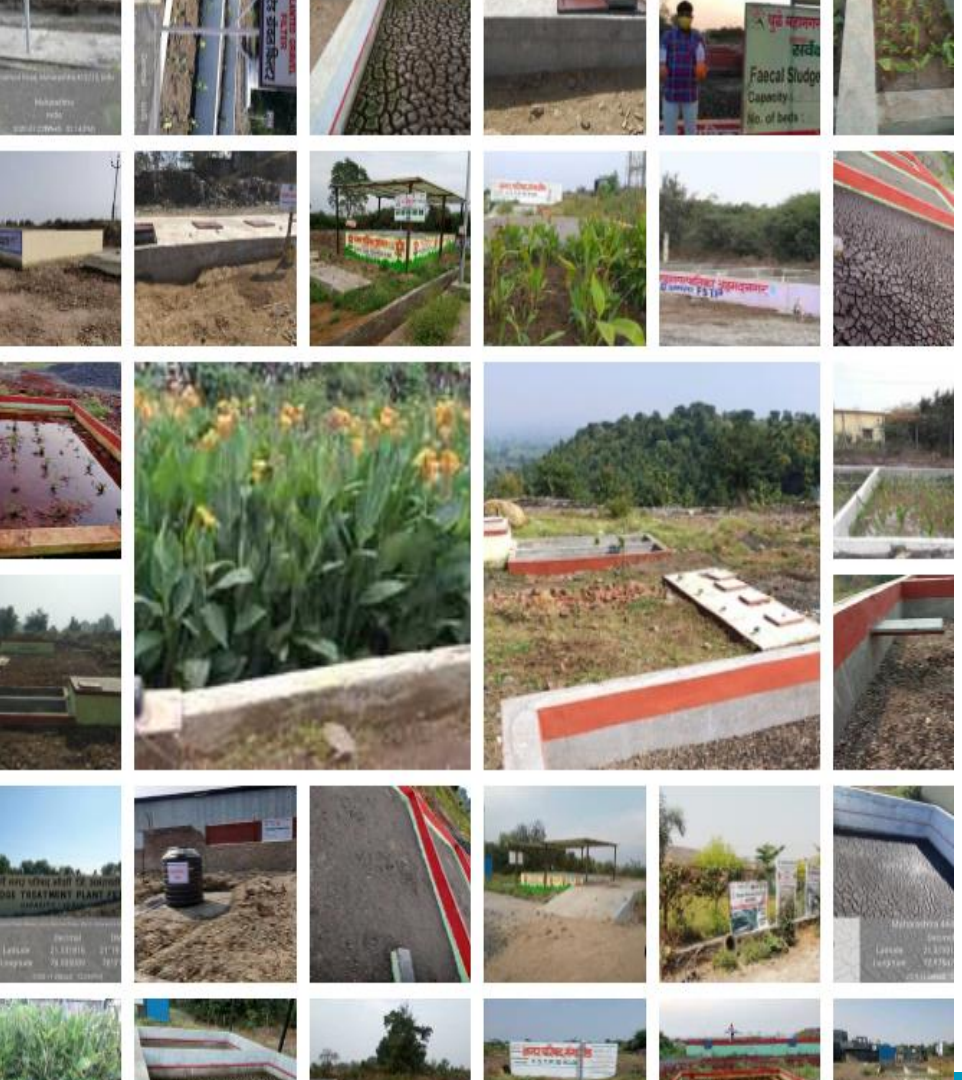


Swachh Bharat Mission 2.0 and Swachh Survekshan 2023 Divisional Level Workshop

Oct 2022

Government of Maharashtra

स्वच्छ भारत
एक कदम स्वच्छता की ओर

स्वच्छतेचे अष्टमार्ग

Swachh Bharat Mission 2.0

Under Swachh Bharat Mission 1.0

Maharashtra has been declared as ODF

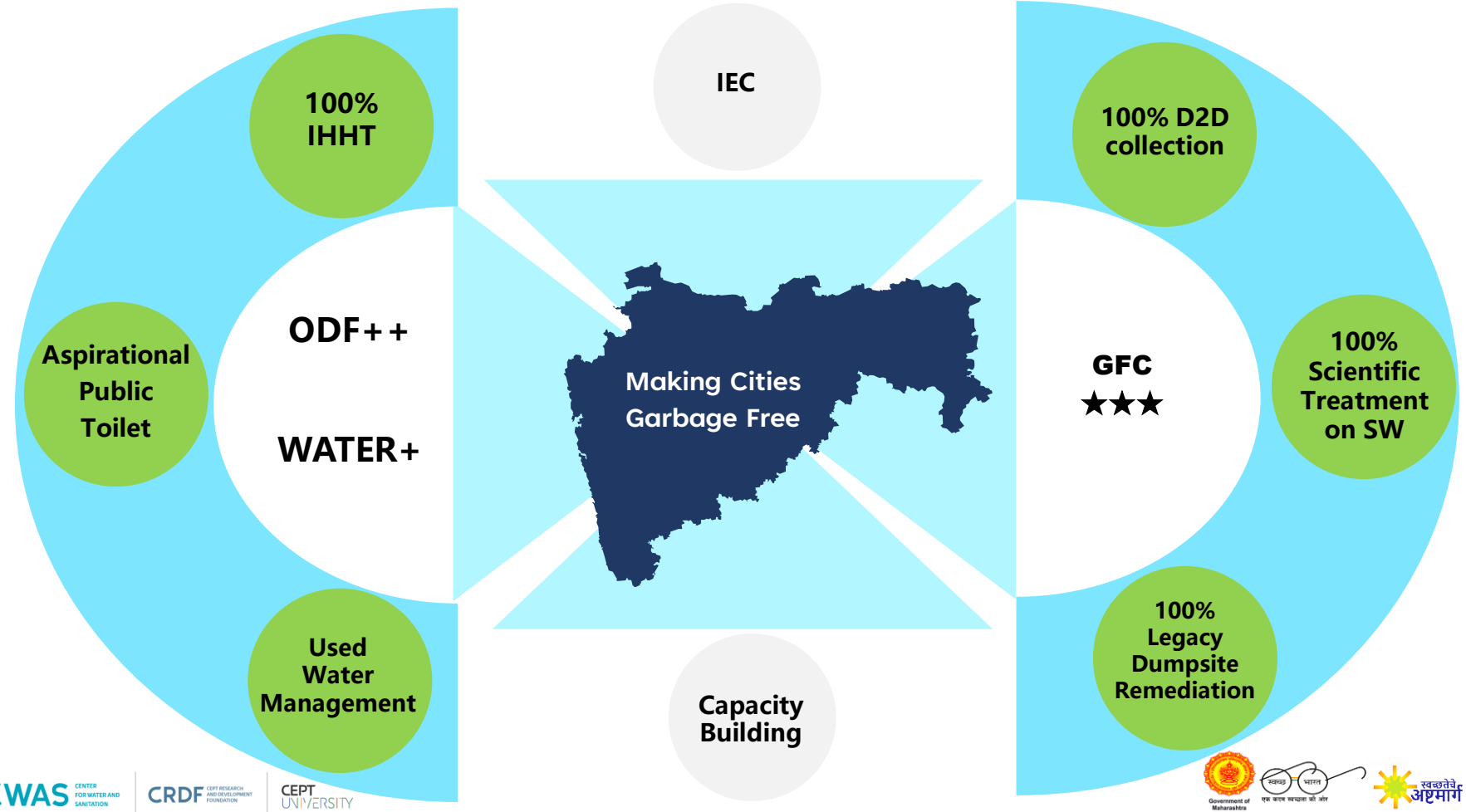
(Open Defecation Free) state in 2017

Cleanliness Resolution

Under Swachh Bharat Mission 2.0 need to make all cities Garbage Free in Maharashtra

All ULBs are now need to move towards ODF++ and Water+

OVERVIEW OF SBM-U 2.0 (Mission Period Oct 2021 to Oct 2026)



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Solid Waste Management

स्वच्छतेचे अष्टमार्ग

Sustainable Sanitation & Used Water Management

1. Segregation of garbage at source
2. 100% door to door solid waste collection
3. 100% scientific management of all waste, including scientific landfills
4. Legacy dumpsite remediation and conversion to green zones

5. **Achieving universal access to individual household toilets and move away from community toilet dependence**
6. **100% safe collection, transport, treatment and disposal of used water including faecal sludge with scheduled desludging**
7. **Ensure access to Public Toilet facilities in public places and aspirational public toilet at high footfall areas**
8. **Convergence to SBM-NULM and other schemes to achieving City Wide Inclusive Sanitation and Safai Mitra Surakshit Sheher**

Coverage and eligible components for funding under SBM 2.0

Module 1: Sustainable Sanitation

All statutory towns (412 ULBs)

Eligible components for central share

- Individual Household Toilets (IHHT)
- Community Toilets
- Aspirational Toilets for tourist/ religious destinations/ iconic cities/ places with high footfall
- Public Toilets
- Public Urinals

Module 2: Used Water Management

Statutory towns with <1 Lakh population (368 ULBs)

Eligible components for central share

- Sewage Treatment Plants (STPs)
- Interception and Diversion Drains (I&D)
- Desludging vehicles for scheduled desludging

State funded components

- Sewerage network / Strengthening of existing municipal drains/ settled sewers

Approach towards State City Sanitation Action Plan (CSAP)

