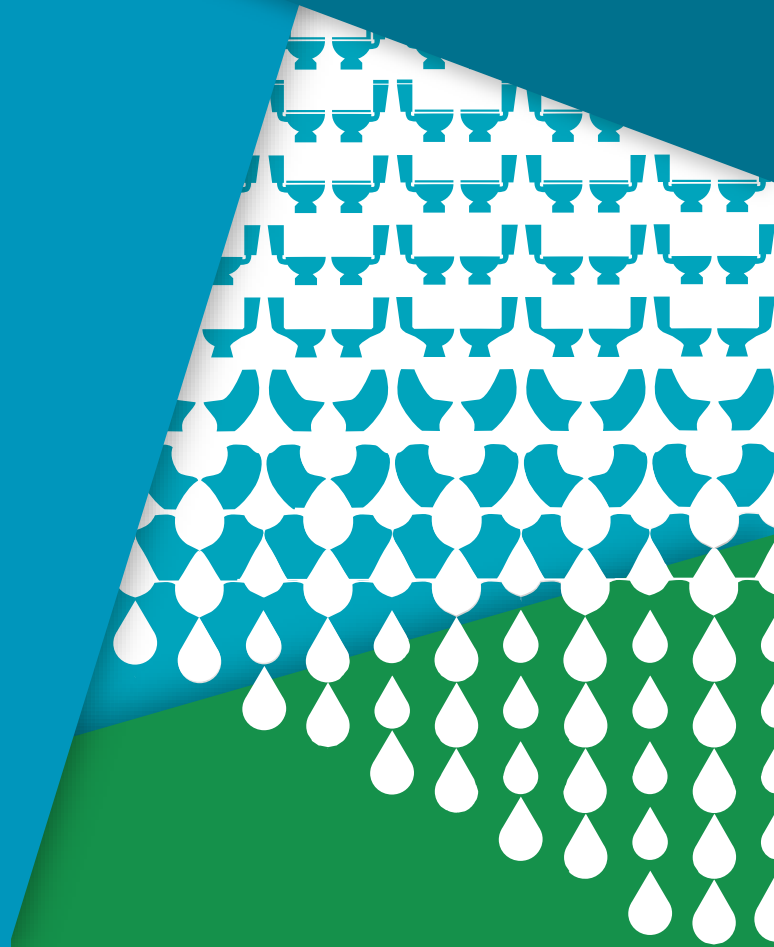
FSSM Plan for Satara

Center for Water and Sanitation (CWAS)

CRDF, CEPT University



Faecal Sludge and Septage Management (FSSM) Plan for Satara

This Faecal Sludge and Septage Management (FSSM) Plan was prepared by
the Center for Water and Sanitation (CWAS),
at the Centre for Research and Development Foundation (CRDF), CEPT University
in consultation with Satara Municipal Council (SMC)
under a grant from HT Parekh Foundation

Acknowledgements

Satara is representative of a large number of cities in India that rely on on-site sanitation system, characterized by toilets connected to septic tanks. This is prevalent in small and medium sized cities as well as parts of larger cities with sewerage. In these cities, it is estimated that over 70% of the faecal waste is not collected and treated. This may have consequences on public health. This FSSM plan suggests how cities can achieve SDG 6.2 on safely managed sanitation and improve environmental hygiene and public health.

Center for Water and Sanitation (CWAS) has been supporting the Swachh Maharashtra Mission for Urban Areas (SMMUA) in developing strategies, building capacity of ULBs and supporting implementation, since 2015. It also supports cities in Maharashtra on city-wide sanitation planning and implementation of ODF and FSSM plans. To scale up these interventions and support other cities, the H T Parekh Foundation provided grant support to CWAS for strengthening the Faecal Sludge and Septage Management (FSSM) activities in Kolhapur Municipal Corporation and Satara Municipal Council in Maharashtra.

The main components of the **Faecal Sludge and Septage Management (FSSM) plan for Satara** are: a) scheduled desludging of septic tanks once in 3 years in one pilot zone, b) Faecal Sludge Treatment plant (30KLD) to ensure safe treatment of sludge, c) monitoring system for safe desludging and treatment by using online monitoring systems, and d) reuse plan for treated wastewater and sludge from FSTPs. A mix of secondary data provided by the city, primary surveys and stakeholder interactions were done to prepare the FSSM plan for the city.

CWAS team acknowledges excellent support by Satara Municipal Council and its officials (Chief officer, Sanitary inspectors, PWD department, ward level officials). Discussions with other stakeholders such as private operators, sanitation workers, community groups and slum households have also helped shape this FSSM plan.

We thank the H T Parekh Foundation for its grant to CWAS for this activity.

Meera Mehta and Dinesh Mehta
Executive Directors, CWAS, CRDF

FSSM is recognized as a viable solution for safely managed sanitation

Targets 6.2 and 6.3 of SDG 6 of the Sustainable Development Goals aims in achieving the target on ending open defecation with provision of access and sanitation hygiene for all and improving water quality, wastewater treatment and safe re-use by 2030.

Image source: http://www.campaign.exchange/campaigns/sustainable-development-goals/

Image source: https://www.ice.org.uk/eventarchive/achieving-sdg-6-the-water-goal

Image source: https://textilesforsdgs.org/sdgs/goals/6-clean-water-and-sanitation/

Government of India has put a strong focus on FSSM

Swachh Bharat Mission (2014-2019) achieved significant success to make India Open Defecation Free. In 2017 the GOI adopted its national policy on "Faecal Sludge and Septage Management" (FSSM)

KEY ACHIEVEMENTS

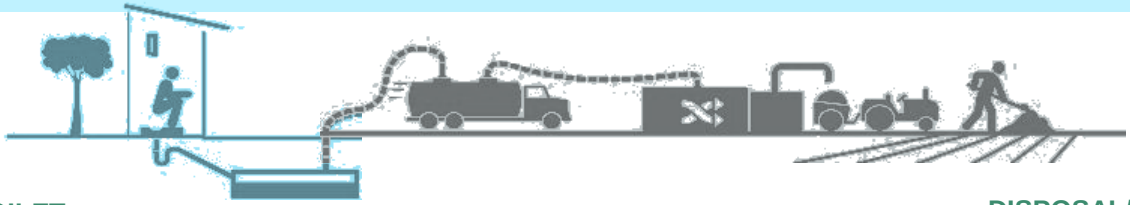
SBM Urban Phase 1 Focus mostly on toilet construction

6.6 MILLION TOILETS

98% CITIES DECLARED OPEN DEFECATION FREE

35 STATES / UTs CERTIFIED AS ODF

FSSM OPERATION VALUE CHAIN



ACCESS TO TOILET
Access to hygienic toilets to all households

CONTAINMENT
Toilets connected to efficient systems like septic tanks

>

EMPTYING AND TRANSPORT
Desludging of septic tanks by suctions machines and transportation to treatment plant

>

TREATMENT
Treatment at centralized or decentralized plants

>

DISPOSAL/REUSE
Reuse of treated effluents and other byproducts for agricultural or other uses or disposal at designated site

Need to focus on entire 'sanitation value chain (both desludging & treatment) to obtain ODF+ and ODF++ status

Source: Press Information Bureau (2020, October) "'Swachhata Ke 6 Saal, Bemisaal'- MOHUA to celebrate six years of Swachh Bharat Mission-Urban on Gandhi Jayanti" Ministry of Housing and Urban Affairs. Government of India. Accessed from https://pib.gov.in/PressReleseDetail.aspx?PRID=1660543 on 24.12.2020; Swachh Bharat Urban Dashboard accessed from http://swachhbharaturban.gov.in/ on 24.12.2020

The following FSSM activities are being carried out in Satara by CWAS under the project

1. **Sanitation assessment and FSSM plan of the city**
2. **Scheduled desludging of septic tanks**
   Trucks procurement and implementation support
3. **Monitoring systems for desludging and treatment services**
   Implementation and procurement support
4. **Technical support for DPR preparation for expansion of FSTP, and its funding**
5. **Capacity building of ULB staff and key stakeholders and documentation**

MoU signed with SMC for support for sanitation improvement

Contents

Contents

Satara is a medium-size town near Pune

1,30,000 Population(2019)

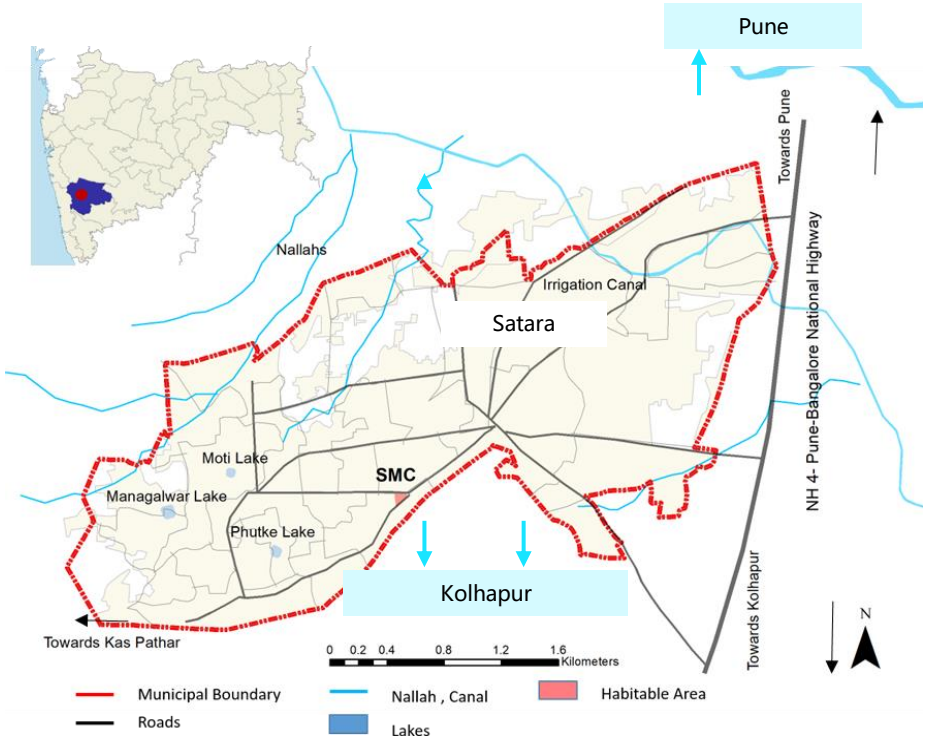
33,800 Households

27 Total slums

11% Slum Population (15,330 population)

