

Scaling up FSM infrastructure in India: Case of Maharashtra

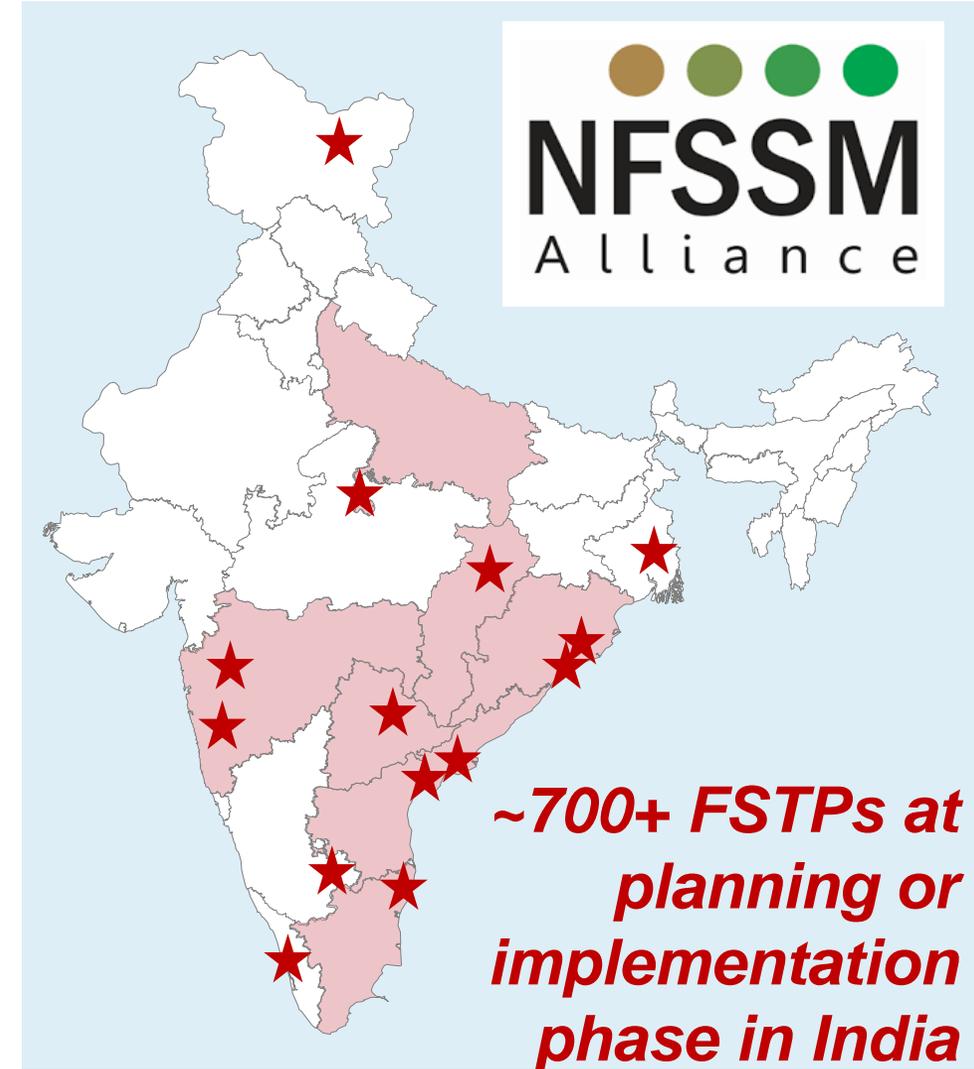
Dhruv Bhavsar, Dr. Dinesh Mehta,
Dr. Meera Mehta, Aasim Mansuri, Rucha Tavkar