Module 1: Sustainable Sanitation
For all statutory towns (412 ULBs)

Target-1
Moving towards Universal Access of Individual Household Latrines

- Moving towards **universal access to Individual Household Latrines (IHHL)**
- Moving **away** from **Community Toilets**
- Community toilets for **space constrained areas** only for **selected ULBs only**

Target-2
Aspirational Public Toilets and Public Urinals

- **Aspirational public toilets and urinals selected 55 cities**
- Public toilets and public urinals

Module 2: Used Water Management
Statutory towns with <1 Lakh population (368 ULBs)

100 percent safe collection, conveyance and treatment of used water and faecal waste

- **100 percent collection, conveyance and treatment** of used water
- **Setting up Sewerage Treatment Plants (STPs)**
- **Interceptor and Diversion drains network plan** as per the **population and class of ULBs**
- **Scheduled desludging** of septic tanks **through mechanized vacuum trucks**

Used water management
100% treatment of Used Water

Approach towards State City Sanitation Action Plan (CSAP)

Module 2: Used Water Management

Statutory towns with <1 Lakh population (368 ULBs)

Target: 100 percent safe collection, conveyance and treatment of used water and faecal waste

- **100 percent collection, conveyance and treatment** of used water
- **Setting up Sewerage Treatment Plants (STPs)**
- **Interceptor and Diversion drains network plan as per the population and class of ULBs**
- **Sewerage/settled sewer/strengthening of municipal drainage network provision through state funding**
- **Scheduled desludging** of septic tanks **through mechanized vacuum trucks**

Approach of Maharashtra for used water management

Cities with sewer network and STPs

- Ensure 100% coverage for sewerage network and Optimize utilization of Sewage Treatment Plant at 100% capacity

Cities with partial sewer network and STPs

- Either complete sewer network or in the remaining areas convert open drains to closed drains/ settled sewers/ Conduits for safe conveyance
- Scheduled desludging of septic tanks in unserved areas
- Optimize utilization of Sewage Treatment Plant at 100% capacity

Cities with no sewer networks but FSTPs

- Convert open drains to closed drains/ settled (solid free) sewers through state schemes/programme
- I & D network
- Scheduled desludging of septic tanks
- STP (co-treatment of FS)

Components for used water management

Sewage Treatment Plant

Interceptor and diversion drains

Desludging vehicle

Sewerage network

State Approach:

- **Less than 20k** population - Settled sewer/strengthening of municipal drains
- **20k to 50k** population - Mixed approach (50% underground sewer & 50% settled sewer/ strengthening of municipal drains
- **>50k** population - sewer network

UWM: Priority actions for ULBs to comply NGT 606/2018...

Cities with STPs
(With partial sewer network or 100% sewer network)

- **Priority 1: Cities must ensure 100% utilization of existing installed capacity of STP**
  - Focus on I&D and pumping station: Tapping used water from non-network areas and diverted to STP
  - Scheduled septic tank desludging in non-network areas
  - From sewerage network areas: Focus on property connections
- **Priority 2: Augmentation of STP capacity in case existing STP operational capacity is less than volume of used water generated in the city**

Cities without STPs
(With partial sewer network or no network)

- **Priority 1/1: Cities must set up an STP to treat 100% used water generated in the city**
  - Finalise the land for setting up STP
  - DPR approval for STP with 5 year of O&M plan + solar based operations
  - Scheduled septic tank desludging in non-network areas
- **Priority 1/2: Interceptor and diversion drain and pumping stations -** All the open discharge points to tap and diverted the used water to proposed STP
- **Priority 2: Network expansion, strengthening municipal drain, settled sewer network**

ULB level actions for used water management

- Assessment of existing usedwater disposal mechanism in city
- Assessment and mapping of existing municipal drains, sewerage network areas, areas with septic tank with soak pits etc.
- Mapping of outfall areas in the city
- Measurement of actual volume of usedwater discharge in open environment from each outfalls
- Identification of suitable land for setting up STPs and intermediate pumping station to ensure that gravity flow can be maintained
- Scheduled desludging implementation actions
- New Road improvement projects/ RCC road projects must include network and property connections provision for usedwater management

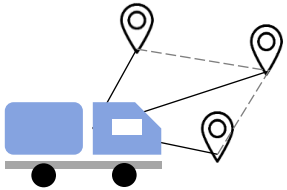
Conveyance and Interception and Diversion Drains for usedwater management

Assess the conveyance

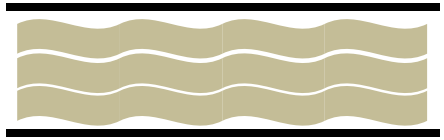
Conveyance of sewage, septage and greywater: Describes **transport of sewer, septage and greywater** from collection to the treatment site

Assess Available Infrastructure

For sewered areas- Assess the areas covered with sewer and areas not covered
For on-site sanitation- Capture details like - Number, type and size of septic tank emptier available

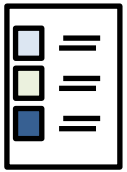


Coverage in different parts of the city



Extent of Service

How many properties covered with sewer network?
How many septic tanks are emptied in a year?
How many emptying tractors are used?



Monitoring and Complaint Redressal Systems

Capacity of Private Companies

For onsite sanitation- No. of septic tank emptiers
Cost per emptying visit
Registers maintained by them.

Grey water system

Assess Covered/ Uncovered drains
Disposal points

Prepare citywide drainage network maps that cover the following aspects

A. Length and width of drain –

a) Prepare a map in terms of availability of roadside drains and measure the total length of drainage network in the city.
b) Classify darins based on width of drains (Drains <75 cm, drains >75 cm)

B. Status of drains –

a) In terms of open or covered or closed drains or soak pits
b) Availability of drain/trench/gutter on one side or both side of the road.

C. Condition of drains –

a) In terms of broken/ruptured or good quality/functional drains
b) Cleanliness- clean or unclean drains
c) Cleaning frequency- daily or weekly or monthly or never cleaned
d) Cleaning organization- private or ULB
e) Method of cleaning- manual or mechanical.

Prepare citywide drainage network maps that cover the following aspects

D. Type of drains -

a)In terms of shape of drains- rectangular or circular along with its measurements in terms of l x b x h and diameter respectively
b) type of construction-in situ or precast
c) construction material- brick masonry or RCC or unlined

E. Flow direction -

a) Identify and plot the direction of usedwater flows in drains and mark major usedwater outfalls.
b) Map clogged and overflowing drains and identify the reasons for facing these issues.

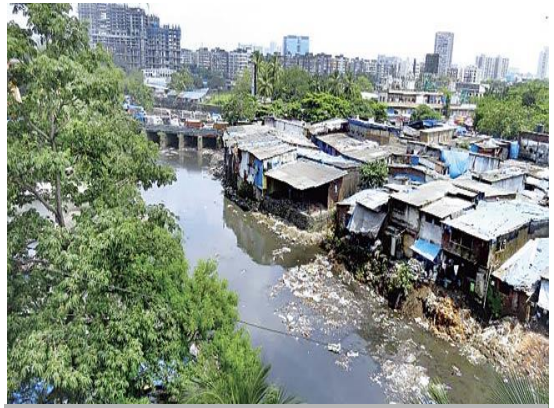
Photographic documentation of citywide drainage network

1. Collect geo-referenced photographs of property level used water outfalls

2. Capture 360° photographs of all drain outfalls into river/land and Collect georeferenced photographs and videos of well functional and poorly functional drains of the city based on on-site observations.

