most celebrated town, Leh, also draws multitudes of visitors from across the country and the world.



- Size: 9.6 SQ. KM
- ODF Status:
 CERTIFIED ODF



The FSTP in Leh has 10 Planted Drying Beds (PDBs)

BACKGROUND

LAHDC, CDD Society, BORDA and Blue water Company have designed and set up a Faecal Sludge Treatment Plant in the city. The FSTP in Leh is the country's first to be set in Public Private partnership. The plant has been optimally desined to function in Leh's climatic conditions- Low temperatures, dry climate and strong sunshine through the year.

Due to its geographical isolation, Ladakh's traditional way of life is incredibly sustainable and self sufficient. But modern habits and influx of tourists over the past 10 years are putting pressure on the fragile ecology of the region and also polluting the natural resources.

About 60% of water supply is drawn from pure underground water table and even drank without filtering. But as flush toilets have become increasingly popular, they discharge sewage into underground septic tanks and pits, which release toxic overflow into soil, that easily reaches and contaminates underground water.

Looking at the aforesaid conditions, Leh Autonomus Hill Development Council (LAHDC) decided to set up a Faecal Sludge Treatment Plant in the city.



Speed of Implementation

The process of land allocation, design approval and construction of the plant took only 3 months



The payment model set up is a pay-foroutcome one, Municipal committee of Leh will pay the agency only when services agreed upon in the contract, have been successfully delivered



Accountability and simplicity

The plant is designed, constructed and maintained by a single agency



New technology

Due to extreme cold climate in Leh, BORDA and CDD have deployed the Planted Drying Bed technology for the first time in India



Respect for Sanitation workers

The FSTP has a comfortable office and rest area for the sanitation workers working at the plant

HIGHLIGHTS OF THE MODEL







- A five year contract between Municipal committee of Leh (MCL) and Blue Water Company (BWC) has been signed
- The constructed plant has 10 planted drying beds, 2 horizontal planted gravel filters and 1 polishing pond
- The FSTP is designed to function optimally in Leh climatic conditionslow temperatures, dry climate with strong sunshine throughout the year
- The capacity of the plant can be increased easily by building more planted drying beds
- BWC does weekly maintenance of the plant and checks for inadequacies







RESPONSIBILITIES OF INVOLVED PARTIES

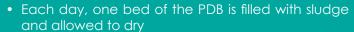
The responsibility of MCL include

- Provision of land for FSTP
- Provision of 2 Suction trucks for providing cleaning services
- Collect user fees from households and commercial areas
- Pay a part of the collected user fees to BWC for rendering cleaning services
- Send notice to residents 20 days prior to their scheduled slot of cleaning

The responsibility of BWC include

- Invest capital to construct the FSTP
- Create a monthly schedule for cleaning and clean big tanks once a year and small tanks twice a year
- Capacity building of all employees
- Develop a plant nursery where the treated water and compost will be used for greenification projects





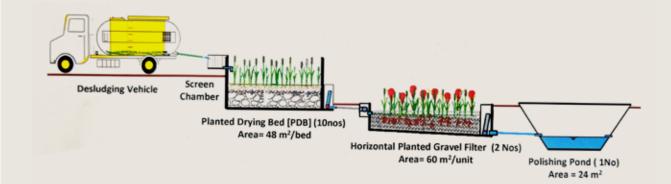
- The excess water percolates and is treated as it flows through HPGF
- The water is then collected in the polishing pond where sunlight provides further disinfection
- Once the sludge accumulates to a height of 0.9 m in the PDB (in 3-4 years), it is removed and can be used as an organic soil conditioner