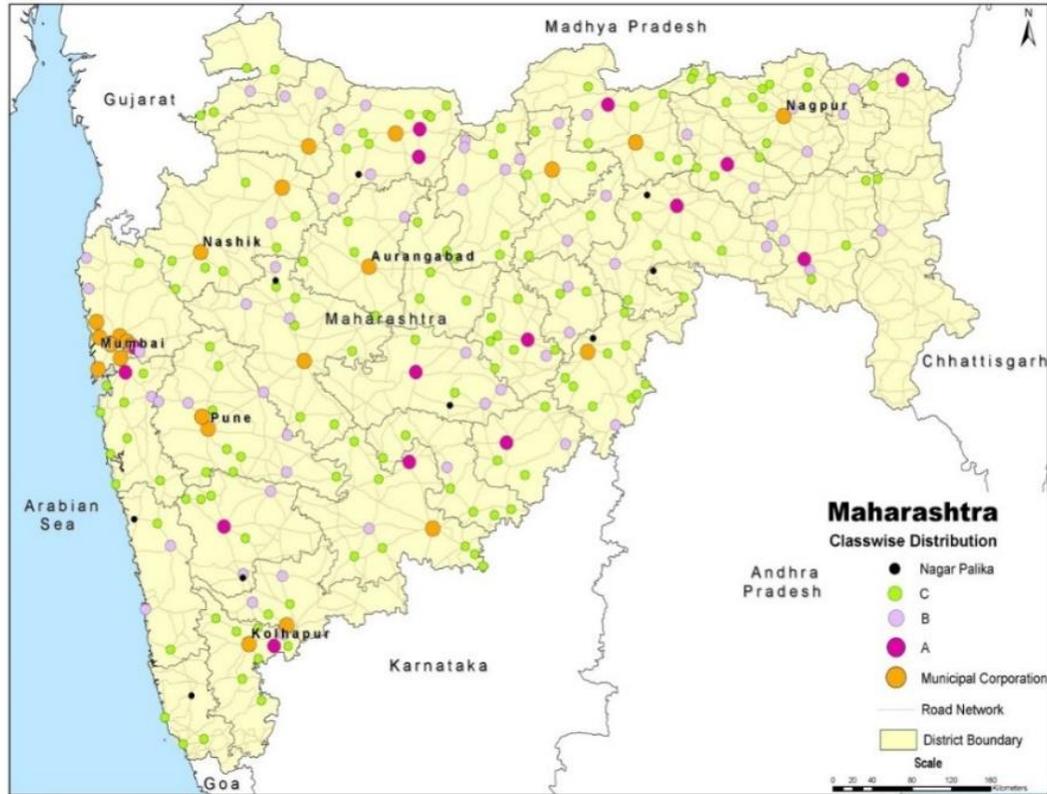
Center for Water and Sanitation (CWAS),
CRDF, CEPT University, India



FSM6 India's story of moving from ODF to ODF++ (focus on FSM)...

- India has achieved an **ambitious target of achieving urban India ODF** under SBM
- SBM focuses on “Beyond Toilet”; Rolled out **National FSSM policy, framework for ODF to ODF++**
- **A consortium of 30 national and international agencies** working under the **NFSSM Alliance** to improve urban sanitation outcomes in India by incorporating **FSSM** as an approach





60 million urban population

394 urban local governments

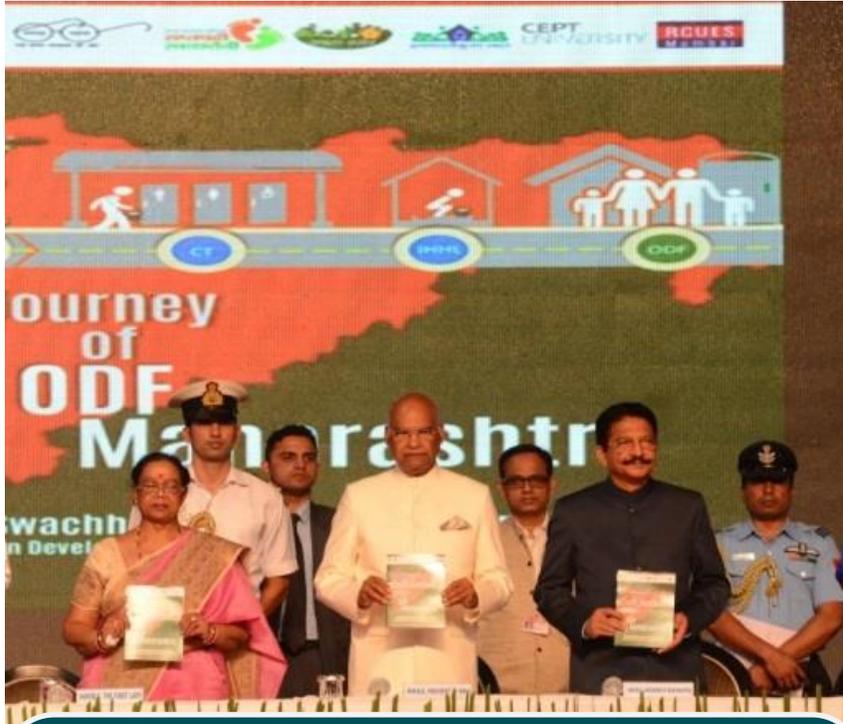
48% HAVE ACCESS TO **piped sewer** SYSTEM

52% USE **Onsite systems**

6 administrative divisions

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: PAS Project 2013-14 and 2014-15

Urban Maharashtra declared Open Defecation Free (ODF) in span of 3 years... ODF Sustainability charter emphasizes on state wide scaling of FSSM plan...



