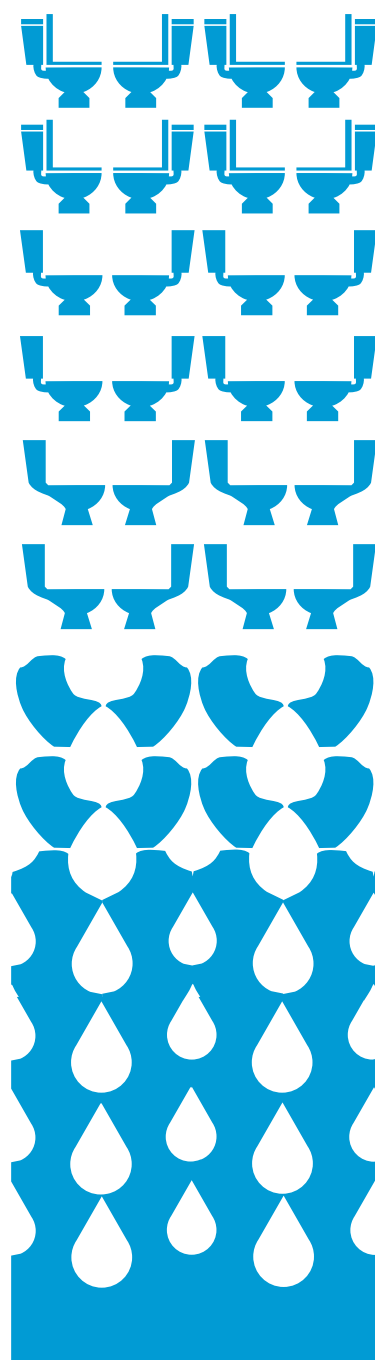


**Beyond Toilets :**

**Making cities ODF+ in Maharashtra**

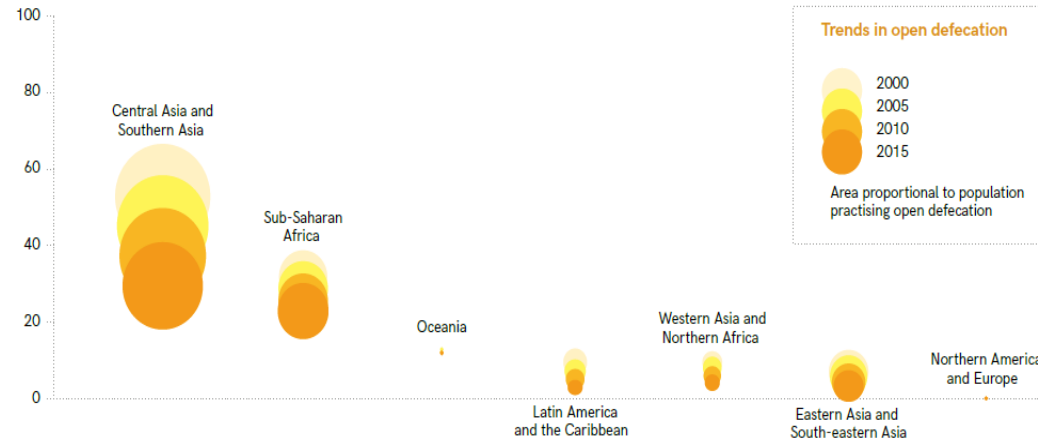
**Dinesh Mehta**

**C-WAS, CEPT University,  
Ahmedabad**

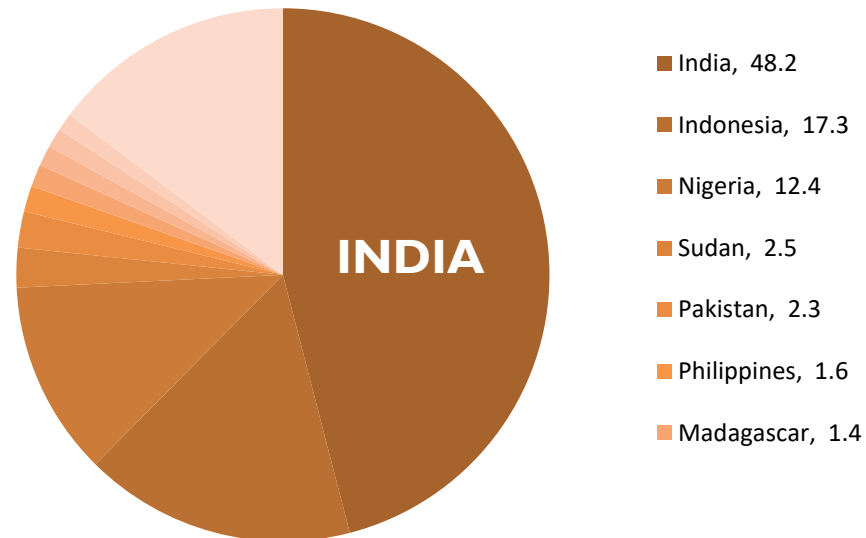


# Challenge of open defecation in cities

Proportion and number of people practising open defecation in 2015, by region



**Globally, 100 million people  
in urban areas  
resort to open defecation**



**Of these  
48% are in India**