8.15 Sq.Km Area

20 Wards

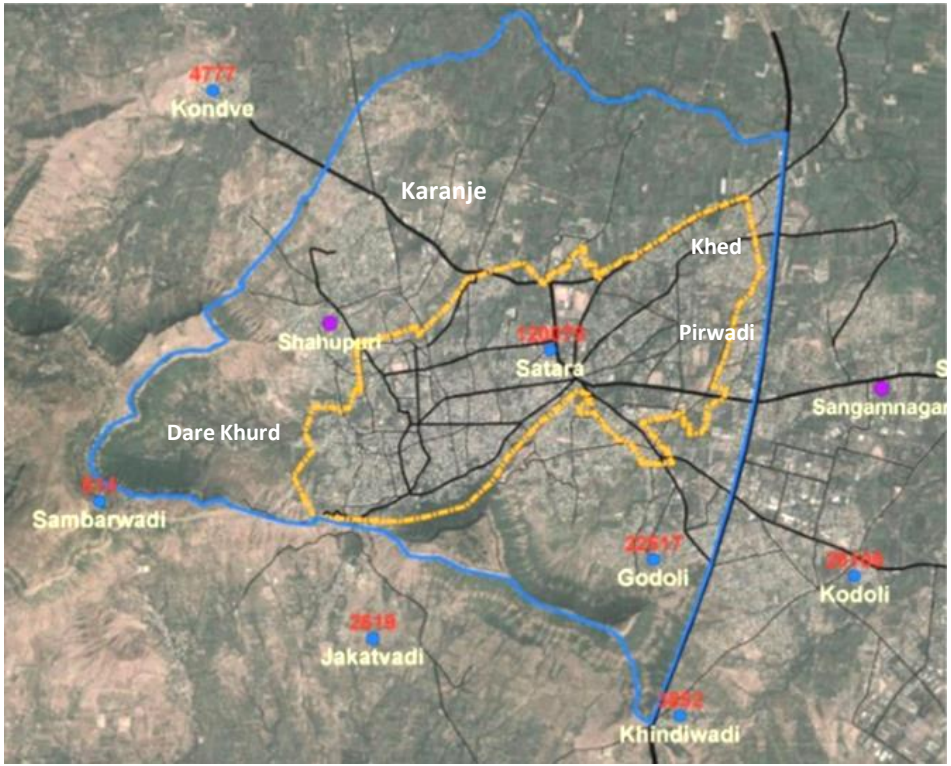


Map showing geographic location with SMC limits

The city has a **historical significance**. It is located near **diversion** of **Pune-Bangalore national highway** and has a **good connectivity** with other important towns. **River Krishna and its tributary (river Veena) is located at 5 km** from Satara.

Source: SWM DPR, Census 2011, STP DPR, Water audit report 2015, PMAY dept, Primary discussion with ULB officials and analysis

Satara's municipal limit was increased recently. However, the current FSSM Plan is prepared for the old area.



Map showing SMC old and extended imits

Existing SMC limit	8.15 sq.km.
New SMC limit	**26.4 sq.km.**
Increased area	18.25 sq.km.

- Plotted individual houses are present in the newly developed areas.
- Direction of growth is along the SH58 in the north western direction and along the SH72 in the south eastern direction, due to industrial activities and major connectivity to other cities.
- 8 Gram Panchayats have been included in the new Satara municipal limits
- **Based on discussions with the Satara Municipal Council, this FSSM plan is prepared based on the old limits.**
- SMC will need to later include the newly added area, after implementation of the plan in pilot zone.

Source: TP Department, Primary discussion with ULB officials and analysis

Satara is famous for it scenic sites and historic monuments

Satara has many **historical places** like Charbhinti, Anjinkyatara, etc. which also provide a very scenic view of the city. It is also famous for a **sweet** called kandi pedhe. **Kass Plateau** (Pathar) has been awarded as a UNESCO's World Heritage Site (WHS) which transforms into a wildflower wonderland during September each year.


Char Bhinti


Ajinkyatara


Kaas Plateau

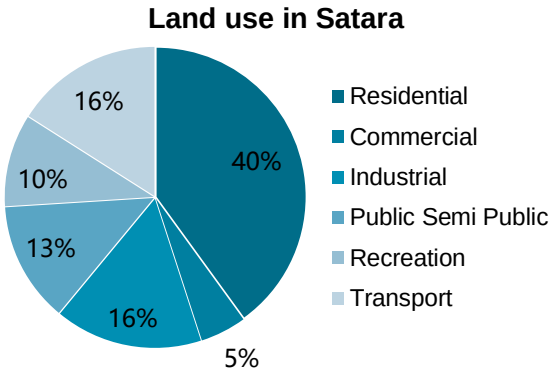
Kandi Pedhe


Rajwada (palace)

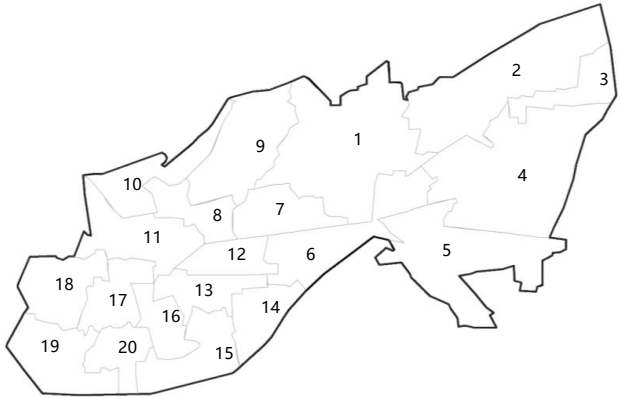
Sainik School Satara

Source: Adapted from Google archives

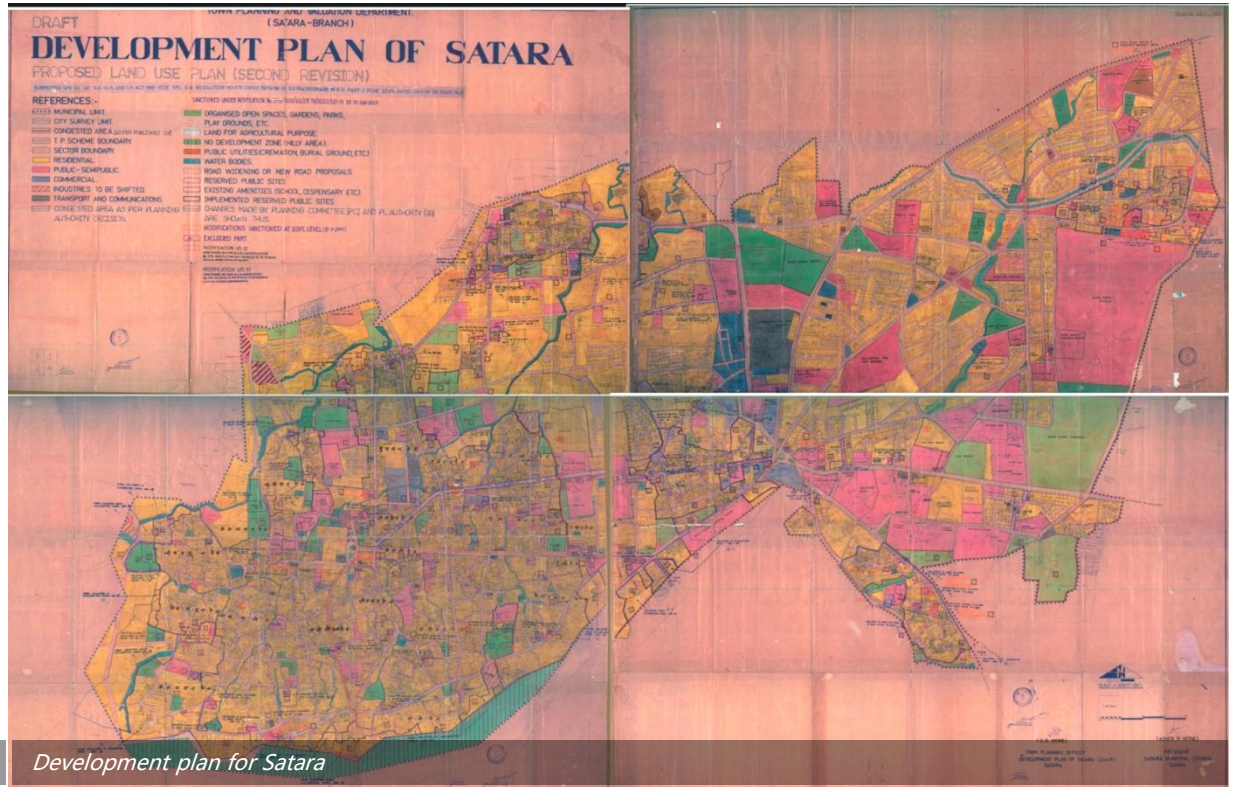
SMC has 20 prabhags and 40 administrative wards



Most of the city maintains a low-rise built form, with higher densities in the old inner city areas. It has mostly plotted development (individual houses). It is observed that apartment buildings are not very common in the city.



Ward map of Satara Municipal Council



Development plan for Satara

Source: SWM DPR Vol. 1, PIP report, Primary discussion with ULB officials and analysis

The topography of the town is funnel type, thus city does not face issues of water logging

Topography

- Topography of Satara is a funnel type enclosure formed by Ajinkyatara fort on south joined by Yevteshwar hills on south-west and west .
- The town begins right up from the slopes of these ranges with gradual fall towards north and east.
- The general slope is towards North-East.

Soil

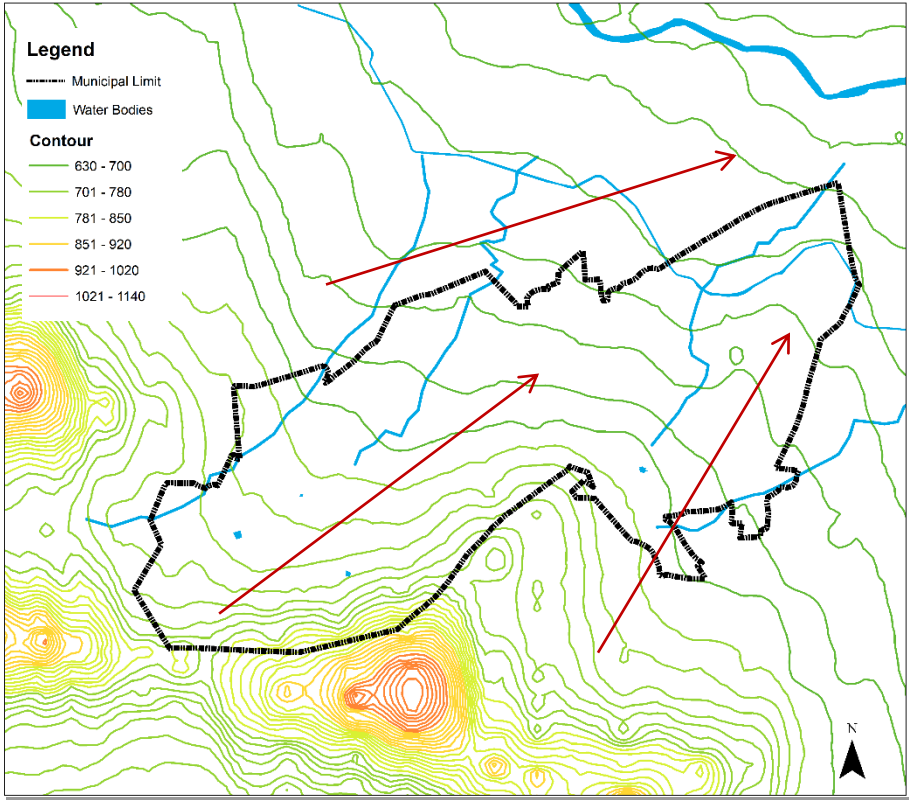
- The soil varies in depth from 2 to 3 ft to about 15 to 20 ft and consists of soft, spongy, easily friable murum overlying the hard Deccan trap-rock. Approximately 172 kms of river course falls inside the district.