Urban Maharashtra was declared Open Defecation Free on 1st October 2017 in the presence of the Hon'ble President of India

सप्तपदी सातत्याची

Sustainability Charter

We are committed towards the vision of Swachh Bharat. We shall ensure ODF sustainability in Maharashtra by:

- #1. Achieving universal access to Individual Household Level Latrines (IHHL), which is a leading development priority.
- #2. Ensuring adequate, clean and reliable access to public/ community toilets across urban Maharashtra, wherever IHHL are not possible.
- #3. Ensuring ODF sustainability through effective participation of government, elected representatives, schools, donors, implementers, NGOs, SHGs, CBOs and the communities.
- #4. Continuing and institutionalizing rigorous ODF validation and monitoring process through "OD Watch" and "ODF sustainability tracker"
- #5. Auditing the performance of community/ public toilet and encouraging development of OD spots into usable public spaces.
- #6. Recognizing and awarding sustained performance
- #7. Moving towards ODF+/++ by ensuring effective collection and adequate treatment of human fecal waste

Chief Minister, Maharashtra

#7 Moving towards ODF++ by ensuring collection and adequate treatment of human fecal waste



Co-treatment at own/near by STP Cities - 71

Independent FSTP Cities - 323

**Category A cities:
ULBs with STPs**

**Category B cities:
Co-treatment at nearby STPs**

**Category C cities:
Independent FSTPs**

Co-treatment at own STP and accept
FS from nearby cities

Co-treatment at nearby STPs within
20 km

Remaining ULBs will treat septage at
FSTPs

Functional/proposed/under
construction STPs

Co-treat at nearby STPs

Independent FSTP

35 cities

36 cities

323 cities

71 ULBs are performing co-treatment and have achieved the ODF++ status . . .

Government resolution on co-treatment of Septage – Own STP and Cities within 20 km of a nearby STP city

स्वच्छ महाराष्ट्र अभियान (नागरी) अंतर्गत राज्यातील नागरी स्थानिक स्वराज्य संस्थांनी करावयाच्या मैला व्यवस्थापना बाबत.

महाराष्ट्र शासन
नगर विकास विभाग

शासन निर्णय क्रमांक: स्वमअ-२०१८/प्र.क्र.३५१/नवि-३४

हुतात्मा राजगुरु चौक, मादाम कामा मार्ग,

मंत्रालय, मुंबई-४०० ०३२

दिनांक: १५ डिसेंबर, २०१८.

- वाचा: १. शासन निर्णय, नगर विकास विभाग, क्रमांक स्वमअ २०१५/प्र.क्र.२३/नवि-३४, दिनांक १५ मे, २०१५
२. शासन परिपत्रक, नगर विकास विभाग, क्रमांक स्वमअ २०१७/प्र.क्र.३९/नवि-३४, दिनांक १७ मार्च, २०१७
३. शासन परिपत्रक, नगर विकास विभाग, क्रमांक स्वमअ २०१७/प्र.क्र.२६३/नवि-३४, दिनांक ३० डिसेंबर, २०१७