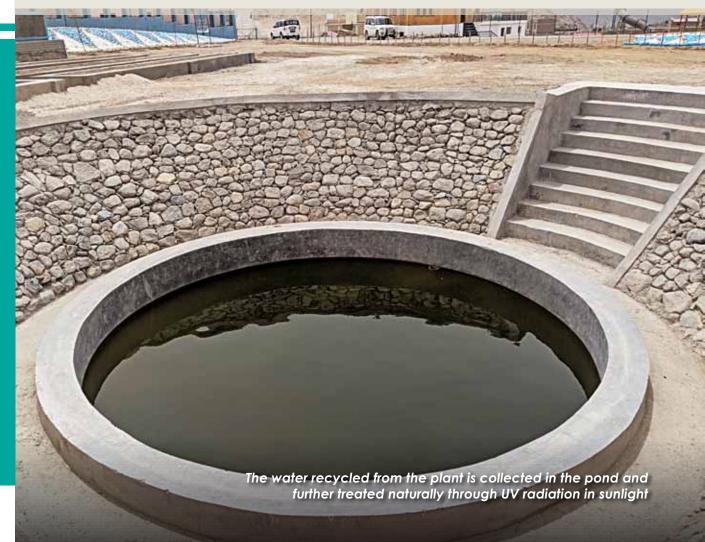
Details of cost incurred and user fees

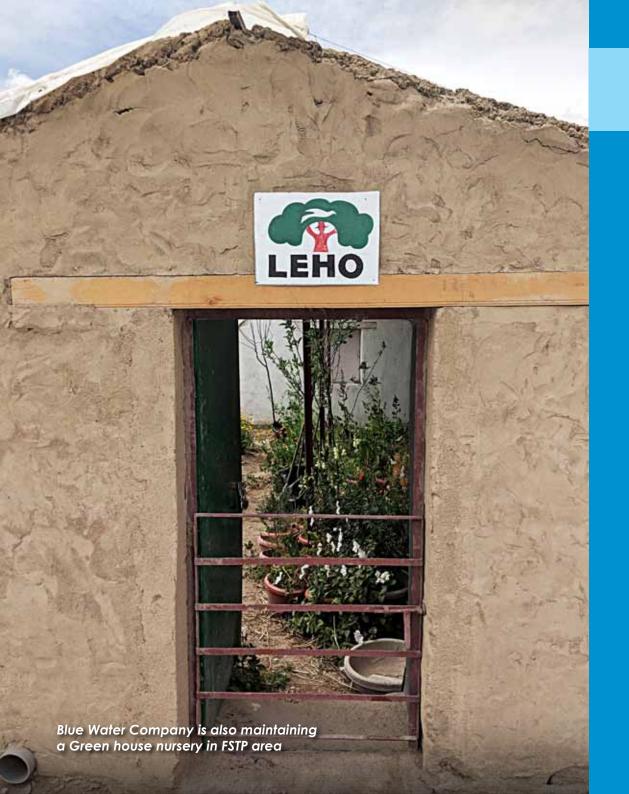
Cost Type	Amount in Lakhs (INR)	Incurred By
Cost of Land	0	None
Cost of construction of plant	65	BWC
O&M Cost	12.2	BWC
Any Additional Cost	1	BWC

Type of User	User Charges / Cleaning (INR)	
Households	3500	In 12 months
Commercial spaces	3500	In 12 months

The land is leased by the local authority for a period of 5 years. BWC gets 90% of the user fees collected whereas MCL retains the 10% of the amount.







LEARNINGS



Planted Drying Bed Technology used in India for the first time is robust and flexible for extreme conditions



In the entire process, there is no direct contact with faecal sludge



Minimal odour during the process and aesthetic design to support locals staying nearby



Gravity based system is based on natural and biological treatment with no use of chemicals or electricity, and is therefore green and ecofriendly



Minimal and simple operations with no skilled operator required, resulting in minimal O&M cost



Model City Sanitation

Warangal is the 2nd largest city in the state of Telangana. The city has inherited strong cultural and architectural legacy from the Kakatiya dynasty. Richly carved stone gateways, fortresses, temples, and lakes make the city a significant tourist attraction. Warangal has also been chosen under HRIDAY, AMRUT, and Smart Cities schemes.



- Size: 408 SQ.KM

10 LAKH

ODF Status:CERTIFIED ODF

Population as per Census 2011:



Operator desludging a septic tank in the city

BACKGROUND

The city does not have underground sewerage system and depends only on on-site sanitation. Lack of adequate individual, community and public toilets was a key issue. As of 2015, 30% of the city's population was reported to be practicing open defecation and this was particularly high in areas having water bodies and slums.

The sanitation service delivery in the city was suboptimal with key issues being: low level of awareness and understanding about the linkage between health and sanitation; difficulties in accessing subsidy for individual household toilets (some of the 180 slums had 100% open defecation); poor maintenance of public toilets lead to lack of usage particularly by women and children; lack of sanitation facilities in schools; presence of many insanitary toilets polluting the environment; unscientific emptying and transportation of faecal sludge from septic tanks and twin pits; lack of use of personal protective equipment by emptier; indiscriminate disposal of faecal waste in water bodies and open areas due to lack of availability of treatment systems.

All these issues have affected the public health status of citizens of Warangal city particularly the urban poor.



Regulation

First city in India to implement (March 2016) Septage Management regulations across FSSM value chain for effective **FSSM**



Innovation

A Non-sewer sanitation(NSS) unit within the municipality to plan, design, implement and monitor interventions



Empanelment of desludging operators

3 Operators with 8 vehicles licensed, Licensing of 6 other operators with 6 vehicles in process



Sanitation Resource Park

Sanitation messages across the FSSM value chain displayed within FSTP premises and on Public Toilets for generating awareness



ICT

Usage of GPS in desludging trucks for monitoring, FSM tracker to capture information of septage collection on real time basis



Partnership

Supported by several organizations like ASCI, BMGF, Tide Technocrats among others





PROCESS FLOW OF FSTP IN WARANGAL

Details of cost incurred and user fees

Cost Type	Amount in Lakhs (INR)	Incurred By
Cost of Land	0	None
Cost of construction of plant	70	TIDE
O&M Cost	10	TIDE
Any Additional Cost	20	GWMC

Desludging is done by private operators to whom households pay directly.

	Type of User	User Charges / Cleaning (INR)	Frequency of desludging
	Households	2500	On demand
	Commercial spaces	2500	On demand



Receipt, Screening and Grit Removal



Pasteurization



Waste Water Treatment



Treated Waste Water Tanks



Dewatering



Sludge

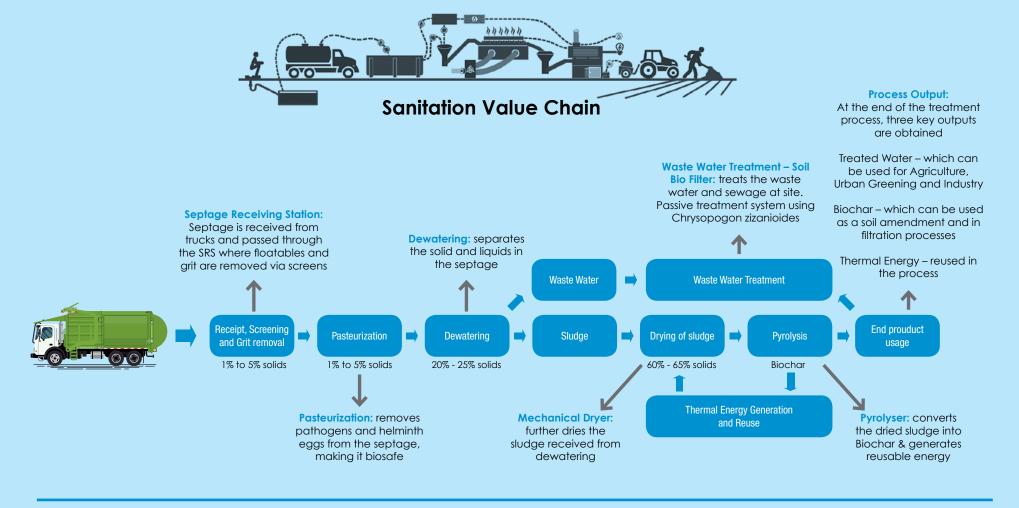


Drying of Sludge



Pyrolysis

WARANGAL FSTP- PROCESS FLOW



KEY FEATURES

- 15 KLD capacity
- Remote monitoring capability
- Biosafe process in a modular / scalable configuration
 - Quick setup
 - All weather systems