Source: Based on information from WHO / UNICEF Joint Monitoring Programme (JMP – 2013) for Water Supply and Sanitation; Retrieved on 20<sup>th</sup> Sep 2013 from

<http://www.wssinfo.org/data-estimates/table/>

<http://www.unwater.org/new-publication-whounicef-joint-monitoring-programme-2017-report>

# Swachh Bharat Mission (SBM) Urban – Oct 2019

## Mission Objectives by October 2019

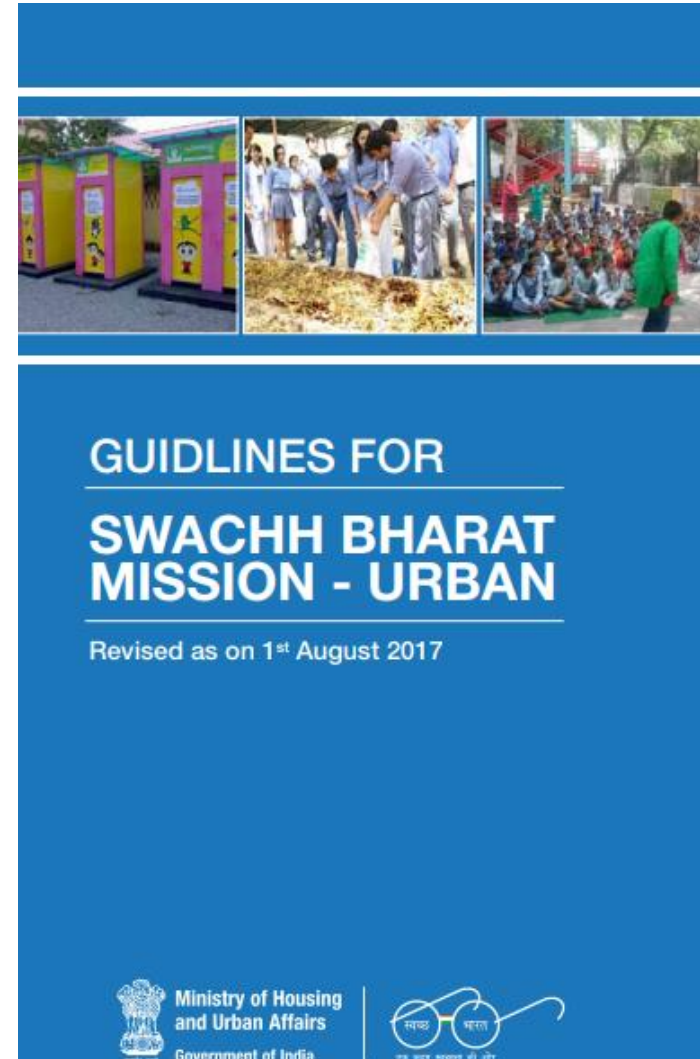
- **Elimination of open defecation**
- Eradication of Manual Scavenging