Climate

- Since Satara is surrounded by seven hills and has hilly areas its climate is tropical wet and dry. The maximum temperature is 38°C and minimum 10°C.

Rainfall

- The annual average rainfall for Satara is 1426 mm.

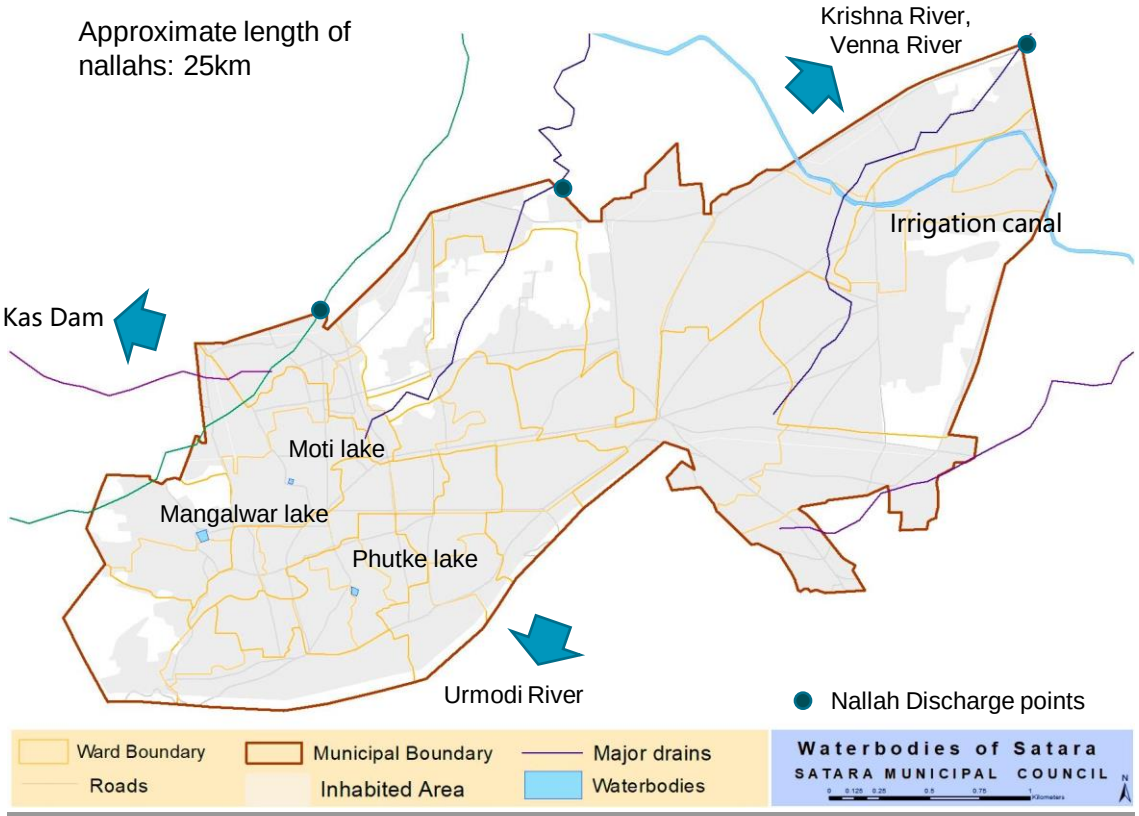


Topography map for Satara

Source: Underground sewerage DPR, SWM DPR, discussion with ULB officials and primary data analysis

There are 3 major nallahs in the city which drain into Krishna river

- There are 7 nallahs in the city out of which 3 are major ones.
- The nallahs drain into Venna river which is a feeder of Krishna river.
- The irrigation canal passes through the city originating from the Kanher dam. It supplies water to the surrounding villages for irrigation.
- There are 3 lakes in the city viz. Moti lake, Mangalwar lake and Phutke lake.
- Kas dam is located 26 kms away from the city which is owned and operated by SMC.
- Krishna river source at Mahuli Sangam is located 5 km from Satara and is owned and operated by MJP (Maharashtra Jeevan Pradhikaran).
- Another source of water supply is the Urmodi river which is located 15 kms to the south-west 15 kms from the city.

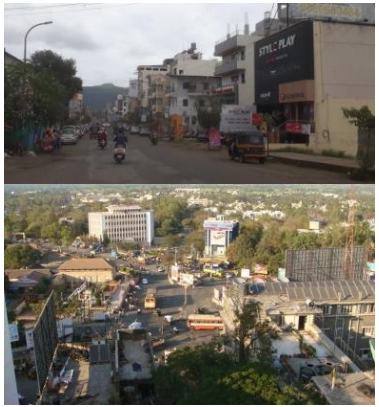


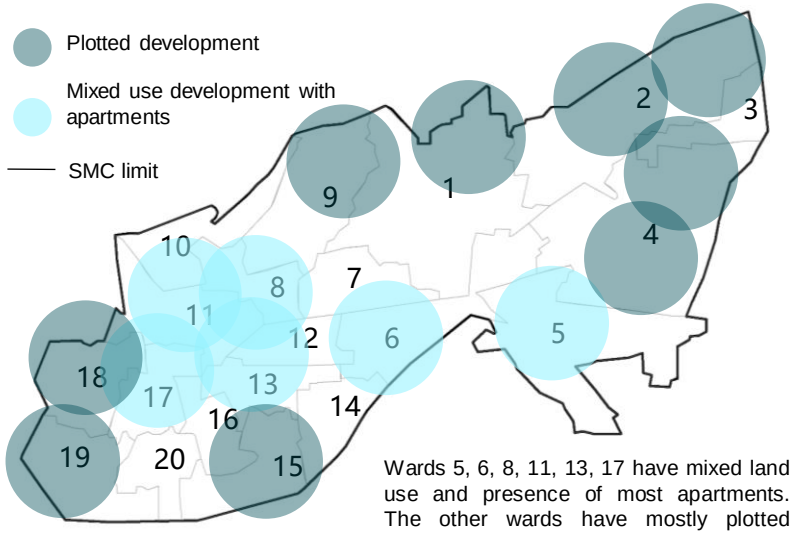
Major water bodies at Satara

Source: SWM DPR Vol. 1, Water Audit report, discussion with ULB officials and primary data analysis

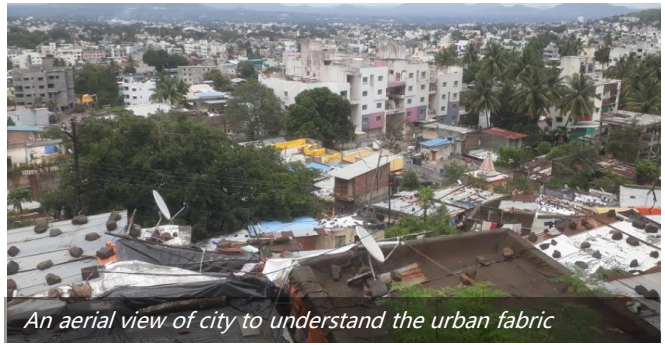
The city has plotted development with apartments on the periphery

- At the city level, the gross density is moderate (147 pph*).
- The core areas of the city and some of the older area's (Gaothan) are very densely populated (200-400 pph)
- The fringe areas of the city has a density around 60-80 pph.





Wards 5, 6, 8, 11, 13, 17 have mixed land use and presence of most apartments. The other wards have mostly plotted development.



An aerial view of city to understand the urban fabric

Housing typologies in the city

Source: Site visit and primary analysis

pph- persons per hectare

The effluent from septic tanks and grey water from households is let out into drains along roads

- The existing storm water system comprises of roadside drain through closed as well as open drainage network.
- Since the topography of the town is funnel type, the city doesn't face problem of water logging or flooding.
- Pucca drains are observed majorly in core area of the city. For the newly developed area SMC has extended closed drainage network.
- Kuccha and overflowing drains are found mostly in slums.
- Since the city doesn't have sewerage connections, there is no waste water treatment facility in the city.
- All drains carrying effluent from septic tanks discharge into Krishna River at distance of 10 km. Total 7 drainage outfalls observed outside the town out of these outfalls 3 are the major outfalls.

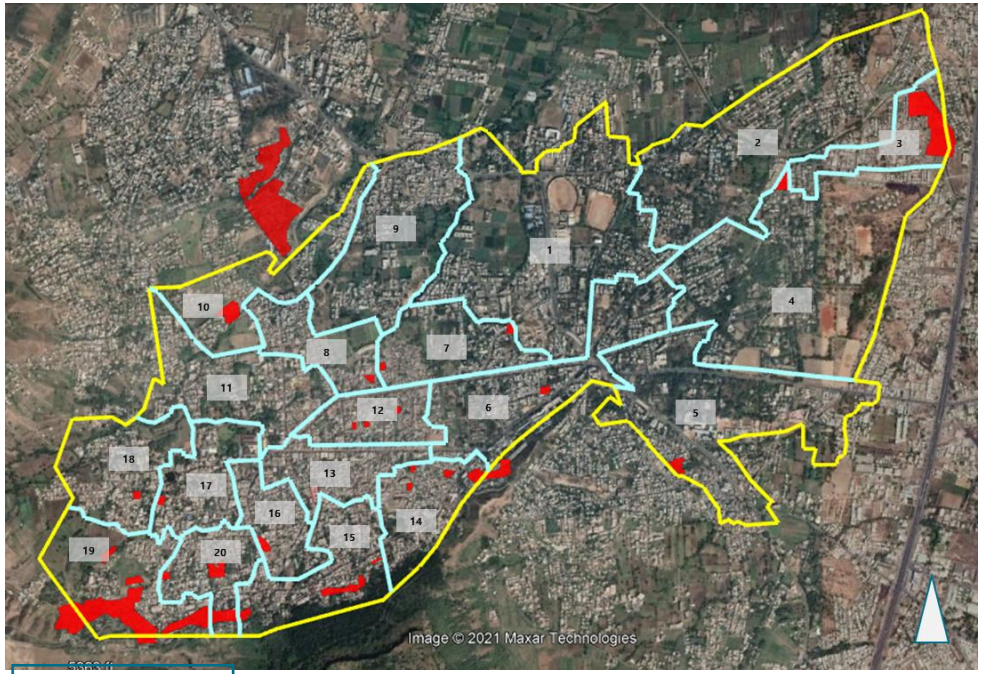
Coverage of Storm Water Drainage	
Total length of Road Network	127 km
Total length of drainage coverage	200 km 75km in core city & 125km open drain in outer city
Covered drainage network	75 km in core city
Area covered	2.40 sq.km.
Open drainage network	125 km in core city
Area covered	4.45 sq.km.