Cell. 9849145043 Screening and grit removal of sludge in process

LEARNINGS



Regulation is pre-requisite for comprehensive city wide sanitation improvement



Extensive use of ICT tools, citizen awareness campaigns, engaging and capacity building of key stakeholders are essential elements of and ODF strategy



FSTP in Warangal is built on PPP mode (Land has been given by the corporation), thereby building synergies between Private and public sector



Institutional ownership through mechanisms such as NSS/FSSM cell plays a key role for sustenance of FSSM initiatives



Systems, processes and tools introduced in Warangal are replicable, as a result of which representatives from all over India and world are visiting Warangal to learn the process



Warangal experience of treatment of Faecal Sludge is being scaled up across the State – 73 **ULBs**



Gangtok is the capital and the largest town of the Indian state of Sikkim. It also is the headquarters of the East Sikkim district. Gangtok is located in the eastern Himalayan range, at an elevation of 1,650 m. It sees large amount of tourists throughout the year. The city is administered by the Gangtok Municipal Corporation.



– Size:19.2 SQ. KM

1,00,286

ODF Status:CERTIFIED ODF





A sanitary napkin dispenser in a Public toilet in Gangtok

BACKGROUND

Sikkim is India's one of the first ODF states and Gangtok its capital has also been award the cleanest city in north eastern India.

For Sikkim, sanitation in urban areas was a bigger problem than in rural areas. In urban areas, many ULBs did not have adequate funds to build or maintain toilet. With the Swachh Bharat Abhiyan's assistance the tide has turned the status of urban sanitation in the last four years in Sikkim.

The Sikkimese culture has generally been against open defecation, however, in the last few years, due to unavalibity of toilets people were defecating in open. Many people used toilets made of bamboo structures, which had single pits, which did not solve the problem for the government. Under the Swachh Bharat Mission, BMC has constructed several new IHHLs. PTs and CTs and have converted the insanitary toilets into sanitary ones.

Through sustained efforts, the city has been certified ODF.



Provision of adequate infrastructure

The corporation started its journey to ODF by providing adequate toilet infrastructure to the citizens



Innovative toilet models

To cater to local needs and habits, innovative toilet models have been adopted by GMC



IEC and BCC activities

To change behaviour, ULB focused massively on IEC activities and ensured participation of children in those activities