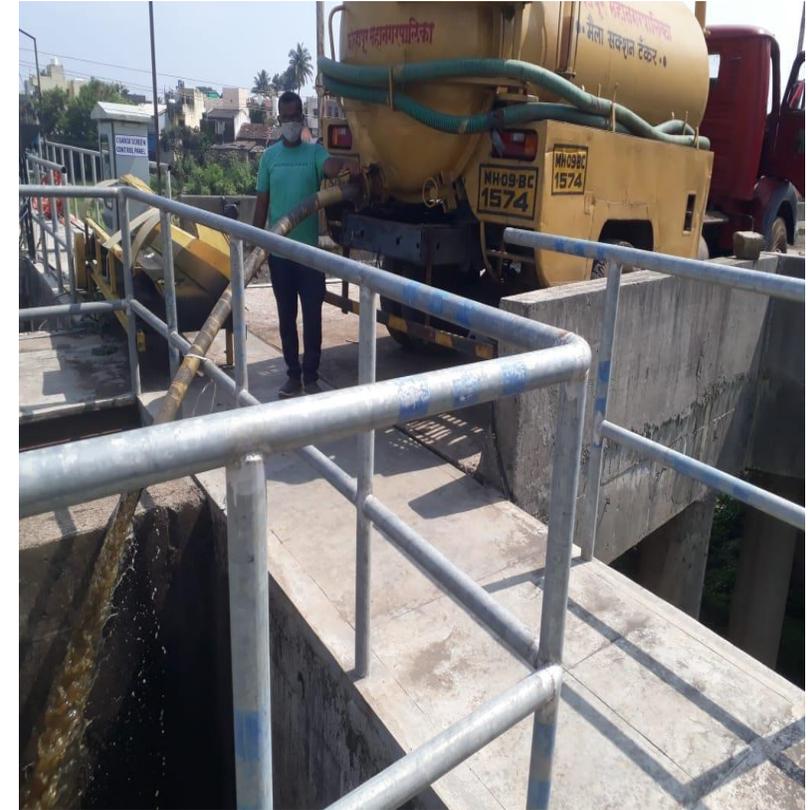
शासन निर्णय:

केंद्र शासनाच्या स्वच्छ भारत अभियानाच्या धर्तीवर राज्यामध्ये स्वच्छ महाराष्ट्र अभियानाची अंमलबजावणी सुरु आहे. या अभियानांतर्गत शहरांमधील ज्या कुटुंबांकडे शौचालयाची सुविधा नाही अशा कुटुंबियांना वैयक्तिक अथवा सामुदायीक शौचालयाची सुविधा उपलब्ध करून देवून शहरे "हागणदारी मक्त" करणे तसेच घनकचरा व्यवस्थापन निगम २०१६ नसार शाहरातील घनकचरा व्यवस्थापन करून

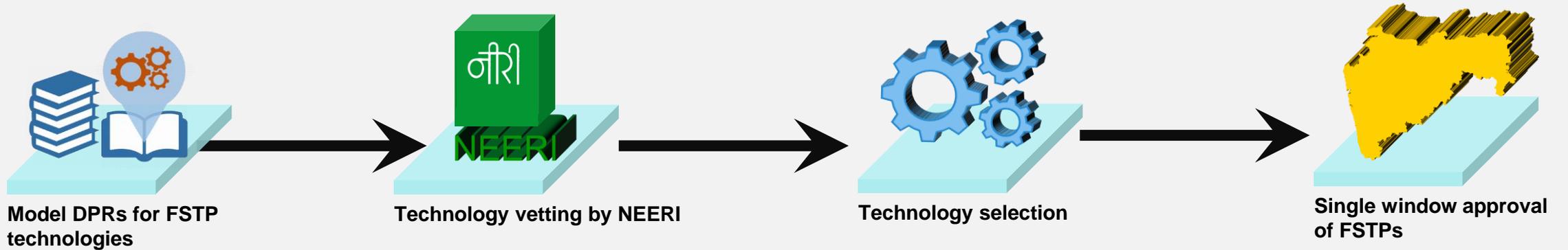
Institutionalize FS co-treatment through MoU between sending and receiving cities



Designated FS discharge point (at wet well at pumping station/STPs or maintenance hole)