Location of 3 major drainage outfalls	
Sr. No.	**Location Name**
1	Kamathipura – Collector Office – Cooper Bunglow – Kanga Colony – Jarandeshwar Naka
2	Bogda – Ramacha Got – Rajwada Pichadi – Juna Motor Stand – Basappa Peth – Hutatma Smarak – Bansode Vasti
3	Gadkar Ali – Badami Vihir – Koteshwar Bridge – Budhwar Naka – Mahanubhav Math

Glimpses of the city showing drainage network

Source: Data collection, analysis and observations from site visits, 2021

11% of city population resides in 27 slum settlements



27
Slums

18,680
Population

3736
Households

4%
HHs with IHHT

96%
Depend on Community toilets

Slums are mostly located on the hills with a mix of partly kacha and pucca houses. Under **IHSDP** scheme, **8 locations** were proposed for housing for slum dwellers. Of these, 6 IHSDP projects have been completed. Some of the slum HHs will benefit under ongoing PMAY scheme. Approval of layout and verification of applications is in process.

Legend
- Municipal Limit
- Ward Boundary
- Pilot Zone
- Slums
- Ward No.

Source: Slum survey and site visit, PMAY Department

Contents

Existing sanitation situation in Satara

Access	Collection	Conveyance	Treatment	Disposal/ Reuse
Pour flush latrines and CTs/PTs	Septic Tanks	*Solid* → Suction emptier trucks	No Treatment of septage	Disposed at SWM site, No reuse plan
		Effluent → Open Drains	No treatment of grey water	Disposed into river

City details
individual toilets- 26,845 HHs (79%)

Many non slum HHs are dependant on CT- 7000 HHs (21%)

City details
HHs septic tanks- 26,845 (100%)

All CT and PT connected to septic tanks (100%)

Slum level details
individual toilets- 179 HHs (4%)

Dependent on community toilet- 3557 HHs (96%)

Slum level details
(27 slums)

15 slums with septic tanks 179 HHs

Mostly connected to open or kuchha drains

- ULB had 1 old truck of 5000 L capacity; hence it was non functional most times
- 1 private operator with two truck of 3000 litres each

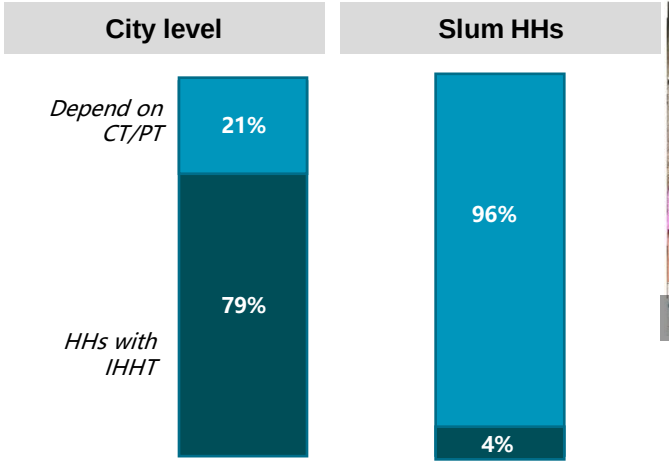
- Irregular desludging, emptied only when full once in 8-9 years
- Manual log books for monitoring

- 20 KLD Faecal Sludge Treatment Plant (FSTP)
- Greywater and effluent are disposed in waterbodies without treatment
- 17.5 MLD STP under proposal
- Manual log-books for monitoring FS loads
- The city lacks a reuse plan for the treated water

Source: Sanitation Dept data 2020 and discussion with Desludging driver, sanitary supervisors, etc. and SS20 database

The city has 79% coverage of Individual Household Toilets

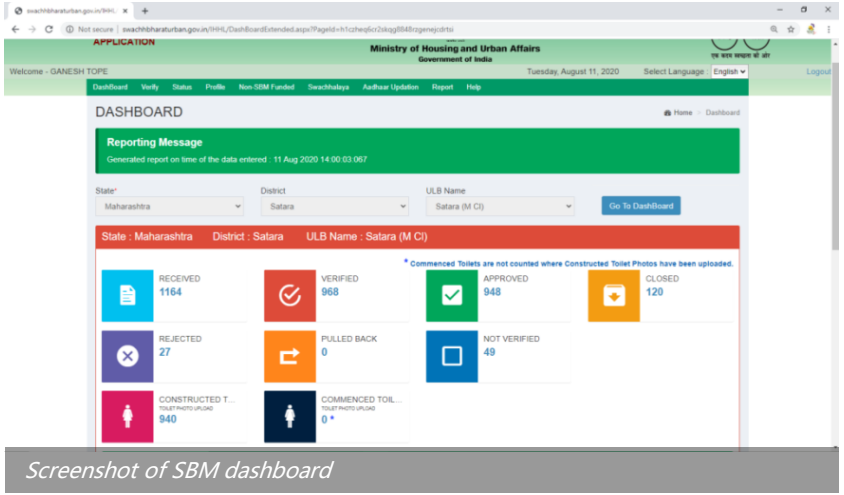
Access to sanitation



Parameter	City level	%	Slum	%
Population	1,30,887		18,680	
Households	33,844		3,736	
Total HHs with IHHT	26845	79%	179	4%
HHs dependant on CT/PT	6,999	21%	3,557	96%

IHHT in non slum HH and slum HH

- Satara achieved ODF+ status on 17th Oct 2019 and ODF++ status on 22nd Jan 2020.
- SMC gave Rs. 12000 grant to households for IHHT under SBM.
- 942 IHHT were constructed under SBM. There is a demand for more IHHT.

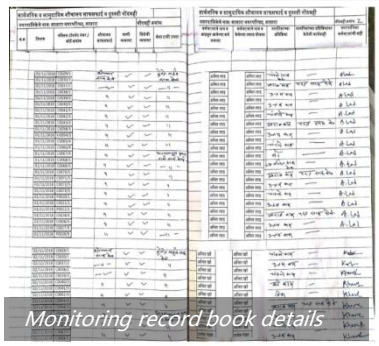


Screenshot of SBM dashboard

Source: Sanitation Department, CSP report, site visit and slum survey

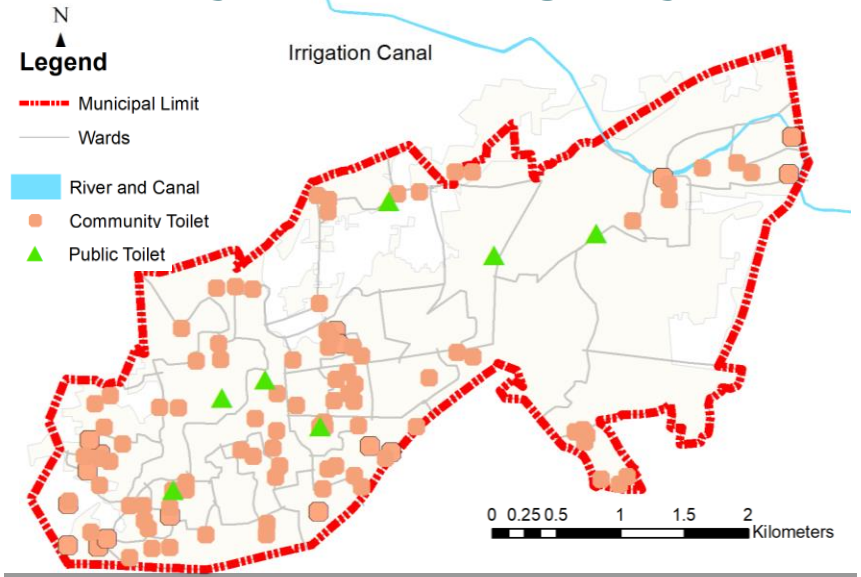
Community and public toilets are maintained by a private agency

Parameters	Community toilets	Public toilets
Total no. of CT and PT	95	7
	868 total seats out of 686 are functional	
Toilets connected to STs	95	7
O & M of CT/PT	Ahilya Devi Swayam Rozar Seva Sahakari Sanstha	Nirmal Bharat
Contract Cost and Time Period	Rs. 25,31,584 per year; 1 year Contract	The PTs are pay and use
Monitoring	By respective sanitary supervisor in the ward and update SI	-



Monitoring record book details

Photos of CT and PT



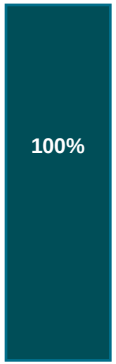
Map showing CT/PT within SMC limits

- Frequency of CT cleaning is **twice in a week.**
- The agency has deployed **7 workers** for cleaning the CTs and they maintain a **record book** which is checked by mukadam.
- The **emptying of STs depends** upon the **usage frequency**.
- Tanks of CTs with **high usage** are emptied **once** in a **month**.
- Those with **low usage** are emptied once in **3 months.**
- Depending upon the quantum of repair work it is done by tendering process. Mostly they are done **twice in a year.**

Source: Sanitation Dept, Site visit and primary data analysis

Collection and conveyance system in Satara

100% septic tank connections



Toilets connected to septic tanks

Household level septic tanks

Number of septic tanks	23,445
Avg. size	5000 lit

Apartment level septic tanks

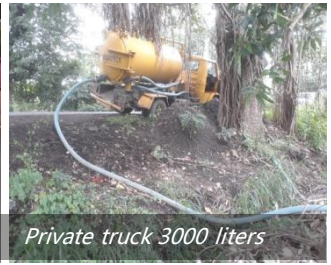
Number of septic tanks	236
Avg. size	10,000 to 15,000 lit

- All toilets are connected to septic tanks in Satara. All the septic tank outlets are connected to the drain.

Both ULB and private operators for desludging


ULB 5000 liters truck


Emptying operations


Private truck 3000 liters

Details	ULB	Authorized private desludger
Truck numbers	1	2
Truck capacity	5000 lit	2 trucks of 3000 lit
Number of trips per day	2-3	8-10
Number of septic tanks emptied daily	3	7-8
Number of ST desludged per year	300	1400
Operation hours	7am to 2pm	7am to 5pm
Charges per trip (within city limits)	Rs. 500	Rs. 2000
Charges per trip (outside city limits)	Rs.1500	Rs.2200
Opening of chamber cover	Done by HHs	Inclusive of charges

Source: Sanitation Dept., STP DPR, Property tax Department., PWD Departmen, discussion with desludging operator and ULB official.

Desludging process by SMC is lengthy and cumbersome

Day 1 — Citizen submits application in SMC's given format

Day 1-2 — Based on location, citizen has to pay initial amount of 1 trip for which receipt is given

Rs. 500 for within city limits and Rs. 1500 outside city limits.