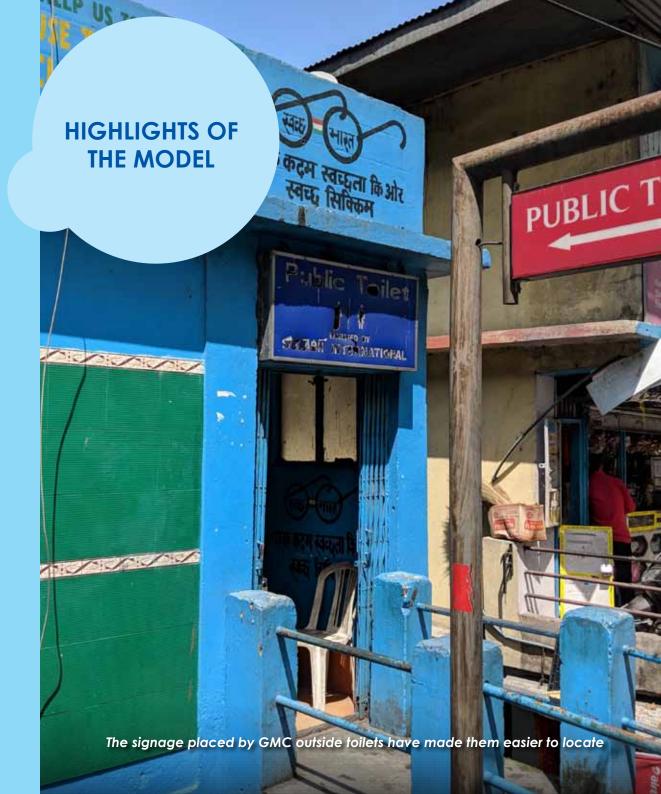
Approach to increase usability

Many small steps have been taken to increase the usability of the toilets



Penalizing the defaulters

For proper enforcement, GMC is penalizing those defecating and urinating in open

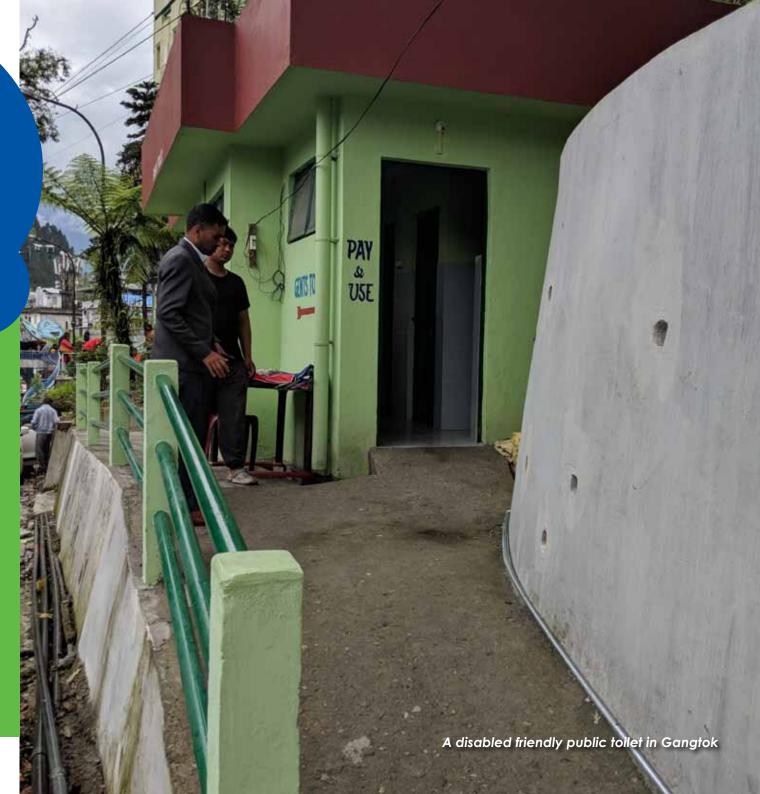






APPROACH TO INCREASE USABILITY

- Disabled friendly toilets- The public toilets constructed by Gangtok Municipal Corporation have
- Proper signage- The corporation has also placed proper signage at adequate places to help people
- Gender segregated toilets- The Public toilets constructed segregated by gender to address the cause of privacy and safety
- Separate Entrances- The toilets are not only segregated by gender, they also have separate entrances and caretakers







- The Municipal Corporation has also constructed Smart Public toilets in the city
- These toilets have clean energy source (solar energy)
- Menstrual Hygiene Management-The smart Public toilets are also equipped with Sanitary napkin dispensers and incinerators
- These toilets essentially follow the Pay-and use model



SPECIAL MODEL FOR O&M

- As seen in the image, GMC is running an innovative model for Public toilets in the city
- As part of this new model, the corporation has constructed structures comprising two floors, and having a cafeteria/ canteen on one and a gender segregated public toilet on another floor
- Through bidding, GMC has allocated the complex to a party. The individuals are responsible for O&M of the toilets and are given free space to run their canteens
- The above agreement is at a very minimal rent





LEARNINGS



The corporation has taken all measures to provide adequate toilet infrastructure to the people of Gangtok



The behavior change in the city is a result of sustained joint efforts by the community



Looking after enforcement, the city officials penalize those urinating or defecating in open



To increase the usability of toilets, GMC has adopted different designs and have also customized them as per local needs



The city has also catered to the issue of operation and maintenance of toilets by adopting innovative methods



BHOPAL

Changing behavior, one household at a time

Bhopal is the capital city of the Indian state of Madhya Pradesh and the administrative headquarters of Bhopal district and Bhopal division. It is located in the central part of India, and is just north of the upper limit of the Vindhya mountain ranges Bhopal is known as the City of Lakes for its various natural as well as artificial lakes and is also one of the greenest cities in India.



Size:413 SQ. KM.

19,23,879

ODF Status:CERTIFIED ODF

Population as per Census 2011:



The 'Gadhigiri' activity included felicitating those who were caught defecating in open

BACKGROUND

Bhopal has been certified as free of open defecation. BMC in association with several NGOs and RWAs held many targeted IEC campaigns in the city to bring about a large scale behavior change.

For being one of the cleanest city in the country, major challenges before BMC were to achieve the ODF status and bring an attitudinal change amongst its residents. Some people in the city had established the practice of defecating in open in spite of having a toilet.

Bhopal Municipal Corporation wanted to end the practice of open defecation in the city. To change the rigid behavior, the corporation started with carrying out a survey to better understand the behavior of slum dwellers. Following which the survey results were analyzed and a targeted communication strategy was formed. As part of the strategy, different IEC initiatives were undertaken to change old behavior, habits and mindset.



Provision of adequate infrastructure

Before starting the communication activity, BMC ensured provision of necessary infrastructure to the city



Research for knowing causes of OD

BMC started the ODF process by conducting a survey



Targeted Behaviour change campaigns

Area wise activity plan was devised for IEC



Engaging key influencers

Key influencers such as Doctors, children etc. were engaged for the process



Heavy focus on sustainability

In spite of Bhopal being certified ODF, BMC is still continuing with its activities to ensure sustainability







ODF+ CHILDREN AND EDUTAINMENT

- ODF+ Children+ is a series of participatory and monitoring activities for children in OD practicing communities
- Children observing safe hygiene behaviour like use of toilet, handwashing with soaps were provided toffees as incentives
- Regular health check-up camps were also conducted
- Conventional Snake & Ladders Game was redesigned with hygiene and sanitation messages
- The children in schools, aanganwadis and slums were encouraged to play the game wherein ladder promoted the positive hygiene behaviour and snake bite discouraged open defecation and unsafe hygiene practices



COMMUNITY TRIGGERING AND ROKO TOKO CAMPAIGN

- Special sessions were conducted communities where open defecation (OD) was in practice
- Sessions aimed at triggering sense of disgust and shame of shame amongst the communities regarding OD practice, and to encourage them to take collective resolve to change their situation
- Roko Toko campaign was carried out across the state by a trained team of ULB officials and swachhagrahis
- The team used to catch people coming out of their houses with a water tumbler in hand, heading for open defecation. They used to stop them and make them pledge to discontinue the practice