3. Major drainage junctions in the city.

Wastewater Outfalls



Drains outfall in River

Drainage Junctions

Covered Drains Cases in Maharashtra

Settled sewer network at Bhor

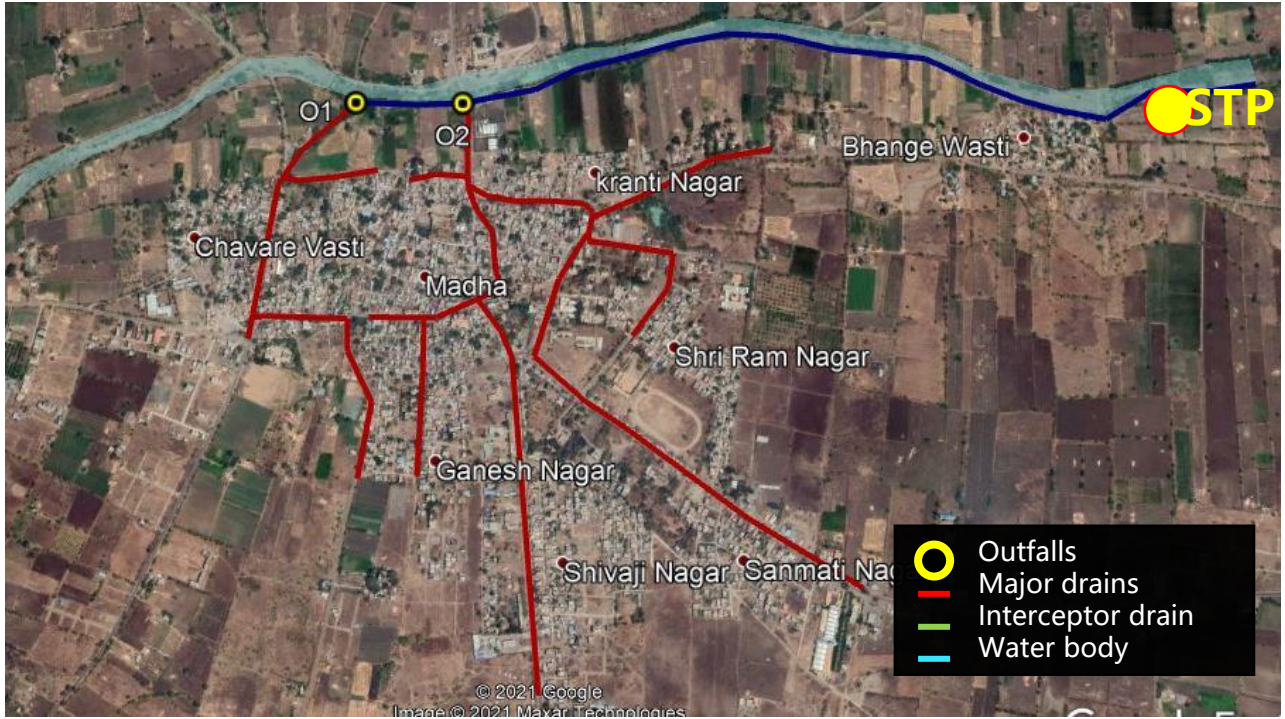
Covered Drain along the road - Sinnar

Covered Drain along the road - Wai

- Settled sewer / covered drain related projects are funded through state level grants on Dalit Basti and Galichh Basti Improvement grant or Road improvement grants
- Many cities have taken up projects on covered piped drain or box covered drain or cover drain

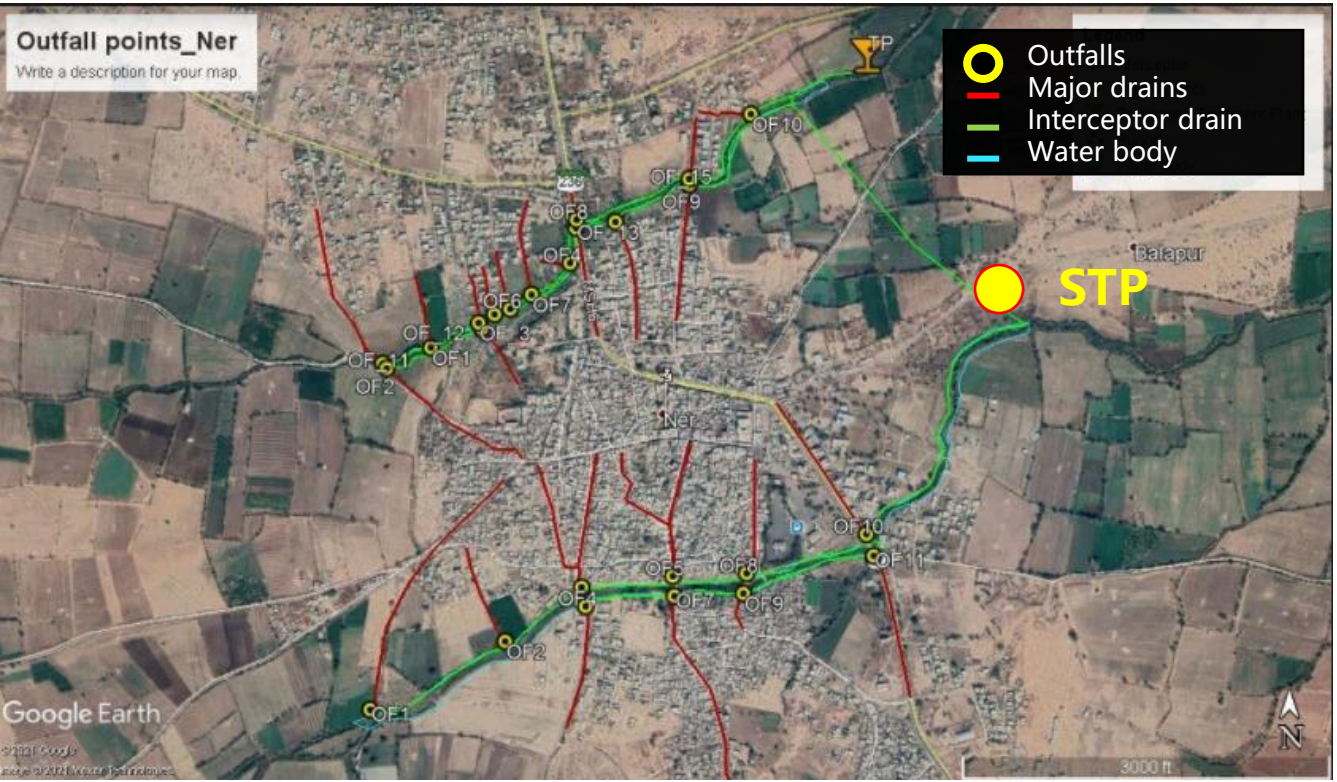
For used water management: Focus should be on I&D and setting up STPs for small and medium towns under SBM 2.0

Madha – Class NP - Pune



- Population- **12,575 (2019-20)**
- Proj. population- **16,924 (2035)**
- Proj.WW generated – **1.8 MLD**
- No. of outfalls- **02**
- Type of water body where WW is disposed- **River**
- Estimated length of interceptor drains-**500 mt**
- Availability of land for STP- **No**

I & D Mapping Ner – Class C - Amravati



- Population- **35,532 (2019-20)**
- Proj. population- **47,821 (2035)**
- Proj.WW generated- **5.2 MLD**
- No. of outfalls- **25**
- Type of water body where WW is disposed- **Nala or River.**
- Estimated length of interceptor drains-**6.64 Km**
- Availablity of land for STP- **No**

Usedwater Treatment and reuse

Encumbrance free land must be available with ULBs to avail the funds under SBM 2.0 and setting up an STP

Liquid waste treatment & Reuse

- There are four treatment technologies vetted and described by MJP in the District Schedule of Rates for treatment of liquid waste. These technologies are: -

1. **Extended Aeration Process**
2. **Primary and secondary treatment-with digesters, sludge drying beds etc.**
3. **Moving Media Bio Reactor (MMBR) / FAB**
4. **Cyclic Activated Sludge Process (CASP)**

- **Recently MoHUA has also published Ready Reckoner which involved various technologies information. ULBs can refer that for selection of technologies**

Source: Maharashtra Jeevan Pradhikaran (DSRs)

The treated used **water may be used by** ULB either for self-consumption, or reuse, for the following purposes:

1. Non-potable purposes like flushing toilets, gardening etc.

2. Agricultural purposes

3. Horticulture purposes

4. Industrial purposes

5. Municipal purposes like dust mitigation, road washing, construction activity, etc.

Efforts may be made to utilize as much used water as feasible, but not less than 20%.

UWM Treatment technologies

Technology	Land requirement	Capital cost	O&M cost	Electricity required.	Effluent Quality	
	Ha/ MLD	INR lakh / MLD	INR lakh / MLD	kWh/ ML treated	BOD, mg/ lit	TSS/ SS, mg/ lit
Nature Based Technologies						
Waste Stabilization Pond (WSP)	0.5 - 1.0	30 –60	0.6 –2.5	negligible	15-50	SS: 75-125
Root Zone Aeration/ Contructed Wetland	0.6-1.5	30-150	1.2-3.0	negligible	20-30	SS: 60-90
Mechanised Treatment Technologies						
Extended Aeration (EA)	0.15 - 0.25	90-200	7.0-12.0	180 - 225	20-30	SS: 50-100
Aerated Lagoon (AL)	0.27 – 0.4	40-60	1.5-3.0	15-20	25-50	SS: 40-150
Sequencing Batch Reactors (SBR)	0.10 - 0.15	150-300	10.0-20.0	150 - 200	<5	TSS< 10
Moving Bed Biofilm Reactor (MBBR)	0.04 - 0.05	170 - 230	8.0-12.0	200 - 250	<10	TSS: <20
Activated Sludge Process (ASP)	0.15 - 0.25	80 - 170	6.0-10.0	180 - 225	20-30	SS: 20-50
Trickling Filter (TF)	0.25-0.50	50-80	2.0-5.0	150-180	25-30	---
Up flow Anaerobic Sludge Blanket (UASB)	0.2 - 0.3	40-60	2.0 -3.5	10.0-15.0	70-100	TSS: 75-100
Onsite treatment Technologies						
Decentralised Treatment System (DTS/DEWATS)	0.13 – 0.14	80 - 200	2.0 – 2.5	negligible	<30	TSS <10

Roadmap for achieving 100% sewage treatment by 2026 for ULBs having less than 1 lakh population