### SBM (Urban) aims to ensure that

- No households engage in the practice of open defecation
- No new insanitary toilets are constructed during the mission period
- Pit latrines are converted to sanitary latrines

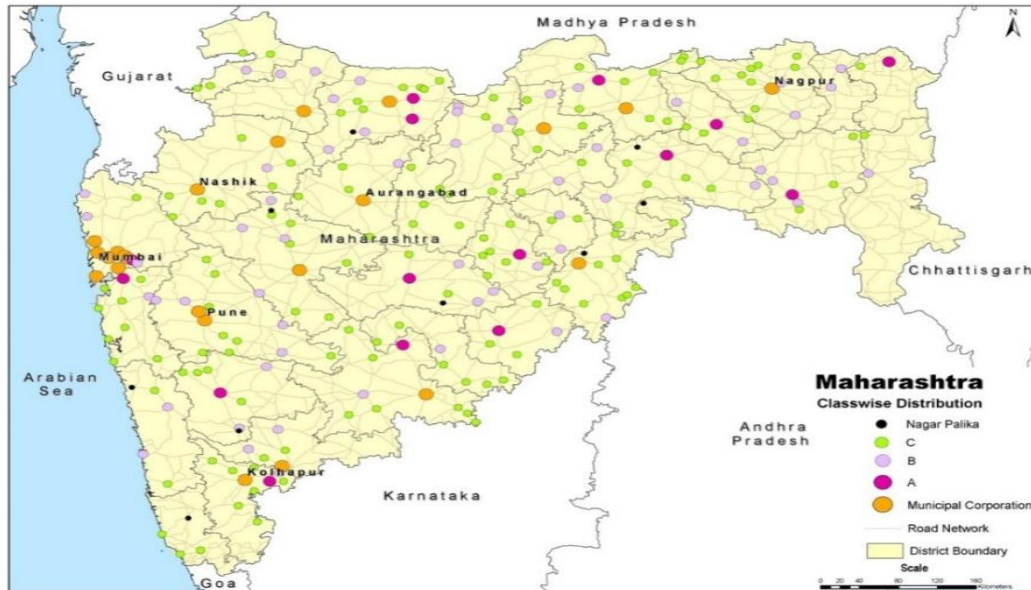
### Mission Components

- Household toilets, including conversion of insanitary latrines into pour-flush latrines
- Community toilets
- Public toilets and urinals



# Maharashtra - one of the most urbanized states in India

## Demography



~50 MILLION URBAN POPULATION

384 CITIES

## Sanitation status of Urban Households

8% WERE DEFECATING IN OPEN

71% HAD AN ON-PREMISE TOILET FACILITY

21% DEPEND ON COMMUNITY TOILETS

56% TOILETS HAVE ACCESS TO PIPED SEWER

44% USE onsite systems

Note: (1) Classification of cities: municipal corporation (>300,000), Municipal Councils: Class A (100,000-300,000), Class B (40,000-100,000), Class C (<40,000), NP (as notified). Source: Census 2011 and PAS data

# CEPT's long partnership with GoM ...

2008-09

**Performance Assessment System (PAS) Project**

242 cities ---- > 384 cities

2011-12

**Performance Improvement Plans for making cities ODF**

15 class A cities

2012

**Documenting ODF Cities**

Mahad, Satara and Others

2012-13

**City Sanitation Plans**

4 small and medium towns (Wai, Sinnar, Ambejogai, Hingoli)

2013- on

Implementation support for Sanitation Improvement

Support to Wai & Sinnar

2014-15

**Demand Based Technical Support**

12 interested cities

2015-on

**Support to Swachh Maharashtra Mission**

State Government and all 384 Cities in Maharashtra

2016-on

**Implementation of Septage Plans, Financing Models**

6 pilot cities in State (Wai, Sinnar, Akot, Umred, Chiplun, Gevrai)