DOCTOR AAPKE DWAR

- 'Doctor Aapke Dwar' was conceptualized for the slum dwellers of the city. As people often tend take a doctor's advice into consideration. Through this activity, the doctors explained the harmful effects of open defecation to the people of Bhopal
- The activity was conducted in 11 Zones and 30 wards of Bhopal city, each activity covering major slum areas
- So far, 68 Camps have already been conducted and have seen participation from more than 20,000 slum dwellers
- The camps also had facility for registering to construct IHHLs. A total of 6815 toilets were built through these registrations received in the camps



SWACHHATA HI SEWA AND SANKALP SE SIDDHI

- Swachhata hi Sewa (Cleanliness A Greatest Service), a campaign that engaged people from all walks of life to promote cleanliness and re-iterate common citizen's commitment for total cleanliness
- Sankalp se Siddhi campaign (Salvation through Resolution) was held wherein a 'Sanitation Dialogue' was established with urban communities on the theme of 'freedom from open defecation', in order to communicate adverse impact of open defection on health, nutrition and socio-economic status of the society
- The campaign was carried out on the occasion of 75th Anniversary of 'Quit India Movement'



Spreading the message of swachhata through innovative methods

LEARNINGS



People in some communities have been practicing open defecation since ages without understanding the harmful effects, therefore changing their behaviour is a gradual process, which will take time



A targeted communication campaign is needed to change rigid behaviours and therefore it should be devised after conducting research of the area wise causes of open defecation



A collaborative effort is required from the municipal corporation, residential welfare associations and civil society organizations to bring about the change



Some of the initiatives adopted by Bhopal **Municipal Corporation such as Doctor** aapke dwar, Swachhata Paathshala etc. present an excellent example of engaging key influencers of our society

TOILET TECHNOLOGIES

Innovative toilet designs

A total of 48.67 Lakh Individual Households Toilets (IHHLs) and 3.30 Lakh Public and Community toilets have been constructed since the inception of Swachh Bharat Mission (Urban). The toilets constructed by ULBs showcase new and innovate technologies and are customized as per local needs.

The toilets covered in the story are:

She Lounge:
BHOPAL

– Smart Toilet:

NEW DELHI MUNICIPAL COUNCIL

E- toilet:

NAVI MUMBAI

Toilet for Trans-genders:

BHOPAL

Innovative O&M model:

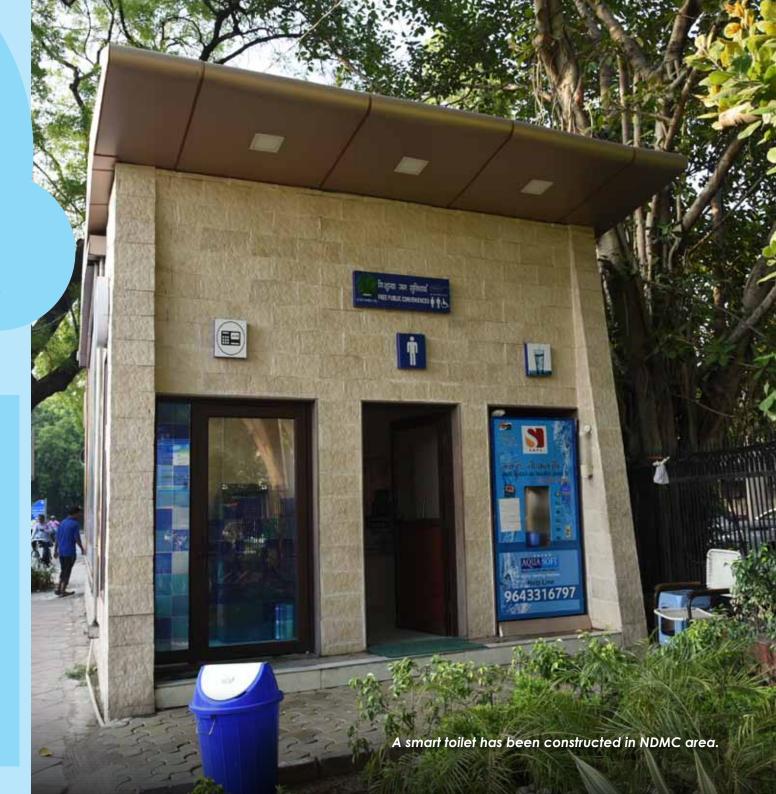
GANGTOK

- Toilet for Senior Citizens:

AMBIKAPUR

Toilet with CSR funds

PANCHGANI







SHE LOUNGE-**BHOPAL**

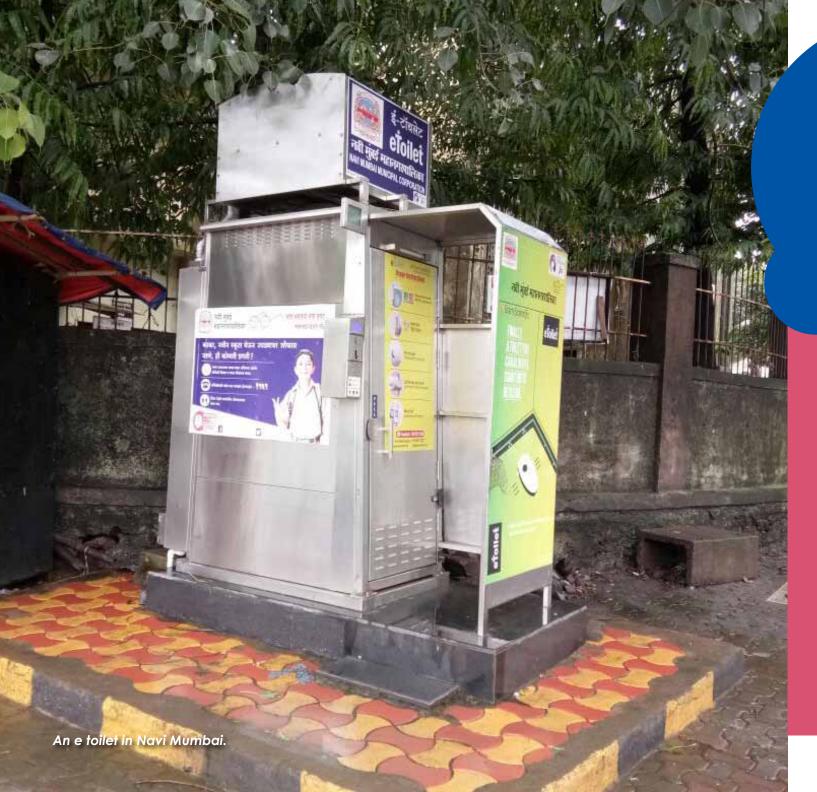
- She Lounge is a concept of Public Toilet which is exclusively for use by women and is also run only by women staff
- The facilities provided include provision of sanitary napkin vending machines, waiting room with proper infrastructure, besides a general shop for women, Wi-Fi, novelty shop, ATM etc.
- She Lounge has been constructed at two locations in Bhopal