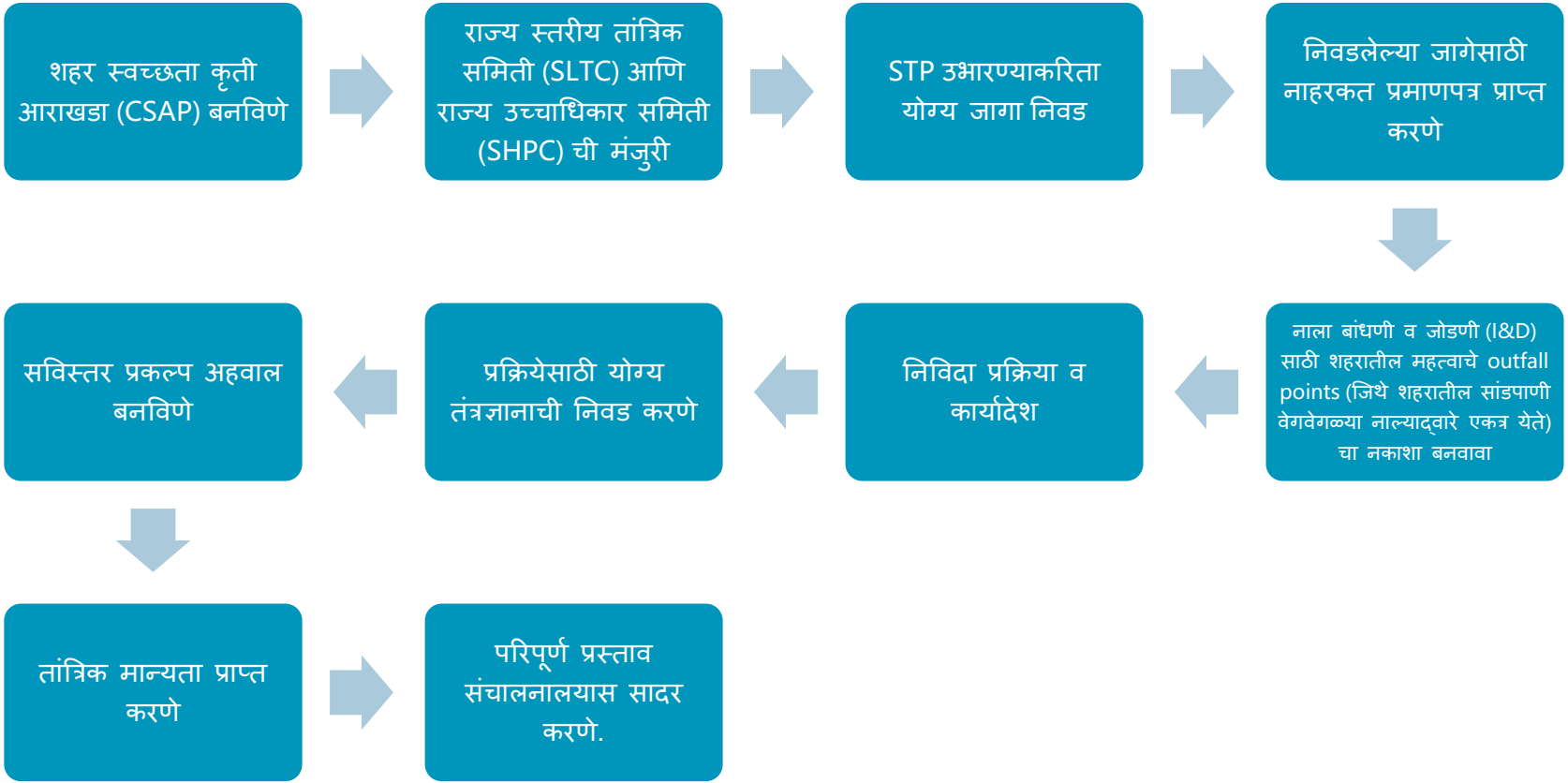
Details	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Roles
Identification of land for setting up STPs*							Chief Officer
Obtaining necessary approvals and procurement of land for setting up STPs **							Consultant
Selection of technical consultants for I&D and STP design							City/WS Engineer
Preparation of Detailed project report for I&D and STPs including technical sanction and administrative sanction.							Chief Officer
Float the tenders for I&D and setting up STPs and I&D							City/WS Engineer
Issuance of work order by ULBs for setting up STPs and I&D							Tender officer

Actions to be taken to resolve common challenges

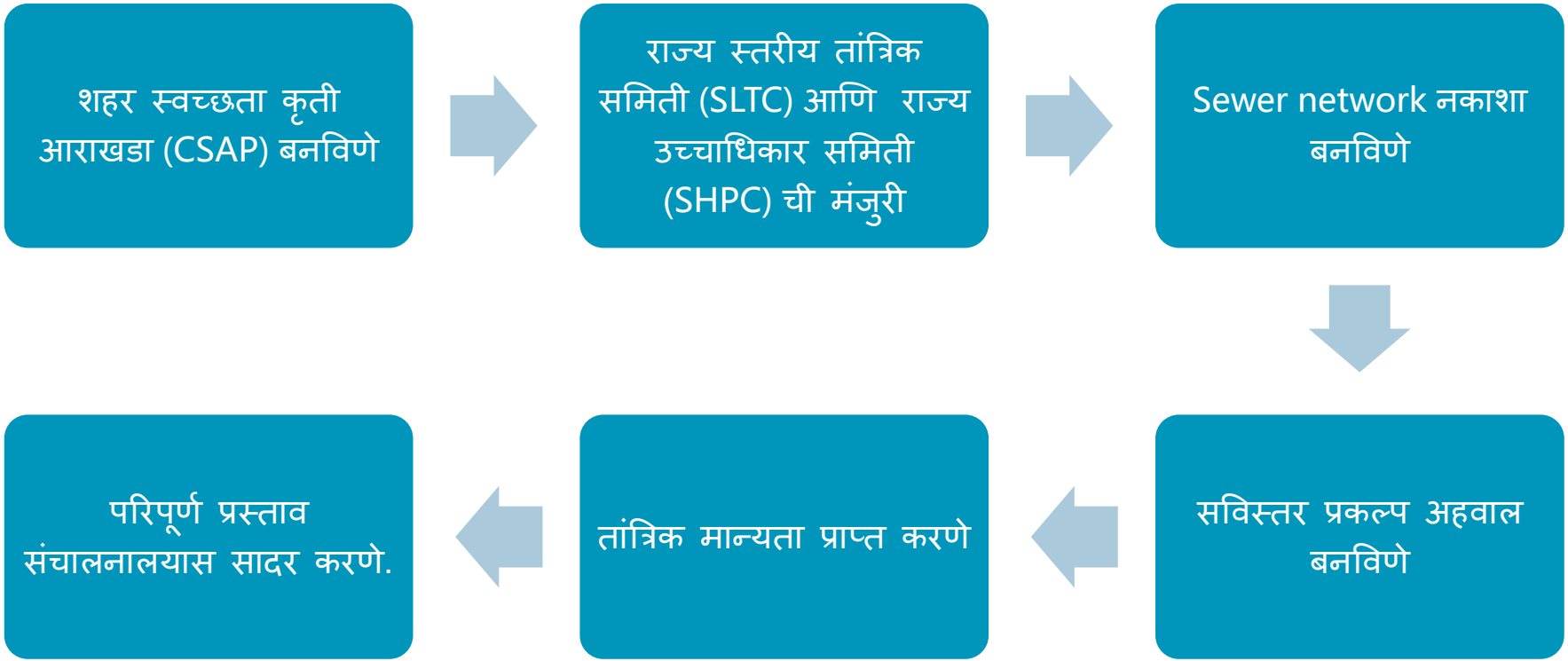
* Non-availability of land for setting up STP is the major barrier. The financing for procurement of land is also one of the major barrier.

** Special committee for approval of NoC for land and land procurement. CM War room.

STP & (I & D) प्रस्ताव -


शहर स्वच्छता कृती आराखडा (CSAP) बनविणे
राज्य स्तरीय तांत्रिक समिती (SLTC) आणि राज्य उच्चाधिकार समिती (SHPC) ची मंजुरी
STP उभारण्याकरिता योग्य जागा निवड
निवडलेल्या जागेसाठी नाहरकत प्रमाणपत्र प्राप्त करणे
नाला बांधणी व जोडणी (I&D) साठी शहरातील महत्वाचे outfall points (जिथे शहरातील सांडपाणी वेगवेगळ्या नाल्याद्वारे एकत्र येते) चा नकाशा बनवावा
निविदा प्रक्रिया व कार्यादेश
प्रक्रियेसाठी योग्य तंत्रज्ञानाची निवड करणे
सविस्तर प्रकल्प अहवाल बनविणे
तांत्रिक मान्यता प्राप्त करणे
परिपूर्ण प्रस्ताव संचालनालयास सादर करणे.

Sewer Network प्रस्ताव



Implementation of project after DPR sanction -

निविदा प्रक्रिया व कार्यादेश

सविस्तर प्रकल्प अहवाल प्रमाणे कामकाज पूर्ण करावे.

करारनामा करावा व त्यामध्ये ५ वर्षासाठी ठेकेदाराला O & M करण्यासाठी द्यावे.

५ वर्षाचा करारनामा झालेनंतर ULB ने प्रकल्पाची स्थिती तपासून जबाबदारी घ्यावी.