# Why is Faecal Sludge and Septage Management (FSSM) important !!!

**1 truck of Faecal Sludge and Septage  
carelessly dumped  
= 5,000 people shitting in the open!**



1 Gram of Feaces may contain:

**100 parasites eggs**

**1000 Protozoa**

**1,000,000 Bacteria**

**10,000,000 Virus**

**Are we really ODF !!!**

# Wai and Sinnar in Maharashtra

These cities were selected in 2012 by the Maharashtra Jeevan Pradhikaran and the Water Supply and Sanitation Department of Maharashtra for the development of City Sanitation Plans (CSPs) with the support of CEPT University

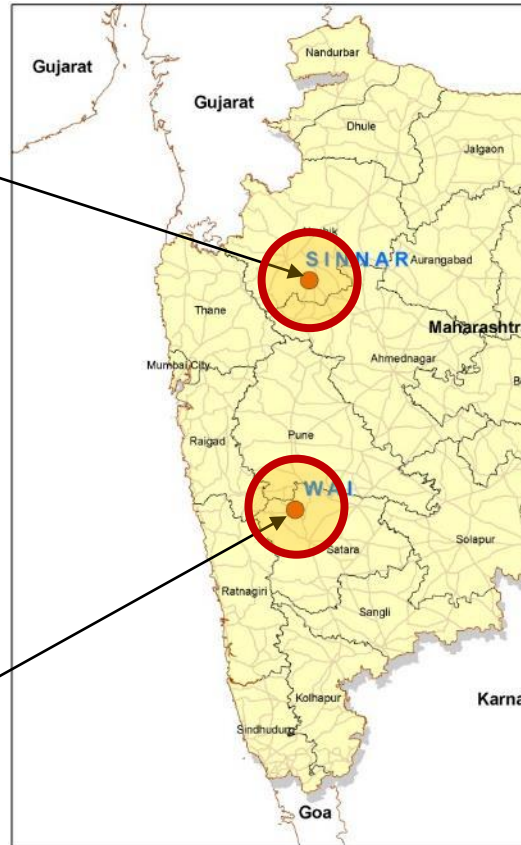
Development of City Sanitation plans were accompanied by ~18 months of stakeholder engagement with the WSSD, MJP and local ULBs

## Sinnar

Located in the Nashik district, with a population of ~72,000 that has more than doubled in size since 2001 mainly due to expansion of city boundaries and an industrial and manufacturing boom in nearby Nashik.

## Wai

Located in the Satara district, 90 km away from Pune, with a population of ~43,000. Wai has grown slowly at 1% per year since 2001.





# Sanitation Situation – When we started

When we started work



Pour flush toilets

- **2-13% open defecation** in both the towns
- **High dependency** on community toilets
- Community toilets **non-functional**

Septic tanks

- **Majority** of toilets are connected to **septic tank**
- Septic tanks **2-3 chambered**
- Septic tanks were **oversized** and only few had **access covers**

Suction emptier truck

- Only **2-4 % of septic tanks cleaned** annually
- Both ULBs provide the **emptying services** on **demand basis**
- Levy **user charges** from **400 - 1000 / trip** for emptying