SMART TOILET-NDMC

- NDMC devised has (PPP) model where NDMC provides space for construction of Public Toilet Utilities (PTUs) along with some additional space, which can be used by other service providers
- The activities permitted include ATMs of banks, water ATMs, vending machines etc. There is also space for advisement which contributes in generating revenue for the ULB
- The PTUs have separate women and men toilets, toilets for differently abled persons
- 30 PTUs from amongst the planned 109 PTUs have been developed and are in public use in NDMC area





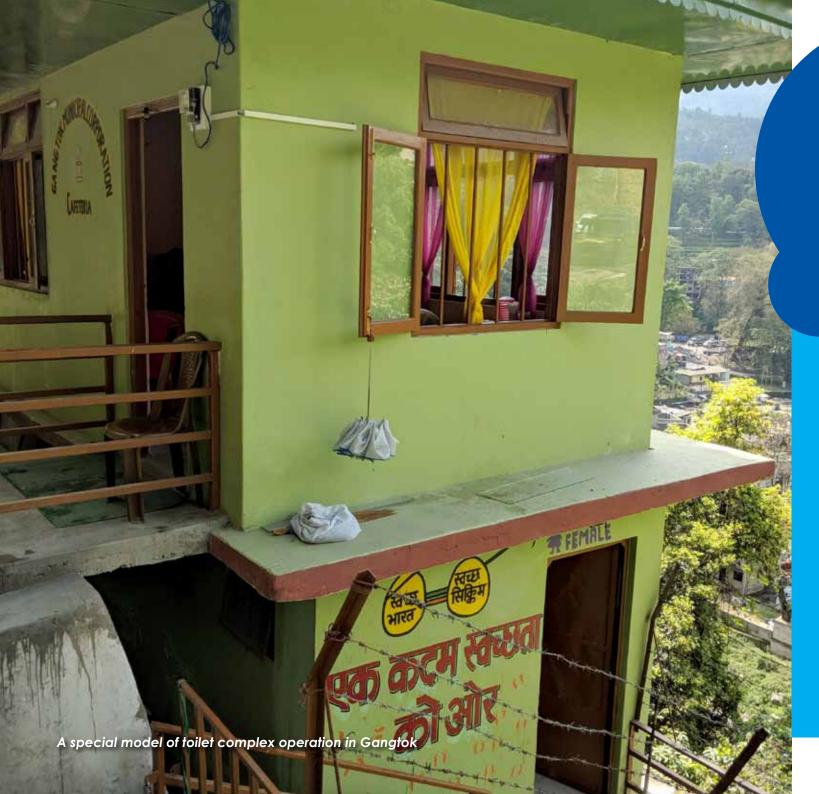


- E toilets are pre-fabricated public toilets that are made of steel and are integrated with electronic system to ensure cleanliness and hygiene to every user
- The toilets are unmanned with self- cleaning capabilities and no regular manual cleaning/ maintenance is required. There is also enhanced cleanliness through auto flushing
- They also have onsite waste treatment anaerobic using biodegradation
- These toilets are connected over a GPRS network, which ensures real time monitoring of these toilets
- NMMC has installed E-toilets across Navi Mumbai



- After Navi Mumbai, Bhopal is the second city to provide toilets for transgender in the city
- The toilets made in the complex have separate entrances for all 3 genders
- The toilet, which has been constructed also has a change room/make-up room
- Currently 1 toilet has been constructed for a population of 300 transgender in Bhopal