५ वर्षासाठी ठेकेदाराला O & M करण्यासाठी ULB ने स्वतः त्यासाठी खर्च करावे

Fund Release - Used Water Management

The 1st instalment of 40% of allotted Central share from MoHUA will be released to the State/ UT for a ULB if following additional conditions are satisfied:

- Adoption of SNA and PFMS
- RSA
- CSAP Submission
- Encumbrances free land for STP

The 2nd instalment of 40% of allotted Central share from MoHUA will be released to the State/ UT for a ULB if following additional conditions are satisfied:

- Functional ESRU
- UC Submitted 75% of 1st installment of central and state share
- Portion of O& M recovered through user charges
- Certified ODF+
- Geotagged photos , Documentary evidences
- 20% Physical progress of conveyance system

The 3rd instalment of 20% of allotted Central share from MoHUA will be released to the State/ UT for a ULB if following additional conditions are satisfied:

- UC Submitted 75% of 2nd installment of central and state share
- 80% Physical progress of conveyance

Sustainable sanitation: Universal coverage of IHHT and Access to public toilet and public urinals at public places

Objective of this to achieve universal coverage of IHHT through SBM 2.0

Individual Household Latrine

- **All households should have IHHL** including new migrated HHs, HHs with previous access to community toilets (CT), HHs with insanitary latrines
- **Tenure security issues** are to be **de-linked from benefits**.
- IHHL to be built in tandem with **municipal water supply connection**
- **Toilet application to be made on UMANG App or mSBM app**
- **Aadhar Seeding is mandatory for toilet application**
- **CTs to be provided in case of land constraints areas only** with seats earmarked for selected families to increase the sense of ownership

Steps for IHHL requirement identifications

Selection of Beneficiary Household shall be as per following guiding principles:

- New independent households
- All new households who might have migrated to urban areas
- All households with previous access to community toilets
- All households with insanitary latrines

- **ULBs to conduct gap analysis to assess Households without individual household toilet at home including finding the reasons for not having toilets at home – Timeline 1 month**
- **ULBs to start initiating demand mobilization for new IHHL under SBM 2.0**
- Family received fund in any earlier scheme would not be eligible to receive funds for toilets again

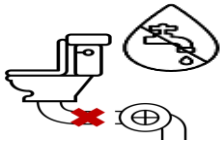
Key main constraints are commonly faced in constructing individual household toilets under SBM 1.0

Complex toilet approval process and Lack of documentation: land related document, tenants etc.

Space constraints in high density areas with small dwellings or **Lack of space for septic tank construction**

Behavioral issues – Preference for community toilet facilities, lack of perceived need, hesitation to build a toilet inside the house

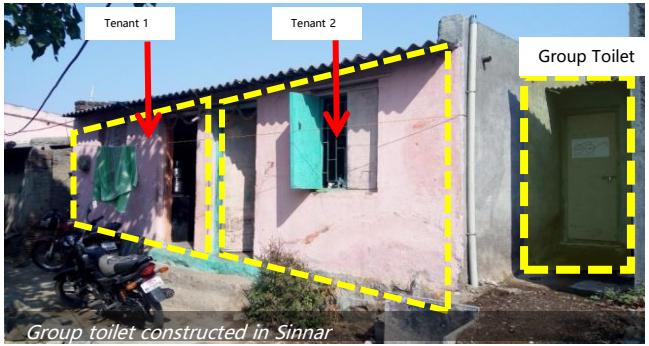
Lack of funds, as the SBM incentive is often not adequate for urban poor with high construction costs



Other infrastructural issues such as inability to get a sewerage connection especially in dense settlements, or lack of water supply

Problems in constructing IHHL

- Space constraints (IHHL/containment)
- Financial constraint
- Infrastructural constraints



Group toilet constructed in Sinnar


Group toilet in Vita

Alternate solutions for IHHL

One home one toilet in slums – Pune

Group toilets

Community toilet seat: Lock and key mechanism

Community septic tank


Toilet restricted by lock-key system in Kanjurmarg slum

Case Kanjurmarg slum where toilet block is shared by group of households by key-lock system

A Group Toilet model and shared septic tank model to address lack of space for construction of individual household toilets

Community toilet convert to lock and key model at Gadhinglaj Municipal Council (GMC)

Group toilets in Gadhinglaj ,Maharashtra

Community septic tank by the Khopoli Municipal Council (KMC)

- To tackle the problems of space and funds, KMC developed an innovative solution to construct a group septic tank for a number of individual toilets in close vicinity.
- Group septic tank of appropriate size was designed to cater to 25-30 household toilets.

Shared Septic Tank

Khopoli - Shared septic tank in connected to 25-30 toilets

Individual household toilets in Khopoli connected to shared septic tanks

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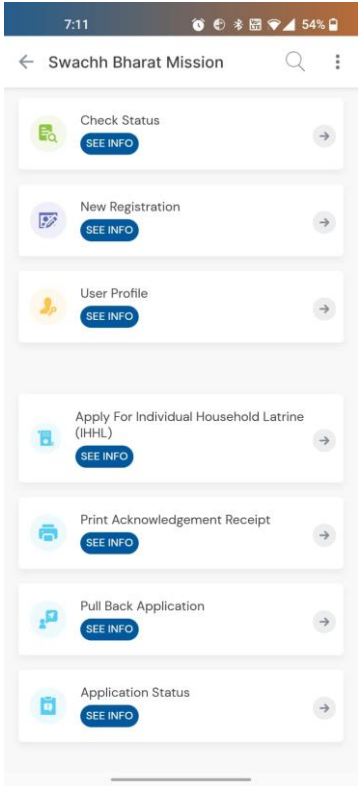
ULB level actions to simplify toilet application process

- **As per SBM 2.0 guidelines and state GR, toilet application approval is delinked with land tenure.**
- ULB should simplify toilet application procedure by relaxing need for land records. For this, ULB may prepare the NOC format and take undertaking that **“This toilet approval/ toilet construction is not deemed legal or its occupant does not get any legal authorization due to the No Objection Certificate.”**
- ULB may pass the resolution that property owners must construct the toilet facilities for properties that are rented out. It may direct that owner should issue the NOC for tenants to get benefits of toilet construction under SBM 2.0
- ULB should appoint nodal officer for fast-track toilet application procedure



Community toilet and Public toilets, Public Urinals

ULBs should ensure that:

- Assessment of dependency on CTs. **As per the current dependency, ULB should plan to convert CT seats into group toilets.**
- Floating population dependent on **PTs has access** to one within a maximum distance of **500 metres**
- **Every public place** has at least one PT/ Urinal available within 500 metre distance, and that the facilities are kept clean, functional and open for public use.
- ULBs need to identify all **possible Open Urination vulnerable points** (yellow spots) (“OD/ OU hot spots”) and make provisions for **adequate numbers of PTs and Urinals** at easily accessible distances, which in turn will lead to elimination of hotspots.

Timeline and Actionable points - IHHL

Actions	Timeline*								Responsible Person/ Authority
	Oct 2022	Nov 2022	Dec 2022	Jan 2023	Feb 2023	March 2023	April 2023	May 2023	
Survey for identification of beneficiary & Gap analysis									City engineer & SI, NULM
Shortlisting beneficiary with space constraint or financial issue									City engineer & SI
Publication of Notification in news paper for inviting applications for IHHL									DMC/CO/SI/City engineer
Awareness through flyers									City engineer/SI
Scrutiny and approval of applications									City engineer
Release of 1st installment									Commissioner/CO
Achievement needed to avail 2nd installment									City engineer
Release of 2nd installment									Commissioner/CO

* Timeline is tentative, it will change subject to local conditions

Swachh Survekshan - 2023

All ULBs with less than 1 lac Population to achieve ODF++ city status - Aligning with SBM 2.0 guidelines

✓ ODF++ Protocols

- ODF+ conditions to be met
- All toilets are connected to safe disposal systems
- Functional feacal sludge treatment plant (either co-treatment at STP or FSTP)
- 25% best CT-PT and **Urinals**

✓ **All the septic tanks needs to connected to soak pits**

✓ **Scheduled mechanical desludging at an interval of 3 years.**

✓ **Mechanised cleaning of septic tanks & sewers**

✓ **Sustainable financing mechanism**

✓ **Mandatory helpline number as 14420 or any other complain mechanism in place**

✓ **All districts/Corporations have to set up functional SRU along with RSA notified by State**

ULBs with Own STP

ULBs co treating at nearby STP

ULB with Own FSTP

ODF++ Protocol Revision

Existing Condition(s)

- Various verification parameters for on-ground assessments like for septic tank and soak-pit, sewage collection and treatment etc. were although defined in the protocol but their enforcement lacked true spirit
- Emphasis on having soak pits with septic tank was not verified for according ODF++ status
- For ODF++ emphasis was only on having FSTP or co-treatment at STP
- No emphasis to have mechanized cleaning of septic tanks and sewers
- All toilets to be connected to a sewerage network or onsite containment systems

Modified Condition(s)

- Mandatory to inspect septic tank and soak-pit etc
- All toilets connected to onsite containment systems/ septic tank and effluent before disposal
- Mechanized cleaning of septic tanks & sewerage systems / machinehole etc.
- 14420 helpline number/ other feedback mechanisms mandatory
- RSA and SRU notified
- ODF++ verification matrix developed

ODF++ Scoring Matrix

S.No.	Parameters	Max Marks	Min. Qualifying**
1	Safe discharge of sewage including septage from CT / PT / !NHL	50	35
2	Adequate treatment opacity of the sewage / septage treatment plant (70% of current population)	50	25
3	At least 1 / 3 septic tanks cleaned annually	25	15
4	Mechanized cleaning of sewer and septic tanks	50	25
5	All desludging vacuum tank operators are registered and licensed	15	15
6	Sufficient capacity of desludging vehicles and workforce	40	10
7	City has issued and notified fines against persons / desludging operators dumping untreated feacal sludge	10	10
8	Sustainable financing mechanism	20	10
9	Mandatory for city to have 14420 number to be operationalized / or other feedback mechanims	15	15
10	Functional SRU, along with RSA notified by State as per the guidelines issued by MoHUA	10	5
Total		285	165

To be certified as ODF++ a ULB, should achieve aggregate 200 marks while scoring minimum qualifying marks for each parameter.