Day 1-2 — Citizen submits payment receipt to sanitation department

This ensures request is genuine

Request forwarded to sanitation department. Desludging details shared with driver

Day 6 — *Working hours are 7am to 2pm*

Based on ongoing cleaning requests driver schedules a date and informs owner

Service is provided 9 to 10 days after request

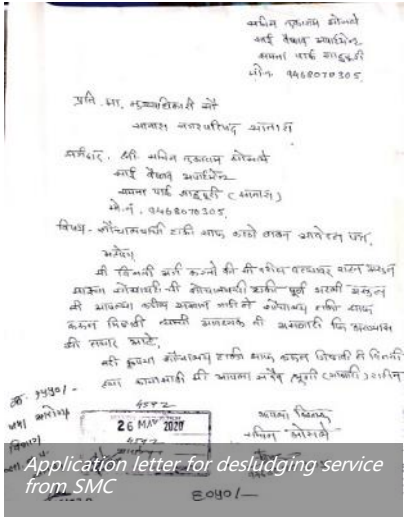
Day 10 — Driver along with 2 helpers visit the location for desludging

2 septic tanks emptied in a day. ULB conducts 2-3trips in a day

Driver informs the ULB incase of more than 1 trip

Citizen is informed by sanitation dept official to pay remaining amount for additional trip

Collected septage dumped at FSTP at Songaon Kachra Depo



Application letter for desludging service from SMC

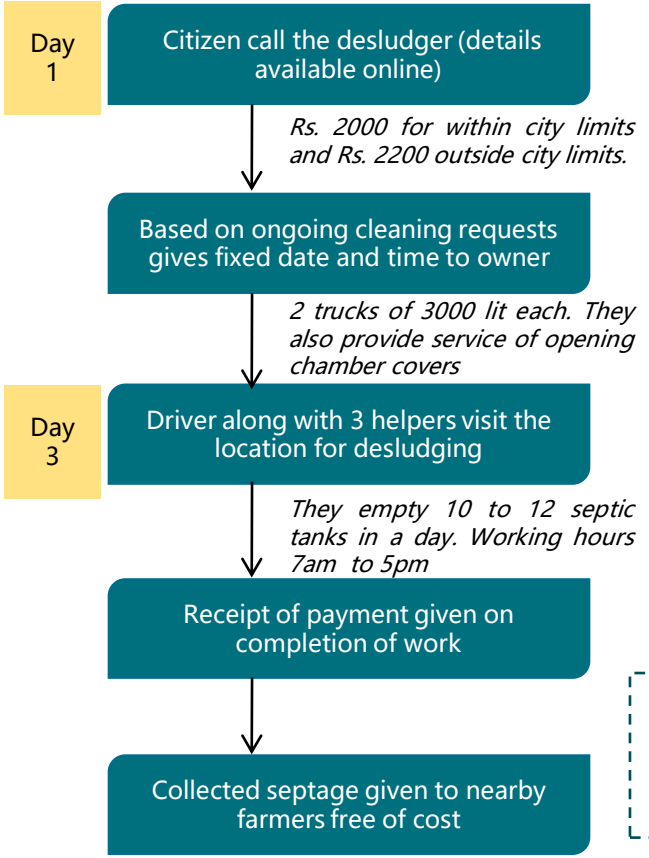
Sample payment receipt of SMC desludging service

Two log books maintained, one by desludging driver and other at sanitation department.

Legend of Departments: Inward outward Department | Tax Department | Sanitation Department

Source: Sanitation Department., discussion with ULB officials and households, SMC

SMC has licensed a private desludger for desludging at fixed rates within the SMC limits



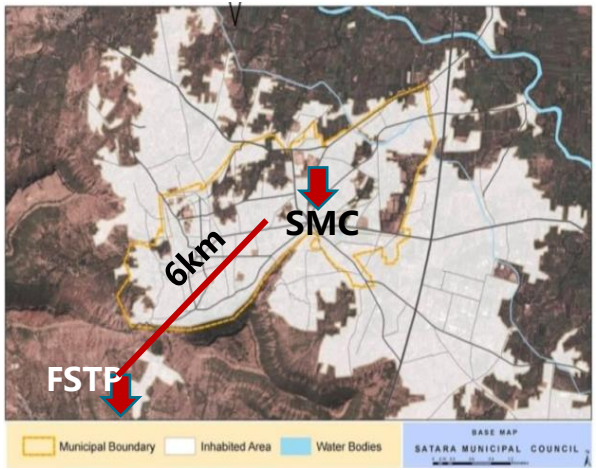
- **SMC follows a long process** and requires the **owner** to **visit** SMC **multiple** times, whereas **private desludger** has **simple process** and **quick service.**
- Owner has to **appoint** a **mason** to **open** chamber **cover** in case of **SMC** desludging. While **private desludger** has a **helper** on vehicle to **open** chamber **cover**.
- **SMC** takes over **10 days** to resolve a complaint. **Private desludger** gives quick service, within **2-3 days** depending on ongoing cleaning.
- Private desludger's **trucks** are **more maintained** than SMC hence conducts more trips.

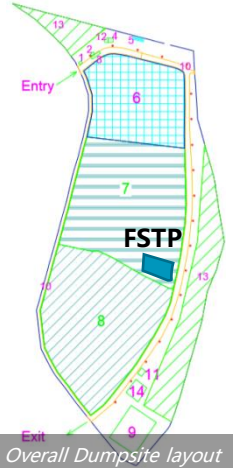
- The **sludge** is mostly used for **sugarcane** and **ginger farming**.
- It is **directly left** into the **farmland** and flows through the water streams created.
- In **monsoons** the farmers **excavate** a part of **land** and **store** the **sludge** for future use.

Source: Discussion with Private desludger at SMC

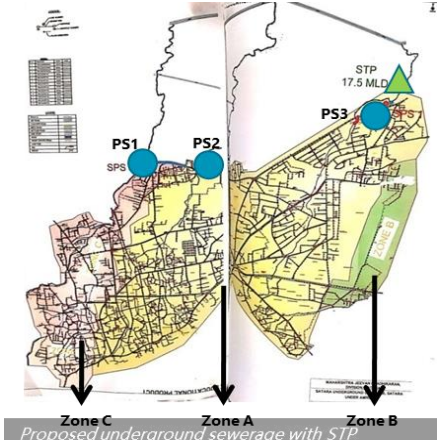
Satara has a 20 KLD FSTP and has proposed a 17.5 KLD STP under the AMRUT Program

- ULB has constructed **20 KLD FSTP** at Songaon Kachra Depot.
- For **operating** FSTP, ULB has appointed the **waste collectors group**
- Under AMRUT, **17.5 MLD STP** and sewerage system is proposed, but currently, **land is not available for the STP.**





Overall Dumpsite layout under SWM DPR



Proposed underground sewerage with STP


Dumpsite entrance


Weighing scale with computer room


Access road to FSTP


Pipelines from SDB


Sludge Drying Bed


Planted Gravel filter and treated water tank


Anaerobic baffled reactor

Source: Primary survey, PWD Dept, Sanitation Dept.

CWAS CENTER FOR WATER AND SANITATION | CRDF CEPT RESEARCH AND DEVELOPMENT FOUNDATION | CEPT UNIVERSITY

Both treated wastewater and dried sludge are being reused

Treated Waste Water

Currently the treated wastewater is reused for:

- Onsite cleaning.
- Watering plants on the roadside and depot.
- Fire extinguishing and dust control at depot.

Dried Sludge

- Treated sludge is kept for drying and packed in proper packets of 1-2 kgs after sieving. While packing, small proportion of wet waste compost is also added to improve its quality.
- Dried sludge is mostly sold to farmers involved in floriculture, to individual households who have garden or landscape and nearby plant nurseries.

Plantation at depo

Evaporation pond

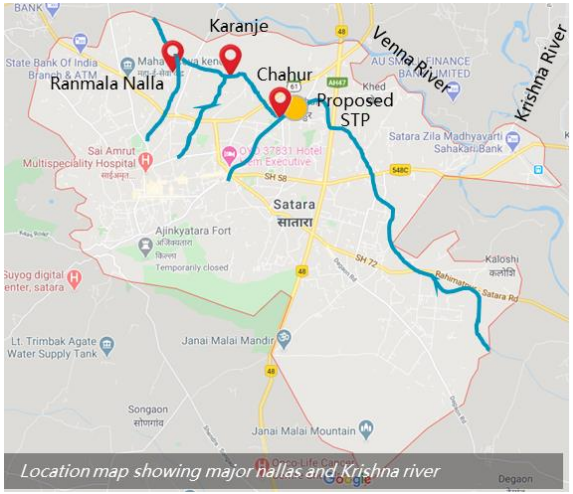
Dried sludge packed

Wet waste compost plant

Further drying of dried sludge

Source: Primary data analysis, Kachra Vehcak Sangha, sanitation Department SMC

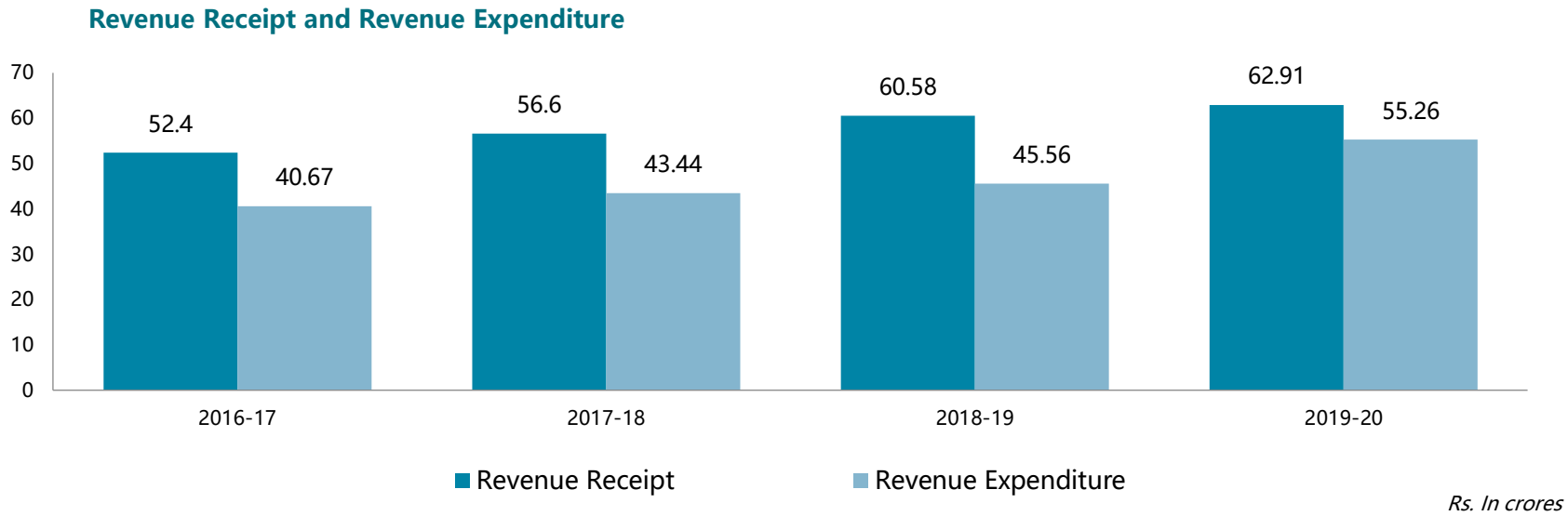
Three-fourths of Satara has drainage network



- Satara city **does not have sewerage network.** The grey water and **effluent** are **discharged** into either **covered or open drains.**
- **All drains** discharge **into Krishna River** at a distance of **10 km.** Total **7 drainage outfalls** were observed outside the town.

Source: Underground Sewerage DPR, PWD Department, primary site visit and surveys

The overall financial health of SMC is good



Rs. In crores

- The graph shows that Revenue Income is more that the Revenue Expenditure. Thus it shows a good operating ratio. This implies financial health of Satara Municipal council is good.
- SMC manages its operating expenses from its revenue grants, own tax and non-tax sources.