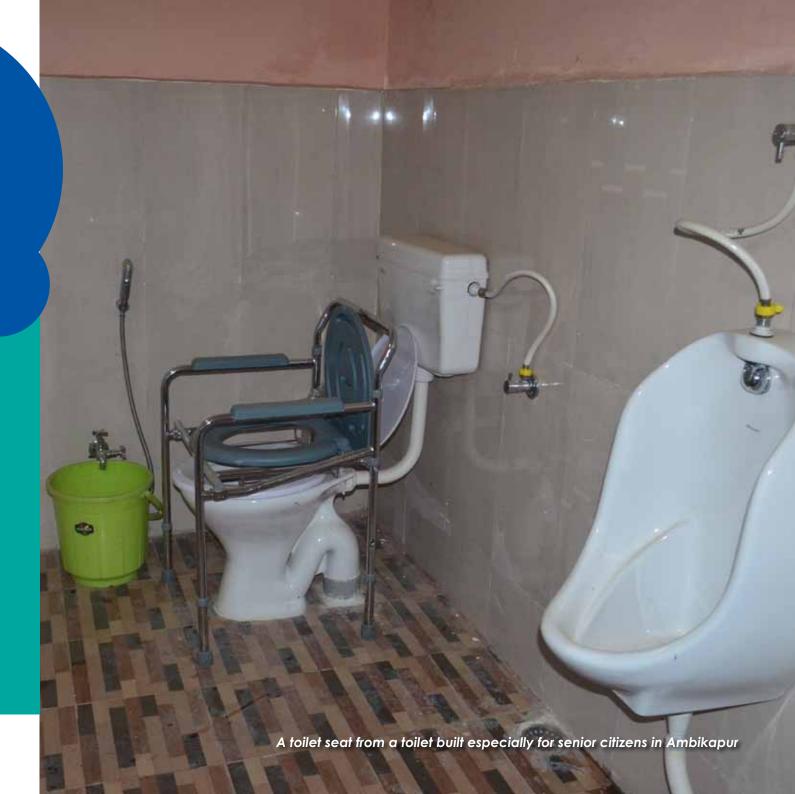


SPECIAL MODEL FOR O&M OF TOILETS IN GANGTOK

- As seen in the image, GMC is running an innovative model for Public toilets in the city
- As part of this new model, the corporation has constructed structures comprising two floors, and having a cafeteria/ canteen on one and a gender segregated public toilet on another floor
- Through bidding, GMC has allocated the complex to a party. The individuals are responsible for O&M of the toilets and are given free space to run their canteen
- The above agreement is at a very minimal rent
- Gangtok has established one such toilet in the market area and is planning to construct more



- On request of Morning walkers club of senior citizen , AMC Provided the first 'Geriatric Toilet' in Ambikapur
- Geriatric friendly toilet seat that has a hand rail and is specially designed for senior citizens
- There is also a provision of Wheel chair in the toilet. The toilet also has ramps for better accessibility
- There are night glow signage outside the toilet for better visibility
- Ambikapur has constructed one such toilet in the city







COMMUNITY TOILET OPERATIONAL THROUGH CSR FUNDING IN PANCHGANI

- Panchgani Municipal corporation has spent Rs2.85 Lakh in construction of a Public toilet in the heart of the city
- The toilet has 7 seats, two each for Gents, Ladies and Children and one for differently abled people
- There is also a janitor room constructed on the floor above the toilets, to ensure availability of clean toilets at all times to people
- The toilet is operated and maintained by Mala Food Products with their CSR funds
- In return, the municipality has allowed the company to use the space for advertisement of their products



MAHARASHTRA

Effective IEC for ODF status sustainability

Maharashtra occupies a substantial portion of the Deccan plateau in the western peninsular part of the subcontinent. Maharashtra is bounded by the Indian states of Gujarat to the northwest, Madhya Pradesh to the north, Chhattisgarh to the east, Telangana to the southeast, Karnataka to the south, and Goa to the southwest and by the union territory of Dadra and Nagar Haveli and the Arabian Sea to the west. Aptly called the gateway of India, Maharashtra is one of India's biggest commercial and industrial centers.



Size:9,084 SQ. KM

50,818,259

Population as per Census 2011:

ODF Status:CERTIFIED ODF





BACKGROUND

Through development of a systematic framework for achieving ODF, ODF+, ODF++ communities, the state of Maharashtra has successfully been declared ODF.

Like other states, prior to the launch of Swachh Bharat Mission, a large proportion of urban households in Maharashtra were dependent on public latrines (21%). And a large number of households still resorted to open defecation. Due to various efforts made at the State level in the last decade, Maharashtra showed an increase in percentage of urban households having water closets from 44.4% (census 2001) to 67.3% (census 2011). Treatment of faecal sludge was rarely seen in smaller ULBs wherein, practice of disposing off septage in open dumps, water bodies or vacant land outside the city limits was very common.

To combat the above issues, the state of Maharashtra launched the Swachh Bharat Abhiyan in May 2015 under the leadership of Hon'ble Chief Minister. The launch of this mission led to formation of strategies which not only helped in creation of ODF communities but also in their sustenance.

The Swachh Maharashtra Abhiyan aspired to provide a toilet to each household and address the entire value chain of sanitation by ensuring safe management of faecal waste in all cities.



Development of concept of ODF Cities & validation mechanism

The state took the lead in defining and developing the concept of **ODF Cities**



Developing ODF validation mechanism

A three tiered validation mechanism was devised by the state



Convergence of funds

The total subsidy amount per toilet is INR 17,000 (Gol, GoM, 14th FC)