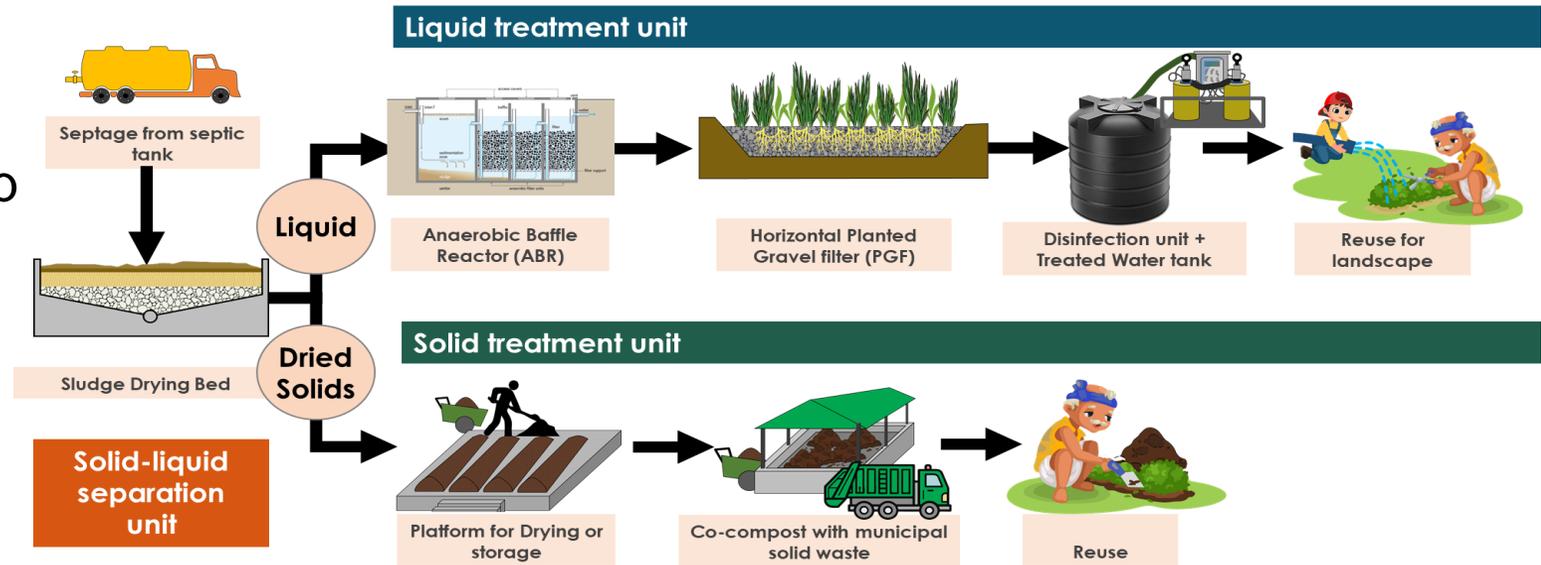


Maharashtra decided to set up independent FSTPs in all the remaining 300+ ULBs

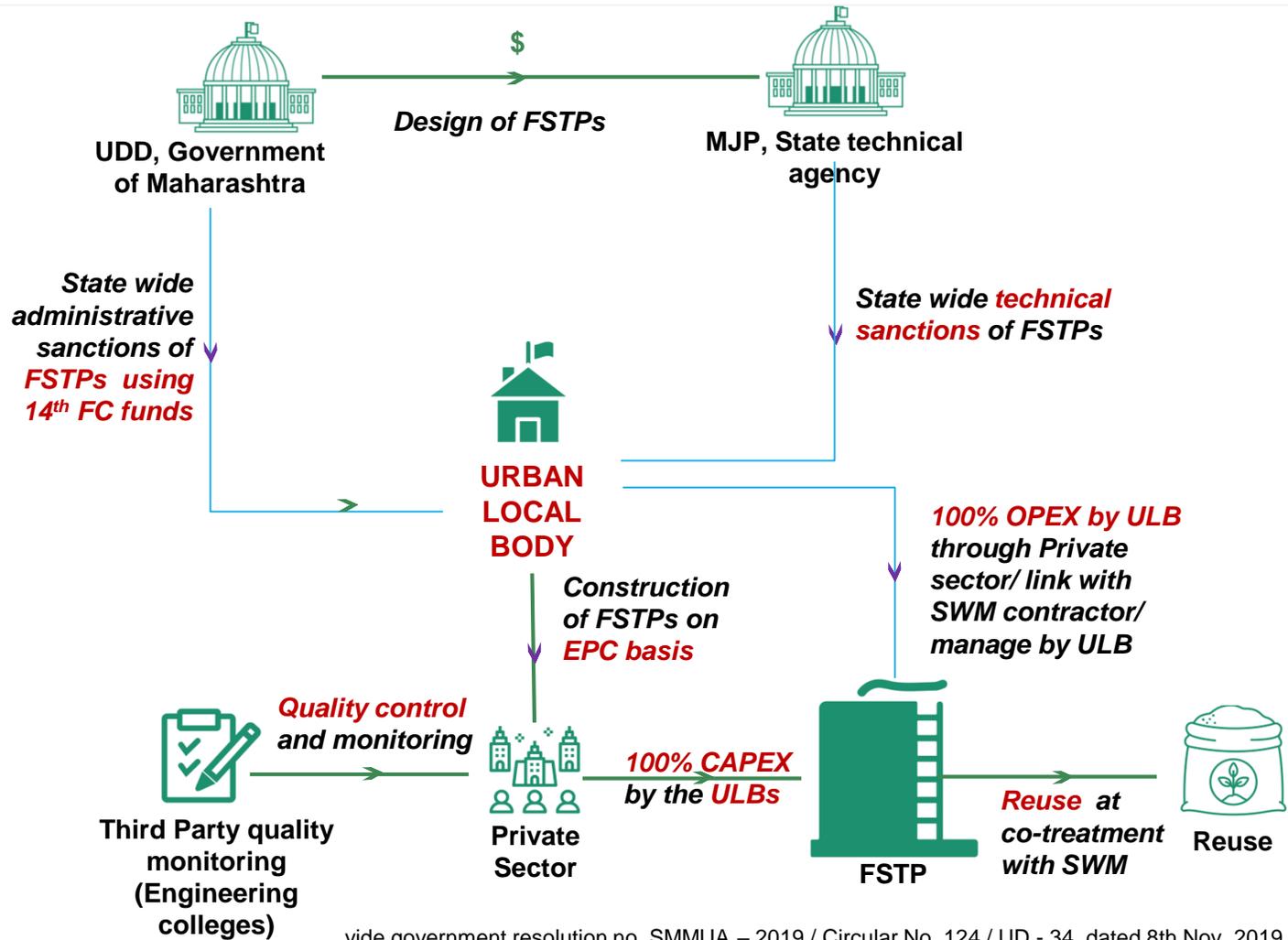


Adoption of **cost effective and less mechanized technology** for setting up faecal sludge treatment facilities

Cost of FSTPs in Maharashtra:
 ~ 2,000 – 4,000 USD per KLD



A single window approval process was adopted for fast track implementation of independent FSTPs at scale



Financing entities and revenue source

Capital cost: Provided by ULB's owned funds using 14th FC through support from state government

Operating cost: by municipalities using local taxes/ sanitation tax

Innovative or unique feature of project

1. Single window technical and administrative sanctions for implementation of FSTPs
2. Simple, easy to implementation of treatment infrastructure at scale
3. FSTPs co-located at SWM site

vide government resolution no. SMMUA – 2019 / Circular No. 124 / UD - 34, dated 8th Nov, 2019. Government resolution No: SMM – 2019 / Circular No. 124 / UD - 34, dated 8th Nov, 2019 – [Link](#)

Many benefits were achieved due to the single window approval process

- A single window approval helped ULBs to **curtail the complex and lengthy approval process**
- Pre-approved technical design, structural and hydraulic design templates of FSTP helped **ULBs to fast track implementation of FS treatment facilities.**