No treatment facility

- **No facility** for fecal sludge treatment

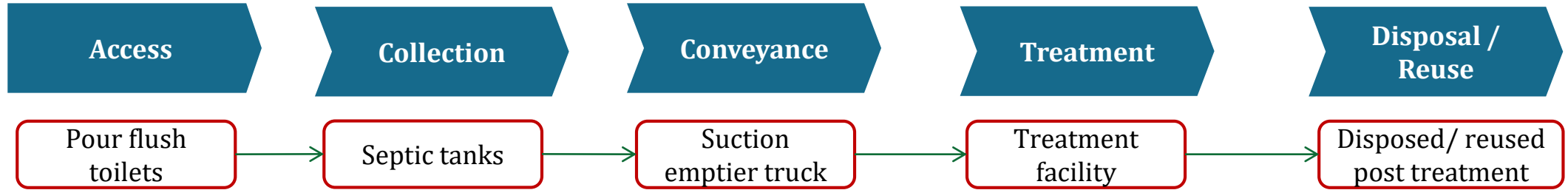
Disposed off on dumping site

- Septage **disposed** off on dumping site **without treatment**



# Sanitation situation after interventions...

Existing Situation

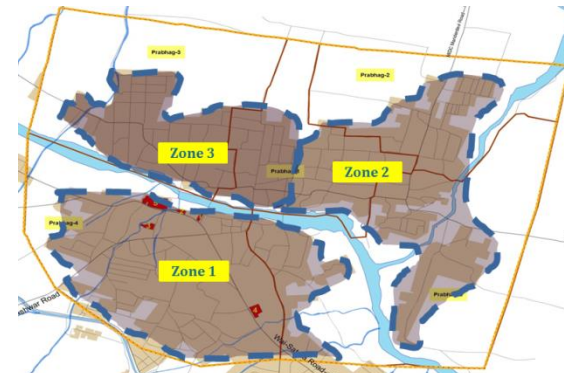


- Cities have **attained ODF status** and **sustained** the same
- **Improved access** to **Individual toilet** and **toilet credit** has been explored
- All **Community toilet seats** have been made **functional, O&M assigned to private sector**
- **Toilet** and **septic tank database** has been generated

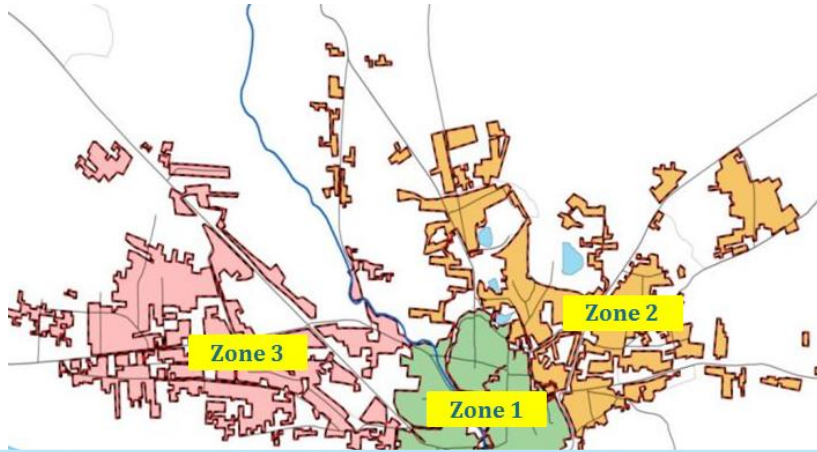
- **Scheduled emptying** of septic tanks at an **interval of 3 years through private sector**
- **Sanitation tax** levied for **financing O&M** of emptying services
- **Payment** to contractor through local taxes using **escrow mechanisms**

- Septage **treatment plant** are **being set up** in both the cities
- **Wai FSTP** – funded by **BMGF**
- **Sinnar FSTP** – **14h FC funds**

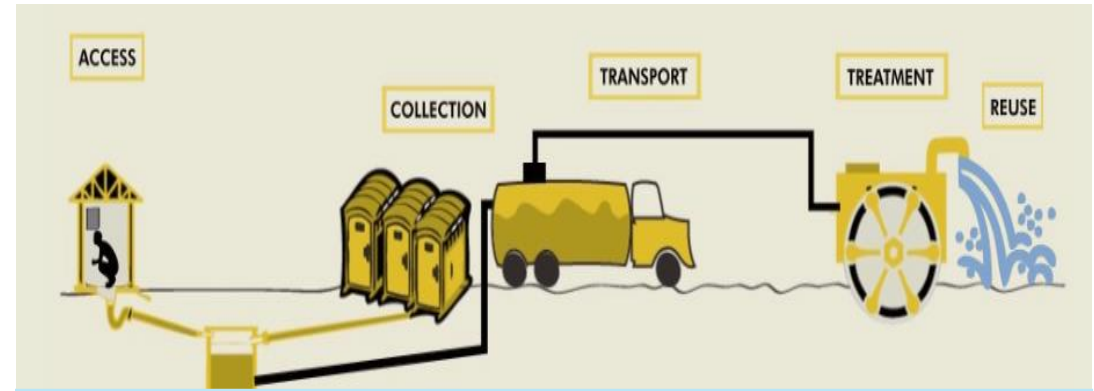
- Reuse of treated water in agriculture/urban forestry. **sale of compost mixed with bio-char; energy generation from biogas**