50% ULBs with less than 1 lac Population to achieve Water+ city status - aligning with SBM 2.0 guidelines

✓ Water + Protocols

- ODF++ conditions to be met
- ULBs with STP and sewerage network
- Min.25% HH connected to sewer network
- Min.75% mechanised equipment for desludging, jetting machines and PPE available
- Min 20% reuse of treated water
- Min 50% O & M cost recovered
- Min.75% requirement of Min, 75% Municipal drain receiving sullage should be well maintained & connected to STP
- Min. 75% drains should have Bar screen at strategic locations
- Availability of RSA & SRU as per MoHUA Guidelines
- Availability of Complaint Redressal system such as 14420, Swachta app etc.

Partial Sewer Network

✓ All the septic tanks needs to connected to soak pits
✓ Scheduled mechanical desludging at an interval of 3 years.

ULBs with STP & Sewer Network

Water Plus Protocols Revisions

Existing Condition(s)

- Qualifying criteria for Water+ is reduced:
  - >50% HHs is connected to sewer network
  - Out of the remaining 30% HHs (mostly fringe areas) more than 20% (overall on city basis more than 90% i.e. >20% + 70% sewered) are connected either with septic tank with soak pit (STS) or Twin-pit latrine (TPL) for blackwater and also greywater is safety discharged into individual or community soak pit / trenches or channelized through open drains to STPs or sewered

Modified Condition(s)

- Qualifying criteria for Water+ is reduced:
  - 25% HHs is connected to sewer network
  - The discharge of sewage from the remaining households will be either managed onsite through a septic tank system including soak pits or in case the discharge flows into open drains, the same will be intercepted and diverted to a STP before being released into a water body.
  - For towns less than 20,000 population sewer network condition is exempted

Water+ Scoring Matrix

S.No.	Parameters	Max Marks	Min. Qualifying**
1	Adequate treatment capacity of STP and operational efficiency	50	35
2	Safe cleaning of Sewer and Septic tanks through mechanised equipment and availability of PPEs and availability of RSA and SRU	40	30
3	Sufficient capacity of desludging vehicles and jetting machines for cleaning of septic tanks with soak pits and sewers respectively in the city	10	5
4	Safe discharge of sewage including septage from CT / PT / IHHL	50	35
5	Re-use of treated water	15	5
6	Municipal drains receiving sullage be well maintained and Bar Screens / trash arrester are placed at strategic locations	30	20
7	100 % Operations and Maintenance costs of sewer networks / STPs / FSTPs are being recovered through dedicated revenue streams / users	40	20
8	Complaint mechanism such as 14420, Swachhata App etc. available and complaint redressal status available	15	10
Total		250	160

To be certified as Water a ULB, should achieve aggregate 175 marks while scoring minimum qualifying marks for each parameter.

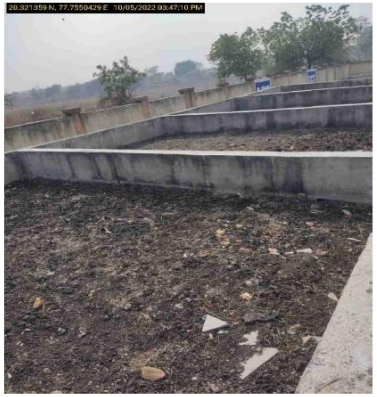
Failure reasons in ODF Assessment (SS22)

ODF+	ODF++	Water Plus
CT/PTs are not well maintained, Lack of facilities in CT/PT	CT/PTs are not well maintained, Lack of facilities in CT/PT	CT/PTs are not well maintained, Lack of facilities in CT/PT
Open defecation in the city	FSTP/STP is not in operational condition	STP is not in operational condition
	Discharge of blackwater in water bodies	Properties are not connected to sewer network
		Improper documentation

Reasons for failure

Bus stand

Treatment Plant:-



Incinerator not functional

Toilet floor is not clean

Door was broken

Safe disposal system not functional

Urinal Pot not Functional

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Reasons for failure

PPE Kit not available
smashanbhumi road

Urinal point not functional

Feedback and complaint mechanism not available

Toilet is not clean

Bolting Arrangements was not Functional

Scheduled Desludging for septage management

Need for moving towards scheduled desludging

Emptying when the tank is full

Unsafe handling of septage

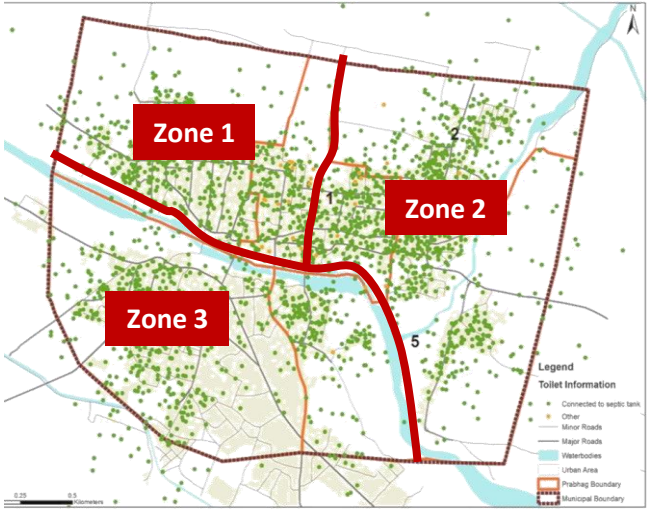
Informal Private sector

- Currently, cleaning cycle greater than 8-10 years against CPHEEO recommended cycle of 2-3 years
- Due to infrequent cleaning, septage begins to solidify in tanks and septic tank fills up, faecal matter along with effluents is released into the drains

Planning for Scheduled desludging

All septic tanks in a city are identified and desludged once during a fixed cycle of 3 years and mandatory desludging is done

- **Zones of Emptying cycle -** The city is divided into zones as per the citywide database on toilets and septic tanks
- **Infrastructure requirement -** Number and capacity of vehicles required for desludging operations is decided based on the need
- **Route planning -** Deciding the truck movement within the zone
- **Levying of sanitation charges/Taxes** - levying of sanitation tax as a percentage of property tax or flat sanitation tax as a part of property tax system



Possible modalities for implementing scheduled desludging

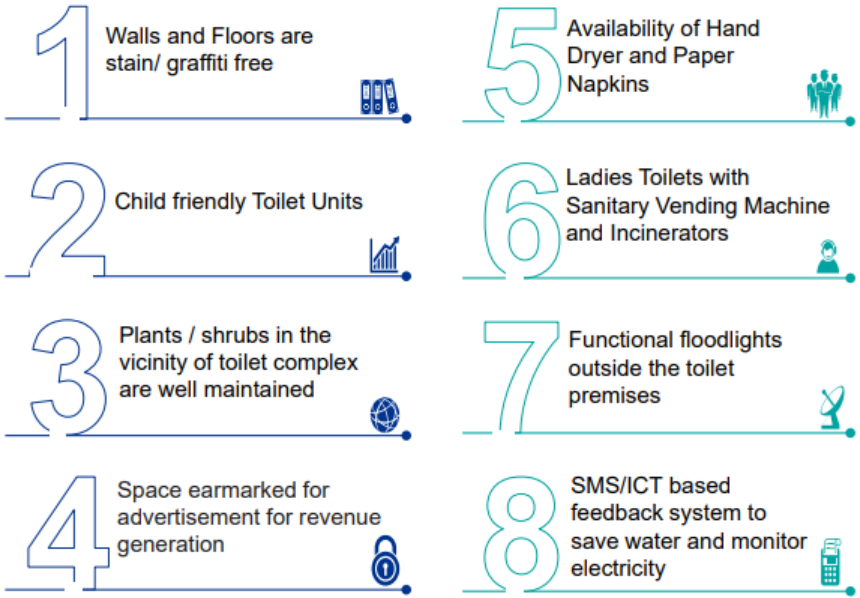
- ULB lead model- Capex of trucks and Opex by ULB
- Involving Private operator with Performance linked payments- Capex of truck and
- Opex by private operator
- Private Sector Participation model- Capex of trucks by ULB and Opex by private operator. Integrated scheduled desludging and FSTP O&M model. Involving SHGs in desludging activities

Cities have started Schedule desludging – Wai, Sinnar, Kolhapur etc.