- Mandatory compliance of **third party technical audit** through the empanelled engineering/polytechnic college **ensured quality checks**



Several rounds of workshops to instruct and guide cities to **take up FSSM activities at scale in Mission mode**



3.1 What percentage of Households, Commercial Institutions, Establishments and Public area CUs/PTs are connected to a closed system such as sewerage, septic tank + soak pit, twin-pit system etc. (no open system/connection/flow/discharge)

Marks 75

This indicator will ascertain whether the city has adequate coverage of sewerage network or septic tanks

| Scheme of Marking | Marks |
|--|-------|
| >95 % Households/commercial establishment /CT&PT are connected to sewerage system or have septic tanks + Soak Pit/without Soak Pit | 75 |
| 80-94% households/commercial establishment / CT & PT with Sewerage/Septic tank/Soak Pit/without Soak Pit | 65 |
| 55-79% Households/commercial establishment / CT & PT with Sewerage/Septic tank/Soak Pit/without Soak Pit | 55 |
| 40 - 54% households/commercial establishment / CT & PT with Sewerage/Septic tank/Soak Pit/without Soak Pit | 30 |
| < 40% households/commercial establishment / CT & PT with Sewerage/Septic tank/Soak Pit/without Soak Pit | 0 |

Note: City to also confirm if areas where households are not connected to a closed system having sewerage system in place