Source: SMC budget document, 2019-20

Property tax and sanitation tax finance sanitation services in Satara

Breakup of Property tax	Percent of taxes
Property tax	28% of taxable value
Tree tax	1% of taxable value
Education tax	5% of property tax
Sanitation tax	Rs. 1 per day for residential; Rs. 1.5 per day for non residential
Fire tax	2% of property tax

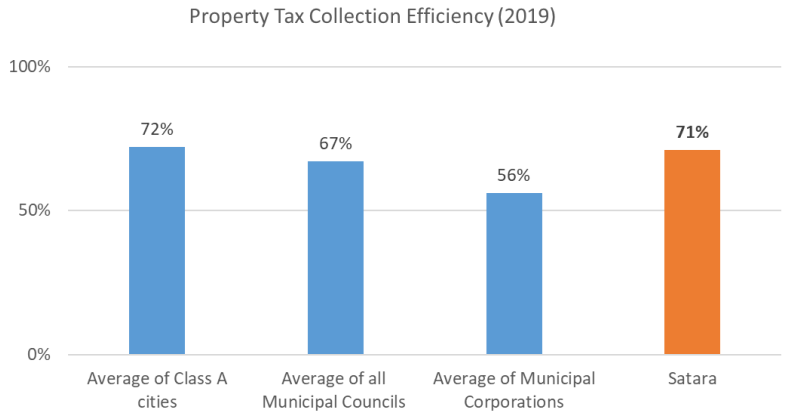
- The **sanitation tax** is applicable from **2017**. It has been levied for the SWM and sanitation services provided by ULB.
- SMC has taken notable measures to improve tax collection efficiency. It has **increased from 36% to 71%.**

Annual Water Tax (revised in 2017)

Sr No	Tap Connection type	Residential	Non -Residential
1	0.50 inch	2000	6080
2	0.75 inch	3300	10135
3	1 inch	6492	20408

- As per DCB tables, the **collection efficiency** of **Sanitation** and **water** tax is **around 60 to 70%**.

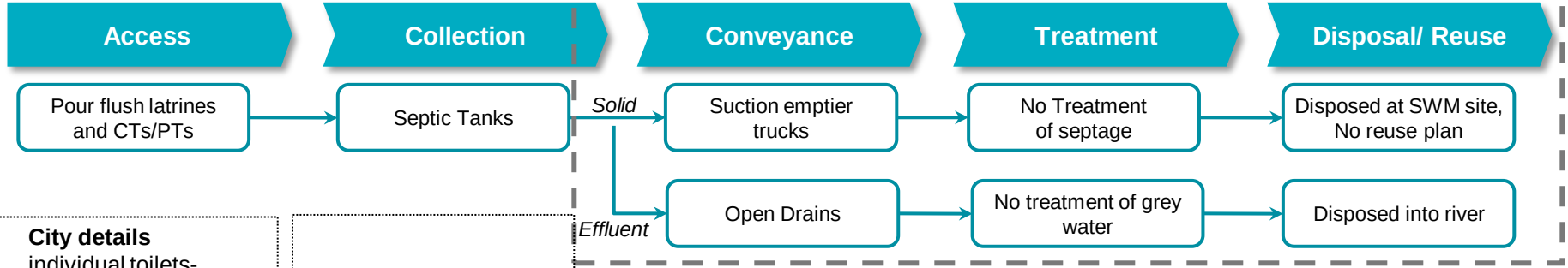
Comparison of property tax collection efficiency of Satara with state averages



- Property tax collection efficiency of Satara Municipal Council aligns with the average of Class A municipal councils of Maharashtra. Also, it is higher than the average of Municipal councils and Municipal Corporations.
- However, there is still scope for improving collection efficiency of the property tax.

Source: Tax department, Water department, SMC

FSSM activities are needed across the sanitation service chain



City details
individual toilets- 26,845 HHs (79%)

Many non slum HHs are dependant on CT- 7000 HHs (21%)

Slum level details
individual toilets- 179 HHs (4%)

Dependent on community toilet- 3557 HHs (96%)

City details
HHs Septic tanks- 26,845 (100%)

All CT and PT connected to septic tanks (100%)

Slum level details
(27 slums)

15 slums with septic tanks 179 HHs
Mostly connected to open or kuchha drains

- ULB had 1 truck of 5000 L capacity; very old so non functional most times
- 1 Private operator with two truck of 3000 litres each
- Irregular desludging, emptied only when full once in 8-9 years
- Manual log books for monitoring

- 20 KLD Faecal Sludge Treatment Plant (FSTP)
- Greywater and effluent are disposed in waterbodies without treatment
- 17.5 MLD STP under proposal
- Manual log-books for monitoring FS loads
- The city lacks a reuse plan for the treated water

Interventions planned

- **Scheduled desludging** of septic tanks once in 3 years
- **Online monitoring systems**
- **FSTP capacity expansion**- ensuring 100% treatment of scheduled desludging load at FSTP.
- **Reuse plan** for treated wastewater and treated sludge. Also overall site development.

Source: Sanitation Dept data and discussion with Desludging driver, sanitary supervisors, etc. and SS20 database

Contents

To address this situation, Satara has decided to adopt scheduled desludging of septic tanks

Current septage management practice

3% septic tanks cleaned annually *(once in >6 to 8 years)*

Demand based practice

- Cleaning is done on-call by the household, who do not see the need for regular cleaning
- Houses pay Rs.500 per trip to the ULB to get tanks cleaned, but only once in more than 6-8 years
- Lack of detailed information on household level sanitation situation
- Service availed by those who can afford.
- The ULB operates the trucks (either owned or borrowed) when the demand arises.

Recommended septage management practice

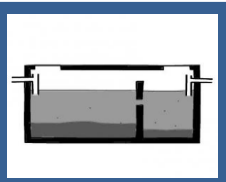
33% septic tanks cleaned annually *(once in 3 years)*

Scheduled practice

- Septic tanks will be cleaned on a **pre-determined schedule**. Regulations and penalties will be set in place
- All property owners (residential and non-residential) will pay a '**special sanitary tax**' to be levied by the ULB as per the municipal legislation* to recover operating expenses
- **MIS /database** on household level sanitation
- **Equitable service** as it will be available to all properties irrespective of income group.
- City will require an **additional number** of trucks to meet service standards (which can be operated by a **private player**)

*Maharashtra Municipal Councils, Nagar Panchayats and Industrial Townships Act, 1965, Chapter IX : Municipal taxation, Section 108

Steps in scheduled desludging planning

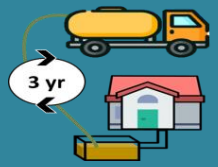


Select zone for scheduled desludging

Select zone for scheduled desludging
Assess number and size of septic tanks in that zone

Infrastructure requirement

Assess the infrastructure requirement – additional emptying trucks and FSTP capacity required



Operations model

Decide model of operations for desludging (local govt. or private service providers) and sanitation tax required to be levied

Monitoring systems

Operationalize online monitoring systems for scheduled desludging and treatment

Benefits of scheduled desludging

Equitable and inclusive services - all households / properties are covered by services. The payment is linked to property tax.

Pricing – Services are offered at lower prices, due to efficiency gains and the pricing is much less than the distress fee that households had to pay previously

Behavior change - Contribution to ODF sustainability as toilet usage can increase

No manual labour - Removal of need for manual labour due to regular emptying

Infrastructure optimization – Planned schedule and frequency for all. Clustered service visits. More predictable loads for treatment facility and route optimization of trucks

Environmental benefits - Lowered likelihood of septic tank overflows, increased efficiency of septic tanks resulting in lower pollutants (such a faecal coliforms) in drain effluent

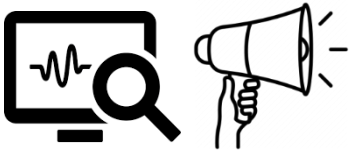
Key considerations for successful scheduled desludging practice

Providing scheduled desludging service as a Municipal Service

- Like provision of SWM door to door collection service
- Promote supply driven approach and not demand driven.
- The onus of desludging the septic tank must not be on the HHs

Higher degree of desludging acceptance rate linked to indirect cost recovery

- Avoid/ user chargers based model (Based on international experiences)
- Should promote indirect cost recovery mechanism such as sanitation tax or sewerage tax as percentage of property tax.



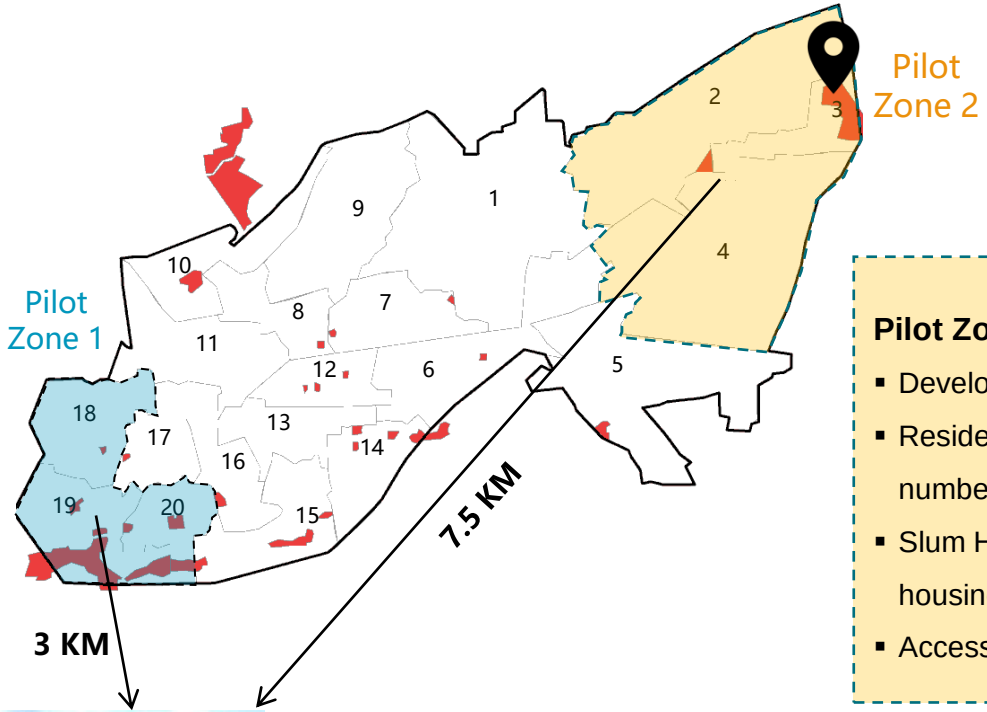
Proper monitoring and IEC campaigns

- Involving various stakeholders for Awareness generations i.e. Citizens, NGOs, ULB officials, SHGs, etc.
- Paper based or IT based monitoring systems

Selection of pilot zone for scheduled desludging

Pilot Zone 1

- High slum population
- Partially undeveloped area
- Residential zone - Mix of row houses and apartments
- High dependency on community toilets