Aspirational Public Toilets

Aspirational Public Toilets for Urban Maharashtra

Features of Aspirational Toilets as per SBM Guidelines *



* Source: Page 7/9 of Letter No. 15/3/2018-SBM-II-Part(1) dated Nov 2018: Protocol for ODF+ and ODF++ for ULBs/Cities

Short term target

Impact

- Create Positive impression on overseas delegates from 250 visiting cities of G20 nations

Proposed Actions:

- Install 50-60 Toilet blocks (200-300 seats) in selected cities of Maharashtra in 5 months by Mid Feb 2023

Long term target

Impact

- Create High Quality Public Places resulting increase in tourists footfalls

Proposed Actions:

- 400+ Toilet blocks in selected 55 cities of Maharashtra (As per SBM Maharashtra)
- To be developed through PPP after careful location analysis and Detailed Feasibility Studies

Maharashtra's Broad Principles for Aspirational Toilets

Design for Aspirational toilets can be linked with –

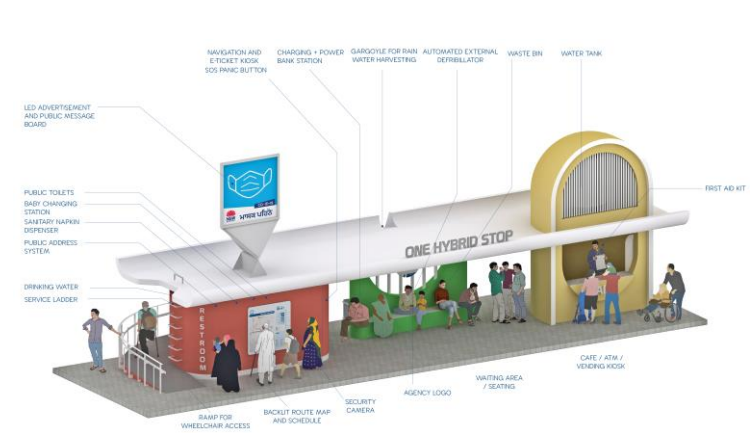
- Pharmacy
- EV charge
- Nursery
- Landscape Gardens
- Library
- Gaming Zones

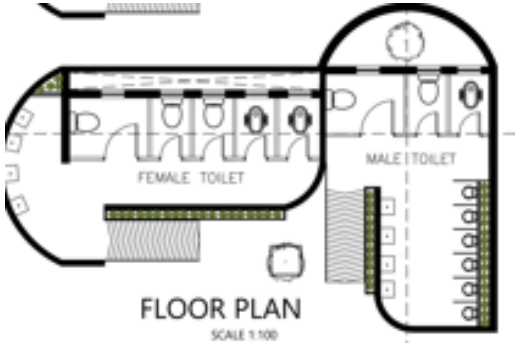
Basic Facilities for Aspirational Toilets can include –

The toilet caters to the need of a male, female, transgenders, children and differently-abled.

- Urban Cafe
- Bank ATM
- Water ATM
- Sanitary napkin vending machine
- Soft drinks vending machine
- Wi-Fi

Aspirational toilet designs

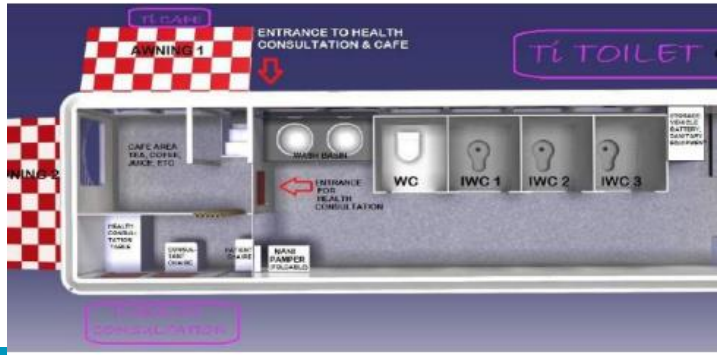




ती – TI Toilet Integration by Pune Corporation + 3S

Pune in partnership with 3S- Saraplast Pvt Ltd has launched mobile toilets exclusively for women by modifying PMPML buses that are no more in use for commuting purposes at high footfalls areas.

- Served over 2,00,000 women at high footfall areas
- TI facilities creates online/retails hub for local women and women entrepreneurs to shop different products and to sell their home-made products and retail hygiene products
- The project has partnered with health providers to operate, run and provide health services to the citizens of these towns.
- Old shipping containers have been converted into TiCs Health Centers, to innovatively address the shortage of availability of suitable location space



Business models for public toilet management (1/2)

a Saraplast Enterprise

3S Saraplast

Mission: To supply and service portable restrooms from the most visited to the remotest areas of the globe. And to constantly improve on it.

Key Information:

Location: Pune

Website: www.3sindia.com

Sector: Sanitary Ware

Operating since: 1999

Number of employees: 300

Impact: 5000+ toilets

a Saraplast Enterprise

3S Saraplast

1. **CAPEX** covered by government / donor funding
2. **Manufactures and assembles** various parts and products of public and community toilets at their factory
3. **Delivery and Installation** at various locations

Provides services across the sanitation value capture, containment, emptying, transport, treatment and disposal. Sludge is transported to treatment facilities for treatment and disposal

4. **Renting of toilets** for various events, such as construction sites and refugee camps.

Products available for rent:

- Portable toilets
- Containerized toilet solutions
- 'Ti' toilet integration
- Handwash stations
- Urinals
- Biotoilets
- Septic tanks

5. **Sale of toilets** to various clients , including government and private sector.
6. **OPEX** is covered by:
   - Pay per use
   - Advertisements
   - Selling products at kiosks

Source: https://gatesopenresearch.org/documents/3-1711/pdf

SHG led business models for public toilet management (2/2)

Gramalaya™
Water, Sanitation and Hygiene for all

Gramalaya

Mission: Emancipation through Entrustment, Entitlement and Empowerment. Gramalaya ensures that all its projects reflect the above core values that encourage people to be emancipated from the cycle of poverty and deprivation through participation. Consequently, communities are entrusted to work on the project by being part of its implementation process and its continued success.

Key Information:

Location: Tiruchirapalli, Tamil Nadu

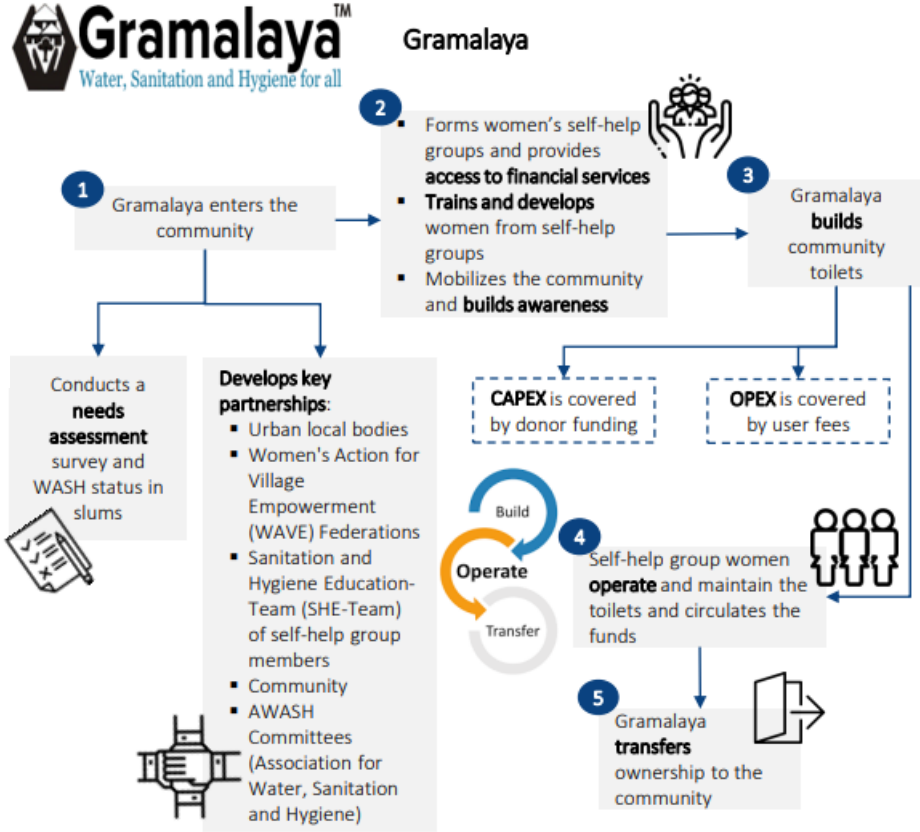
Website: www.gramalaya.org

Sector: Water and Sanitation

Operating since: 1987

Number of employees: 63

Impact: 375 slums



Source: https://gatesopenresearch.org/documents/3-1711/pdf

Timeline and Actionable points - Aspirational Public Toilet / Public Toilet and Urinal

Actions	Timeline*							Responsible Person/ Authority
	Oct 2022	Nov 2022	Dec 2022	Jan 2023	Feb 2023	March 2023	April 2023	
Identification of Site for PT proposal & Gap analysis								City Engineer/SI
Preparation of estimate & technical sanction								ULB / Consultant
Floating of Tender & Work order								ULB
Commission of Work								Contractor
Completion of work								Contractor & ULB

* Timeline is tentative, it will change subject to local conditions

Citywide Inclusive Sanitation and Safai Mitra Suraksha Challenge

Citywide Inclusive Sanitation (CWIS)

- Citywide Inclusive Sanitation means everybody benefits from adequate sanitation, with human waste being safely managed at every point along the service chain.
- CWIS aims to ensure everyone has access to safely managed sanitation by promoting a range of solutions: both onsite and sewered, centralized or decentralized- tailored to the realities of the cities
- CWIS Focuses on service provision and its enabling environment, rather than on building infrastructure