REC Ruha Tavkar is presenting

Kadegaon Naga... and 36 more

1:41 PM

Definitions: ODF

| ODF | ODF+ | ODF++ | Water + |
|--|---|---|---|
| A city / ward can be notified/declared as ODF city/ ODF ward if, at any point of the day, not a single person is found defecating in the open. | Not a single person is found defecating and/or urinating in the open, and all community & public toilets are functional and well maintained | ODF+ AND Faecal sludge/septage and sewage is safely managed and treated, with no discharging and/or dumping of untreated faecal sludge/septage and sewage in drains/water bodies/open areas | All wastewater released from households, commercial establishments ,drains, nallahs etc. is treated to a satisfactory level before releasing the treated wastewater to the environment. |

UMESH GHADGE has left the meeting

will be now moving,towards achieving ODF++ Status

Meeting details

Turn on captions

Ruha Tavkar is presenting



(101)

Omkar Kane (You)

Ruha Tavkar

Amit Saraf

Ruha Tavkar

Others in the meeting (97)

Aasim Mansuri

FSTP O&M Guidelines

Septic Tank Desludging SOPs

Behaviour change communications

Quality assurance and quality control checks

Making cities ODF++

Manual for Operation and Maintenance of Faecal Sludge Treatment Plants

Swachh Maharashtra Mission, Urban

Standard Operating Procedures for Desludging of Septic Tanks

September 2020

Operation and maintenance Checklist

- General FSTP Operations:
 - Desludger and FSTP operator should be wearing Hand Gloves, Face Mask and Gum Boots during operations.



- Screening

- Daily cleaning of screens using broom and water- Cleaning of solids and deposited sludge



Regular progress review meetings from state/ division

Setting up technical call center; robust monitoring arrangements backed by regular progress review meeting at state/ division/ district level



Field visits



Before FSTP Construction



Weekly Follow-up with ULB through phone calls



Call support to resolve any issues faced or delays in the process

During FSTP Construction



Weekly Follow-up with ULB through phone calls for the completion of FSTPs as per designs provides



Call support to resolve any issues faced or delays in the process



Site visit for Quality check during FSTP construction



Prepared posters of Do's and Don'ts for construction

After FSTP Construction



Preparation of operation and maintenance manual for ULBs.



Third party institutes for Quality check of FSTP construction



Identifying a testing laboratory in proximity to the city



Call support to resolve any doubts and help identify a reuse plan

With the facilitation support from state, 140+ FSTPs are operational within span of one year and ~100 FSTPs are upcoming...



Dhule, Nashik

25+
FSTPs
Functional



Jan. 2020



Karjat, Konkan

40+
FSTPs
Functional



Jul. 2020



Vita, Pune

100+
FSTPs
Functional



Nov. 2020



Ahmednagar, Nashik

Nov. 2019

GR
Published
Sanctioning
311 FSTPs
in




Bhadrawati, Nagpur

Mar. 2020

30+
FSTPs
Functional




Karanja, Amravati

Sept. 2020

60+
FSTPs
Functional




Mahur, Aurangabad

Feb. 2021

140+
FSTPs
Functional



* National lockdown due to Covid-19 from March 2020 – June 2020

FSM6 Measures to strengthen FSSM service delivery . . .

- Along with the FSTPs, to sustain the inclusive FSSM services, the state is moving towards adopting scheduled desludging services
- Moving from Manhole to Machineholes - Safeguard sanitation workforces
- State level strategy for convergence of livelihood-sanitation – Promote engaging Women Self Help Groups FSSM/Sanitation activities
- Institutional Strengthening for sustained FSSM service delivery – Capacity building of laboratories for testing of faecal sludge and septage
- Institutionalise monitoring and third party audit for performance of FSTPs

- Recognition of FSM as mainstream municipal service impacting 30 million OSS dependent population in the state
- Immersed as 'model' state for scaling up FSM services - Mission led by urban local bodies, facilitated by state government
- Adoption of cost effective, simple and less mechanised helps amplification of faecal sludge treatment solutions at scale
- Single window approval to fast track implementation
- Scalable/ replicable to 7600+ towns of India and many small cities in South Asia and Africa are of similar size can also learn from Maharashtra's experience
- Recognition and influenced policy decisions at various level of government



Government of Maharashtra



BILL & MELINDA
GATES *foundation*



Thank you!



Connect us at:
Email: cwas@cept.ac.in
Website: www.cwas.org.in

About us

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



cwas.org.in
pas.org.in



cwas@cept.ac.in
tiny.cc/pasenews



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