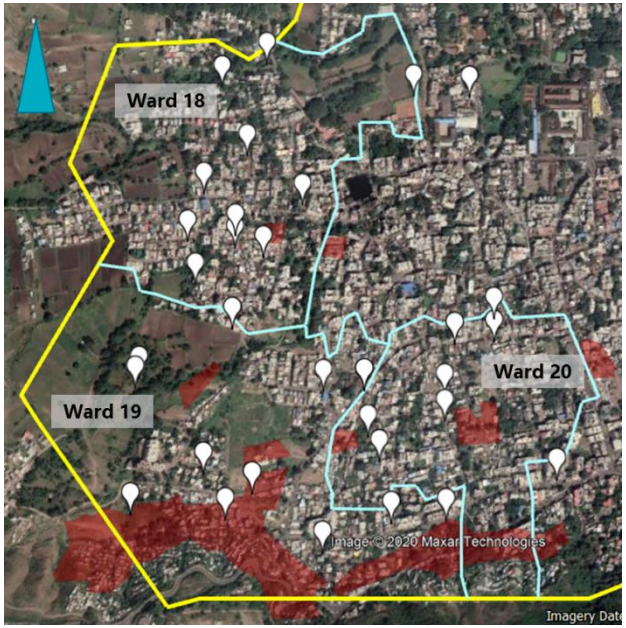
Pilot Zone 2 Character:

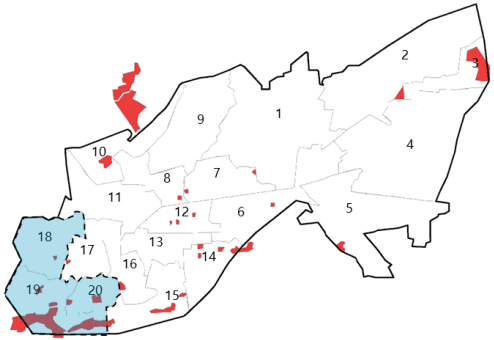
- Developed/ Planned area
- Residential zone- More number of row houses,
- Slum HHs eligible for IHSDP housing at Laxmi Tekdi
- Accessible roads

Two zones were shortlisted for scheduled desludging for further discussion with SMC

Source: Primary data collection and analysis

Sanitation assessment of pilot zone-1: Residential areas of ward 18,19 and 20





Pilot zone 1

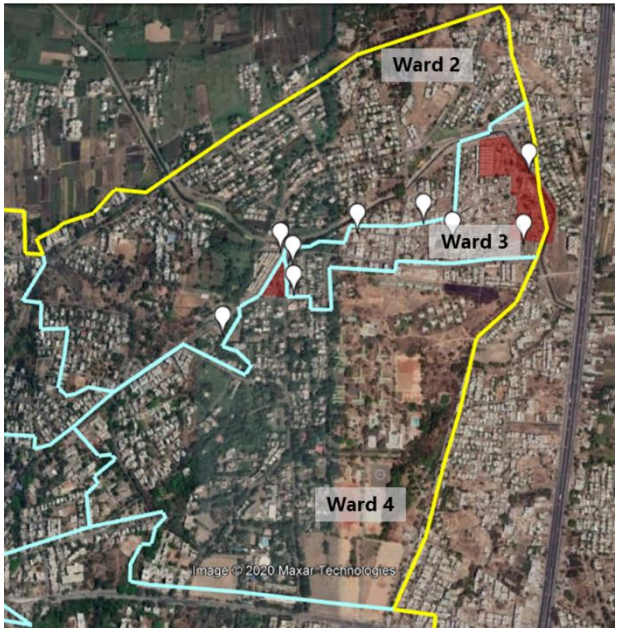
3 yr desludging cycle

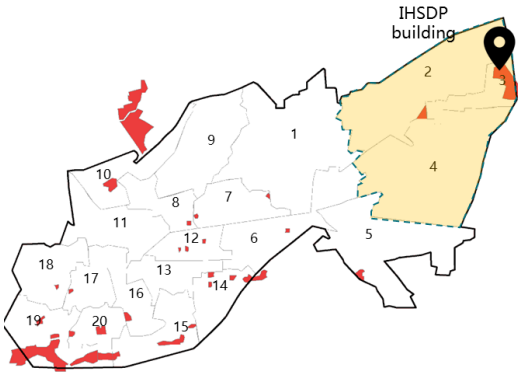
- **Total 5000 HHs; out of which 800 are slum HHs**
- **3 wards: 1 ward per year**
- **1200 septic tanks to be desludged every year**
- **19 community toilets available**
- **Distance from FSTP: 3 km**

Ward no	Area name	Area type	Population	ST (individual)	ST (Apt)	Slum	Slum no.	Slum HHs
Ward 18	Chimanpura peth	Residential	6282	1126	11	Chimanpura peth	1	20
Ward 19	Ramacha goth	Residential	6675	1196	14	501 pol wasti, 502,503 patra chal, power house, nana chowk	4	625
Ward 20	Mangalwar peth	Residential	6151	1101	13	617 mangalwar peth, samarth mandir, dastgir colony	3	220
	TOTAL		**19108**	**3423**	**38**		**8**	**865**

Source: Primary data collection and analysis, PMAY and Sanitation Department SMC

Sanitation assessment of pilot zone-2: Residential areas wards 2, 3 & 4





Pilot zone 2

3 yr desludging cycle

- **Total 5000 HHs; 370 slum HHs**
- **3 wards: 1 ward per year**
- **1200 Septic tanks to be desludged every year**
- **7 Community toilets available**
- **Distance from FSTP: 7.5 km**

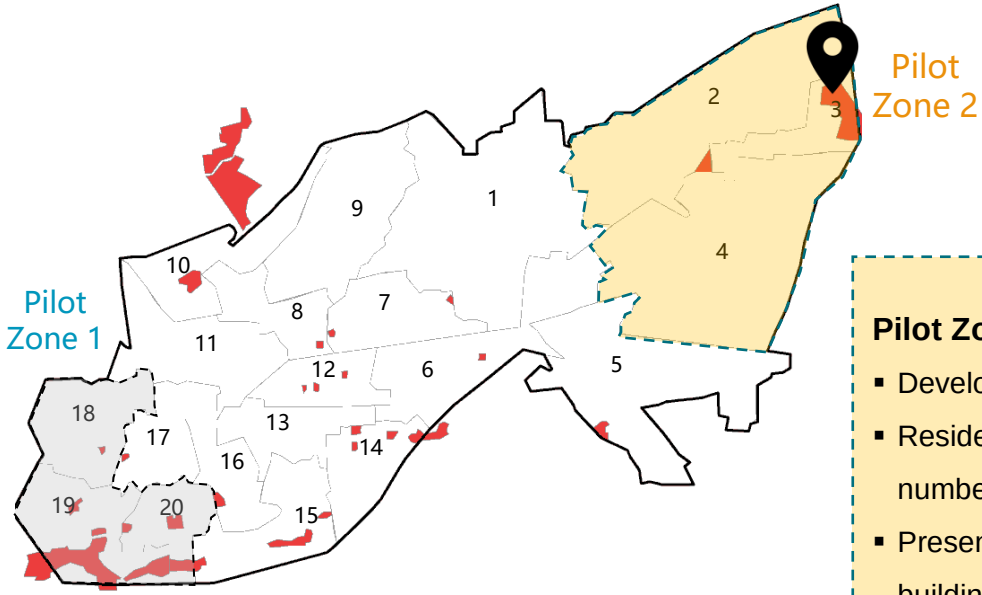
Ward no	Area name	Area type	Population	ST (individual)	ST (apt)	Slum	Slum no.	Slum HHs
Ward 2	Kanga colany,sadar bazar,satara	Residential	7198	1289	7			
Ward 3	Gavthan sadarbazar peth,satara	Residential	6675	1196	9	Laxmi tekdi	1	256
Ward 4	Utekarnagar, sadarbazar, satara	Residential	7067	1266	8	Bhimabai ambedkar nagar	1	114
	TOTAL		**20940**	**3751**	**24**		**2**	**370**

Source: Primary data collection and analysis, PMAY and Sanitation Department SMC

Selection of zone 2 as pilot zone for scheduled desludging

Pilot Zone 1

- Higher slum population
- Partially undeveloped area
- Residential zone - mix of row houses and apartments
- High dependency on community toilets



Pilot Zone 2 Character:

- Developed/ planned area
- Residential zone- higher number of row houses,
- Presence of slums- IHSDP building at Laxmi Tekdi
- Accessible roads

Based on a discussion with Satara Chief Officer, Zone 2 was selected for scheduled desludging. As it is a mix of developed as well as slum area, different accessibilities, easy to monitor, etc.

Source: Primary data collection and analysis, discussions with CO and sanitation department

Infrastructure requirement for scheduled desludging in pilot zone

Septic tanks per day	Desludging Trucks	FSTP

Existing Infrastructure

3 septic tanks/day

Demand based desludging:
Conducts 4 trips per day i.e. generates 20 KLD septage
(300 septic tanks annually)

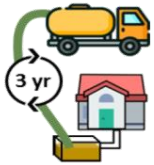
X 1 @ 5KLD

ULB vehicle can be used for demand desludging request and cleaning of CT and PT septic tanks

20 KLD
Existing capacity

The existing capacity will be utilized by the SMC vehicle

Additional infrastructure required



4-5 septic tanks/day

Scheduled desludging:
Desludged 4-5 septic tanks per day i.e. it will generate 15 KLD septage.
(1200 septic tanks annually)

X 1 @ 3KLD

One new truck of 3000 litre for scheduled desludging in one pilot zone

30 KLD
Proposed capacity

The additional capacity will be able to cater the scheduled desludging demand

Source: Primary data collection and analysis from SMC

Proposed business model for scheduled desludging

	Truck procurement	FSTP capacity expansion
Capital Cost	 X 1 @ 3 KLD Rs. 20-25 Lakhs	 30 KLD additional capacity Rs. 30-40 Lakhs
O & M Cost	**Annually** Rs. 10-15 Lakhs Considering the human resources, regular operation and maintenance, fuel, insurance of staff, etc.	**Annually** Rs. 10 Lakhs Considering the human resources, regular operation and maintenance, electricity, insurance of staff, etc.

Project support for: i) procuring one truck (3000L) for scheduled desludging and ii) FSTP capacity expansion through CSR funds

ULB has committed to paying for the O&M cost for scheduled desludging and the FSTP

Based on the SMC has agreed that scheduled desludging expenses will be covered through existing sanitation tax as well as transfers from property tax. No user charges will be collected at the time of desludging

Source: Primary data collection and analysis

Planning for scheduled desludging in zone-2 (1/2)

1

Sub-zones for desludging cycle

- The pilot area will be divided into 3 sub-zones and each sub-zone will be considered for scheduled desludging every year.