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Source: World Bank Official website, Available at Link

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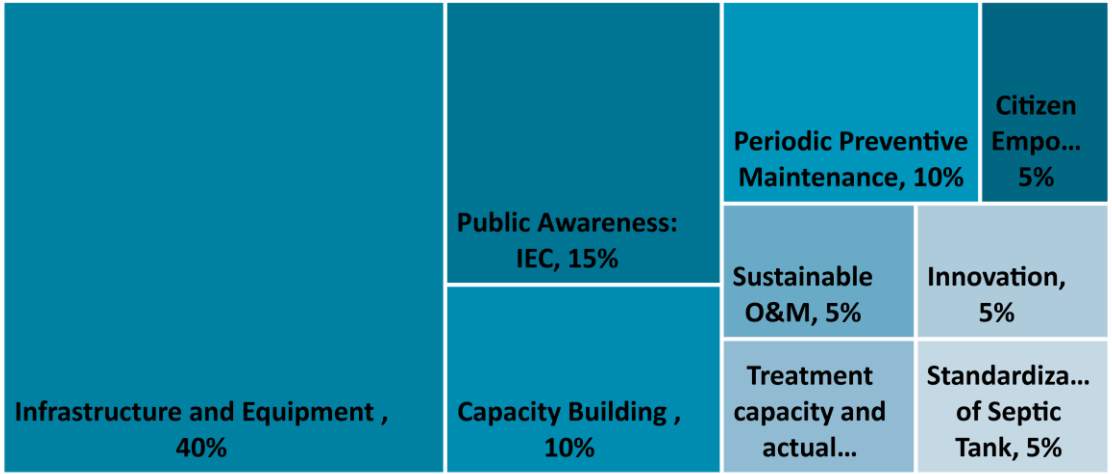
Key CWIS aspects in alignment with Ongoing and Upcoming state and National Missions

	Key CWIS Aspects			State and National Mission
1	Universal Access of individual household toilet (IHHT)	Increasing coverage of IHHT	Design initiatives for constricting IHHT in small places	Swachh Bharat Mission (SBM): ODF+/++ , Water + certifications
2	Scheduled desludging and safe treatment and reuse	City wide Scheduled desludging through mechanized processes. App based monitoring	Monitoring FSTPs, Online quality monitoring systems, Reuse of treated waste water	Swachh Survekshan 2023 City Sanitation Action Plan (CSAP)
3	Gender Inclusivity	Capacity development and leadership of elected women representatives	Women SHG engagement for SWM and FSSM Technical training for Women COs and Engineer	DMA: NULM –SBM Convergence
4	Sanitation Worker Safety	Worker safety with the use of PPEs and mechanized cleaning equipments	Institutionalizing safety of sanitation workers Training and health camps	Safai Mitra Suraksha Challenge
5	Municipal Strengthening	Budget Briefs Adhava Dashboard Suggestions on use of Women and child development funds	Billing and Payment Dashboard Swachhata app training Increasing collection efficiency of property tax	DMA reporting

Scoring Matrix of SSC and Strategy for supporting ULBs for Safai Mitra Suraksha Challenge

Parameter wise scoring



Focus on core parameter of Mechanized cleaning: Soft measures

- Capacity Building
- Empowerment of Safai Mitras

Focus on their safety and health

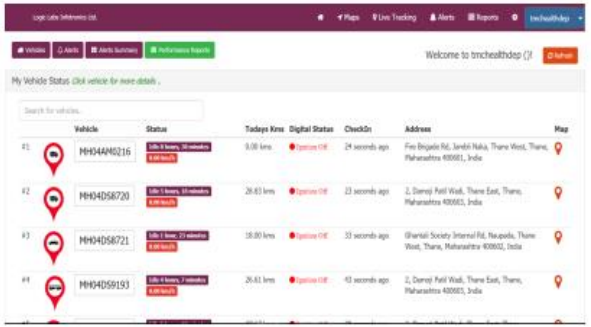
- Training on using PPE
- Support for conducting health camps for sanitation workers
- Awareness camps on NSKFDC loans

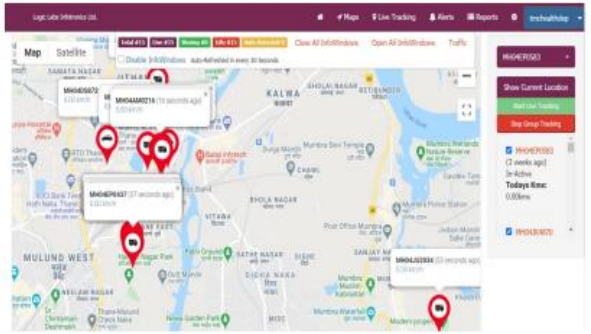
Focus on training the workers on using equipment

- Training on using desludging equipment
- For ULBs expect corporations having sewer networks will need to procure list of equipment under SSC. Need training for those equipment

Innovations

Nashik Municipal Corporation : has used hyflow recycler machine for cleaning of sewer lines & this machine. Also cleans grit and other materials in manholes

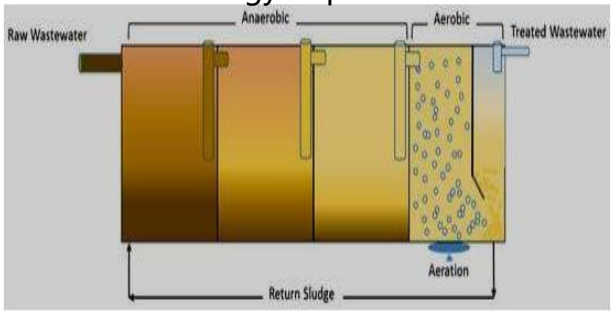




Thane Municipal Corporation : Septic tank desludging vehicles live tracking portal

Navi Mumbai : Monitoring of Sewer Cleaning with the use of Sewer Cameras (Jetting)

Amravati Municipal Corporation: Innovative modified septic tank systems were designed as stand-alone technologies to treat domestic wastewater. This is modified septic tank system can be used as a low cost system due to its low energy requirement.



Innovations

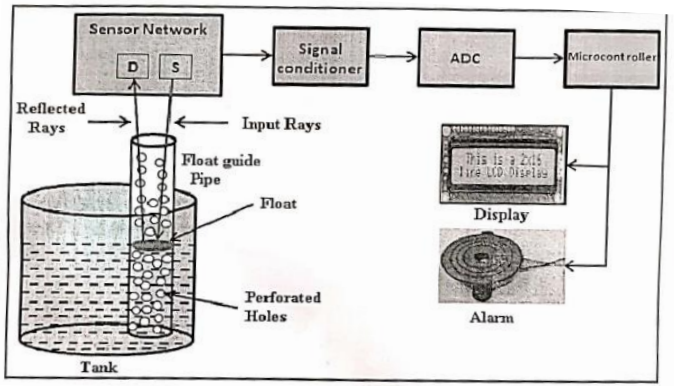
Jalgaon Municipal Corporation : Efficient Methods of Designing, Constructing and Managing Water Supply and Sewerage Systems

Nagpur Municipal Corporation : Wastewater Treatment and Reuse in Dayanand Park Nagpur, Maharashtra, India

Chandrapur Municipal Corporation : Water level indicator at all septic tanks of all CTPTs

Dhule Municipal Corporation : Bandicoot

Innovative system for cleaning the sewers, storm water drains and septic tanks have been implemented



Cities who declared themselves as Safaimitra Surkshit Sheher

Sr No	ULB Name	Declared as Safaimitra Surkshit Sheher
1	Ahmednagar	Y
2	Amravati	Y
3	Aurangabad	Y
4	Chandrapur_M	Y
5	Dhule	Y
6	Kolhapur	Y
7	MCGM	Y
8	Malegaon	Y
9	Vasai Virar	Y
10	Parbhani	Y
11	PCMC	Y
12	Pune	Y
13	Bhiwandi Nizampur	Y
14	Kalyan Dombivali	Y
15	Mira Bhayandar	Y
16	NMMC	Y
17	Thane	Y
18	Nagpur	Y

Sr No	ULB Name	Achieved "Saturated" status as per CPHEEO calculator
1	Ahmednagar	Saturated
2	Amravati	Saturated
3	Bhiwandi Nizampur	Saturated
4	Kalyan Dombivali	Saturated
5	Kolhapur	Saturated
6	Mira Bhayandar	Saturated
7	NMMC	Saturated
8	Panvel	Saturated
9	Parbhani	Saturated
10	Pune	Saturated

- Total 18 lighthouse cities have declared themselves as Safaimitra Surkshit Sheher (All these cities have achieved "Adequate" level in equipment as per CPHEEO calculator)
- Total 10 lighthouse cities have achieved saturated level

Criteria for declaring saturated under Safaimitra Suraksha challenge

SATURATED	ADEQUATE	MINIMAL	INADEQUATE
100% of CPHEEO standards	Manpower >80% Core equipment 50-80% Special equipment- 1 set Safety gear – 1 set	Manpower 50-80% Core equipment 50-80% Special equipment- 1 set Safety gear – 1 set	Manpower <50% Core equipment <50% Special equipment-0 set Safety gear - 0 set

Thank You