Incentivizing ODF status for ULBs

Rewards were given to ULBs which sustained the ODF Status



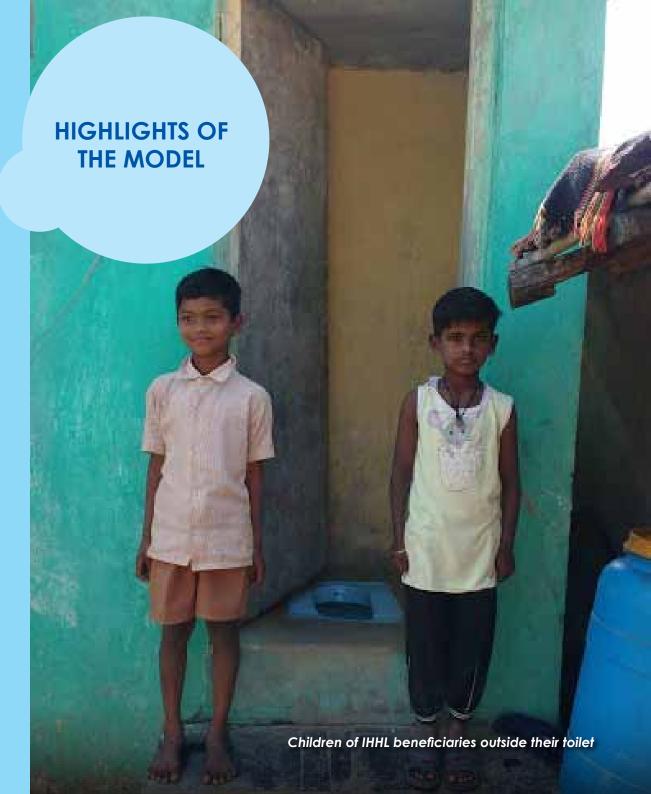
Vigilant monitoring of **OD Spots**

New tools were developed to closely watch the OD Spots



Safe disposal of septage

The city has also issued guidelines on safe disposal of faecal sludge







DEVELOPMENT OF ODF CITIES AND VALIDATION MECHANISM

- State developed a stringent framework for defining ODF cities in Maharashtra
- The state has taken a step ahead and included safe management of faecal sludge as part of ODF verification process
- Frameworks for ODF, ODF++ cities have been defined by the state
- A 3 tier validation mechanism has been devised by the state:
- City self declares as ODF- A city level resolution is passed by the general body
- District level validation- A committee comprising district level officials validates the claim of the city
- -State Level Validation- A committee independent field specialists examine the ODF status of the city







POLICY LEVEL DECISIONS TAKEN BY THE STATE

- Disbursement of incentive funds to cities on achievement of ODF certification
- No release of development grants to ULBs on failing achievement of ODF status
- Amending the Mumbai Municipal Corporation Ordinance 1988, IHHLs were made mandatory for elected representatives
- Total subsidy given per toilet for construction is INR 17,000
- Streamlining process for granting permission for constructing toilets
- No NOC is required now to construct toilets on land belonging to the GoM



- OD Watch is a unique tool developed by the GoM to generate awareness, monitor upkeep of the infrastructure and ensure elimination and beautification of likely OD spots in the city
- The system monitors OD spots at city, district and state level
- Devised the mechanism of Good Morning Pathak, which constituted active and informed people from all over the city to generate awareness among those defecating in open
- The above team visited all critical old and new OD spots and informed the concerned ULB officials regarding those defecating in open
- After which the ULB understood the cause for open defecation and took the necessary remedial action to deter people from defecating in open



An IHHL beneficiary outside his toilet.

LEARNINGS



Local Leadership- The Swachh Maharashtra Mission was broken into city level ODF targets for ease of implementation and monitoring



Knowledge sharing- Social media was extensively used for sharing of best practices and success stories among cities all over the state



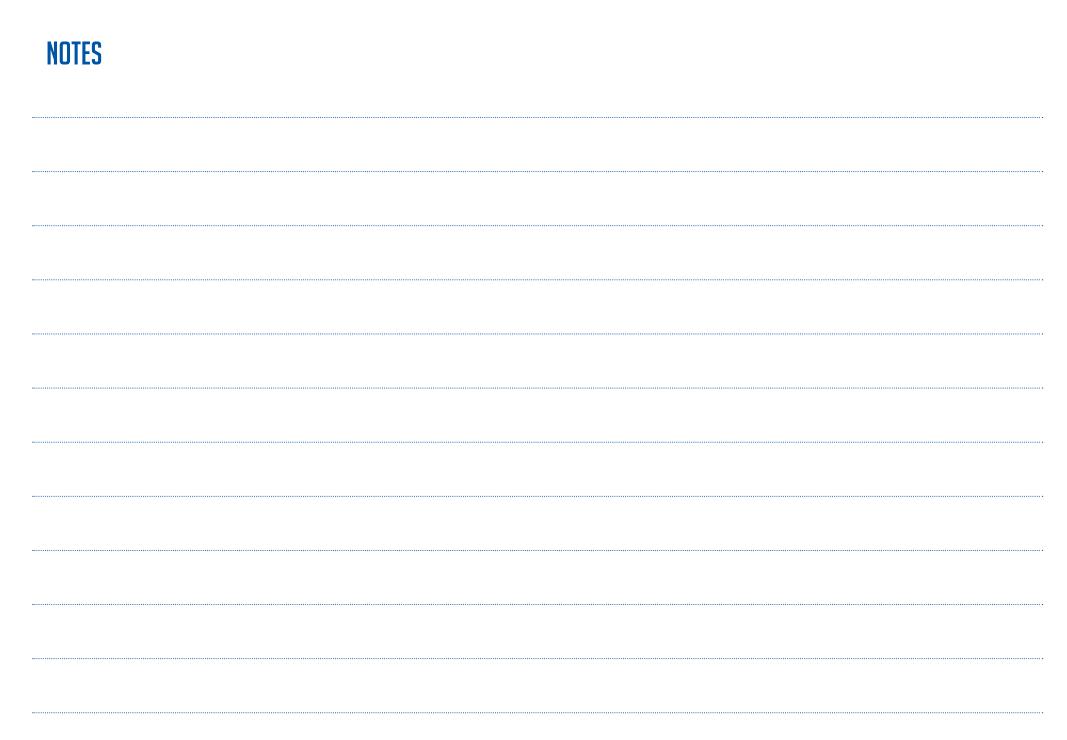
Close monitoring- The Swachh Maharashtra initiative has seen collaborative effort been put by Divisional Commissioners, District Collectors and Municipal Commissioners. The senior officials have also very closely monitored the mission's progress in their respective districts and cities



Systematic Approach- Sustainability comes with a systematic approach adopted towards achieving success. Mere provision of toilets was not the objective of the mission. It envisaged 'ODF Communities' by ensuring usage of toilets and total elimination of open defecation



Stakeholder participation- A systematic action plan for ensuring stakeholder participation was developed and followed



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