# Planning Principles in our work.. ( 1 / 2 )



**Spatial Planning –  
Citywide Sanitation Services**



**Assessment and Planning across the  
Sanitation service chain –  
Outcome based approach**



**Institutional -  
City Ownership of all interventions-  
Formalised by Council Resolutions**



**Financing –  
Capital Financed through ULB own funds  
O&M Financed through Sanitation Tax**

# Planning Principles in our work.. ( 2 / 2 )



**Inclusive** –  
Equitable services to all including Slums



**Behavior change** –  
for ODF sustainability & ODF+

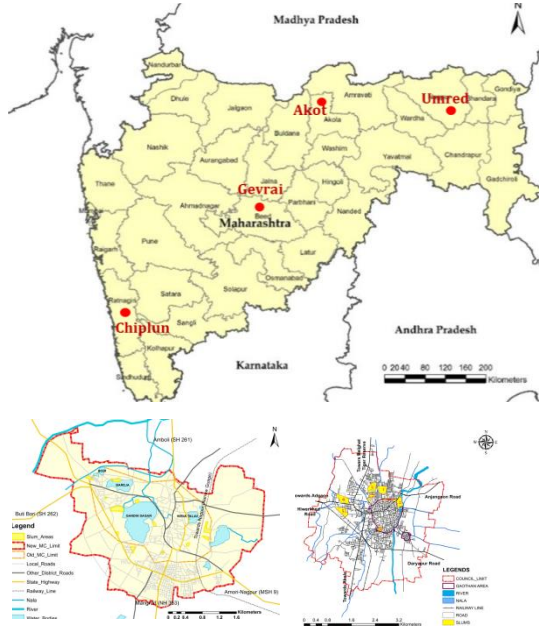


**Social aspect** –  
Removed need for manual scavenging



**Environmental aspect** –  
Stopped crude disposal of septage

# Scalability and Sustainability ...



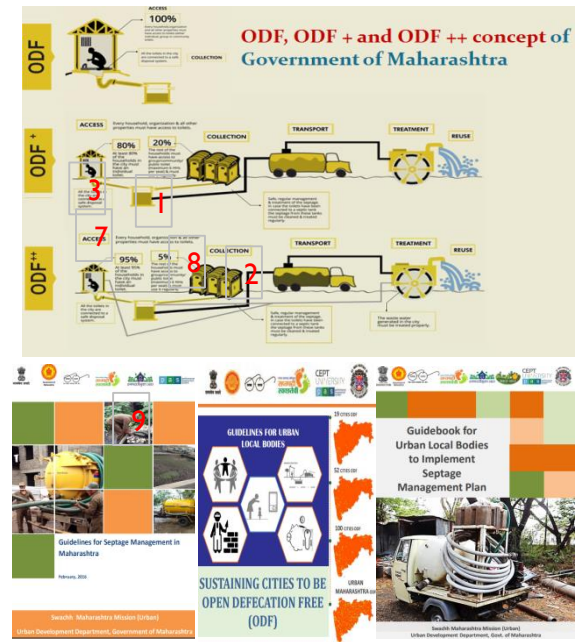
### Primer on Faecal Sludge and Septage Management

4

5

### NATIONAL POLICY ON FAECAL SLUDGE AND SEPTAGE MANAGEMENT (FSSM)

February 2017



Scaling up in other 7 towns of Maharashtra

Influenced National Policies and guidelines

Lessons scaled up at State level through Policies and guidelines

Tools for training ULBs across India

CaPex – 14<sup>th</sup> FC funds  
Opex – Sanitation tax

# Partnerships and Collaboration to attain Scale ...

BILL & MELINDA  
GATES *foundation*

CEPT  
UNIVERSITY



Government of  
Maharashtra



# Thank you

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## About us

The Center for Water and Sanitation (C-WAS) at CEPT University carries out various activities – action research, training, advocacy to enable state and local governments to improve delivery of services.



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