2

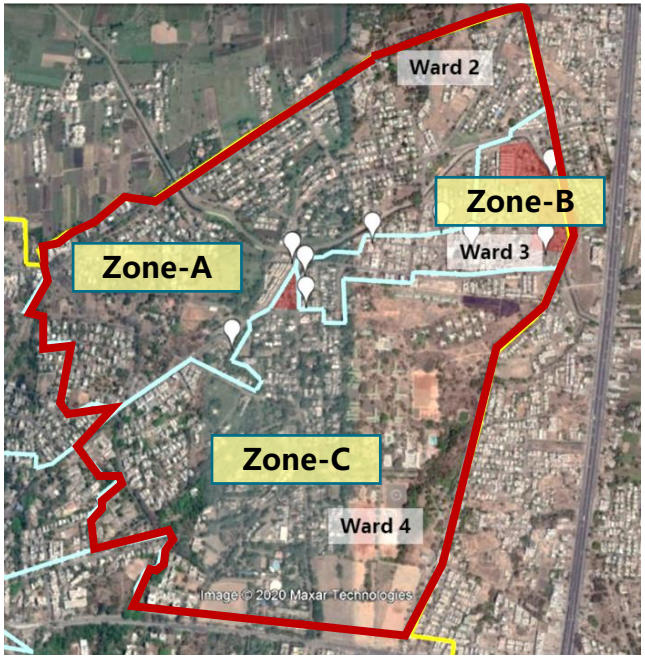
Number of septic tanks to be desludged

4-5 septic tanks/day

X 1 @ 3KLD

Scheduled desludging:
Desludged 4-5 septic tanks per day i.e. it will generate 15 KLD septage.
(1200 septic tanks annually)

One new truck of 3000 litres for scheduled desludging in one pilot zone



Map showing pilot zone for scheduled emptying

Source: Primary analysis

Planning for scheduled desludging in zone-2 (2/2)

3 Route planning

- A Route Plan is to be prepared and desludging will be done using these planned routes to ensure that there is **infrastructure optimization and service efficiency**
- **CWAS in consultation with city will assist in preparing route planning for scheduled desludging**

4 Awareness activities in pilot area

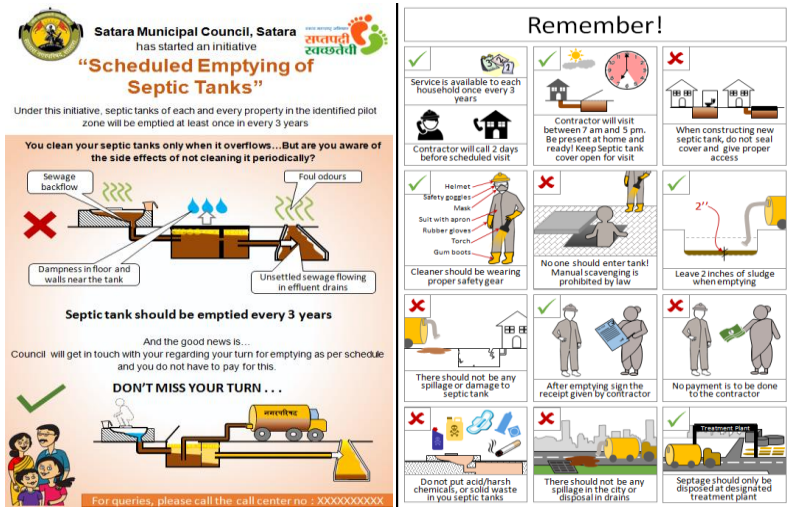
- **Develop awareness material and carry out one week awareness drive and property survey in pilot scheduled desludging area**

Household visits with information leaflets and informed about scheduled desludging

Source: Primary analysis

Awareness drive and survey of properties for emptying operations

These awareness pamphlets are to be distributed by driver during the initial survey.

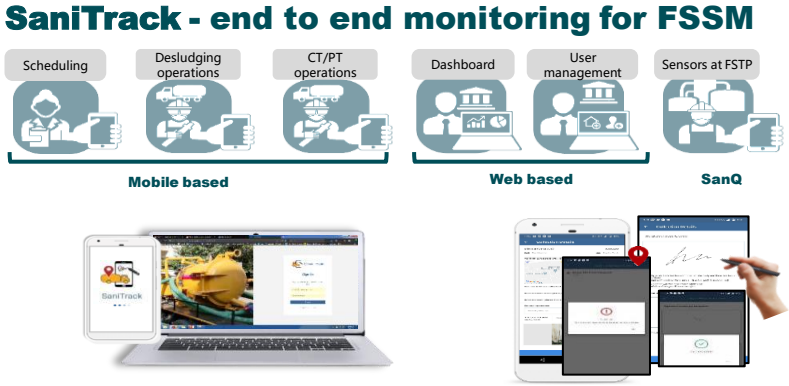



Distribution of awareness pamphlets in pilot zone

Source: Primary analysis

Online monitoring systems for tracking desludging and treatment services

- Currently city maintains desludging service record on **manual log-books.**
- **Online monitoring systems** will be adopted for tracking desludging and treatment services efficient services.
- Online monitoring systems called **Sanitrack** is planned to be used in pilot scheduled desludging zone.
- Sanitrack will help monitor scheduled desludging service at property end and safe decanting at FSTP
- **CWAS will provide training assistance to ULB staff and private operator and set-up system for online monitoring through Sanitrack.**



Sanitrack app training to supervisors and sanitation workers in Satara

Implementation of SaniTrack for efficient monitoring mechanism for scheduled desludging

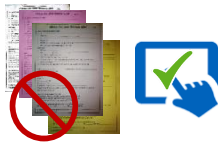
SaniTrack

E-com type app for desludging operations

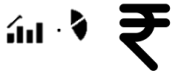
- ✓ Add properties to “todays schedule” by property tax number - **GIS linked property tax data attached to app**
- ✓ **Access cover, photo of property**
- ✓ **Customer’s & operator’s signature** – like Amazon delivery app
- ✓ Pumping station operator signature at disposal
- ✓ In-built validation checks
- ✓ Unique database

Integrated monitoring system – Across FSM service chain

“Real time” monitoring. No need to process data



Easy to operate, reduce paper work, Minimize human error



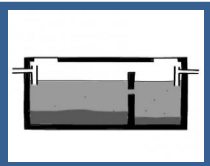
Can view progress easily

Citizen awareness about emptying procedures

Photo stamping, geo stamping, signatures

Supports vernacular language

Scheduled desludging plan has been finalized after discussion with SMC officials, and will be started after FSTP is operational



Select zone for scheduled desludging

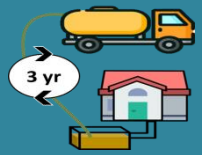
Select zone for scheduled desludging and Assess number and size of septic tanks in that zone

Pilot zone (Ward-2,3,4) is selected for scheduled desludging

Infrastructure requirement

Assess the infrastructure requirement – additional emptying trucks and FSTP capacity required

One truck of 3000 L capacity> 4-5 septic tanks per day to be desludged



Operations model

Decide model of operations for desludging (Local Govt. or Private sector) and sanitation tax required to be levied

Local government will deploy manpower and infrastructure for scheduled desludging

Monitoring systems

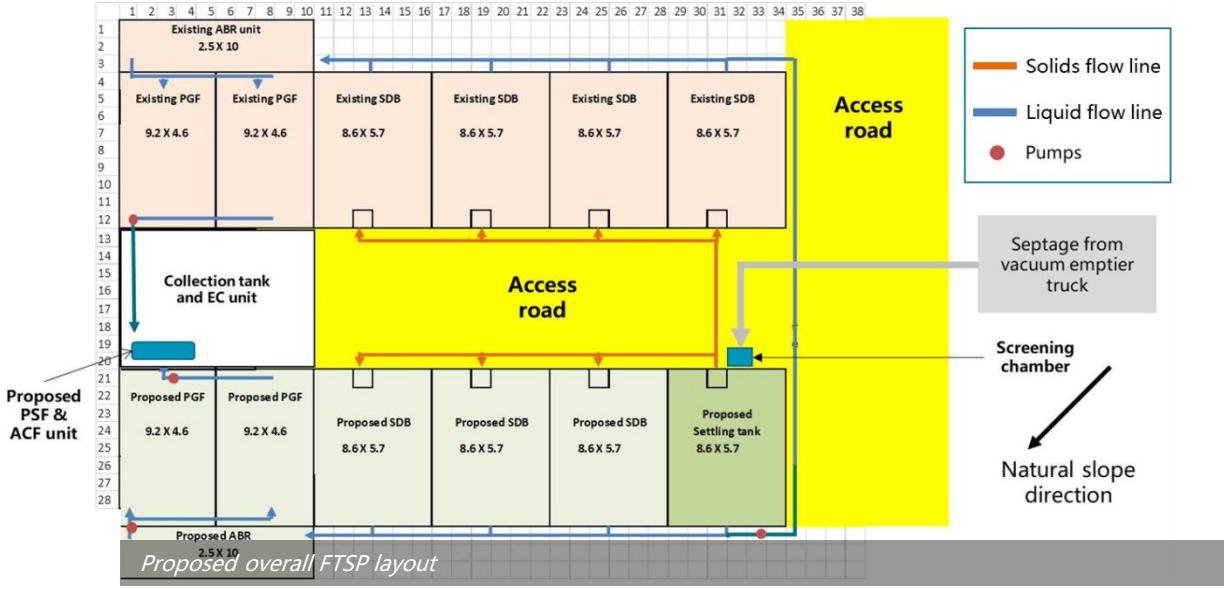
Online monitoring systems for scheduled desludging and treatment

Online monitoring systems will be deployed to monitor scheduled desludging operations

Contents

New Faecal Sludge Treatment Plant (FSTP)

- The FSTP is located at Songaon Kachra Depo which is council owned dump site. The existing FSTP has **20 kld capacity.** However, existing capacity of treatment plant will not be sufficient once a scheduled desludging service is introduced in the pilot zone.
- The proposal aims to **increase the total treatment capacity of the FSTP to 50 KLD** i.e. (additional 30 KLD capacity).



Proposed overall FTSP layout

- CWAS will support in design and capital funding of the 30 KLD FSTP. CWAS will provide training for O&M of treatment plant to FSTP operators.
- SMC will provide land, approval for design and permission to start construction. SMC will be responsible for O&M of FSTP.

Source: Primary analysis, Discussions with PWD officials and Arise Consultants

Current FSTP operation and maintenance

FSTP O&M has been given to local waste collector group:

- Kachra Vechak Sangh has been appointed for FSTP O&M.

- Mr. Bhise was inspired by the story of Kagad Kach Patra Kashtakari Panchayat KKPKP of Pune. It is a trade union and brings together different types of waste pickers. It gave them dignity of labor and self employment. He wanted to create a similar platform for all waste collectors of Satara city.
- The group also promotes high engagement of women as it gives them a confidence of being self employed. They use the money it to manage the house and educate their children.

Establishment Year	22nd April 2012
Registration Number	Reg.Maharashtra/15065/Satara
Address	736, Guruwar Peth, Satara
Founder	Mr. Shashikant Bhise
Number of Members	74 from Satara Council 101 from nearby villages outside council limits
Current Activities	Managing operations at SMC wet waste compost plant, packaging and selling the generated compost, members collect waste in different parts of the city.
Monthly Fees	Every member has to pay Rs.20 per month to be a part of the Union

Wet Waste Compost Plant at Rajwada, Satara

Treated Sludge kept for drying at the Songaon Kachra Depot

Source: Primary analysis and data collection

Training and capacity building session by CWAS Team for FSTP operation and maintenance

Training for FSTP O&M:

On 5th August, CWAS team conducted detailed training for FSTP O&M. All components of FSTP were explained in detail with operational and maintenance details, PPEs to be used. The SMC council will provide all necessary infrastructure, PPEs, equipment's, etc to the group. SMC supervisor and CWAS team regularly monitor their activities.

Ongoing work at FSTP by Kachra Vechak Sangh

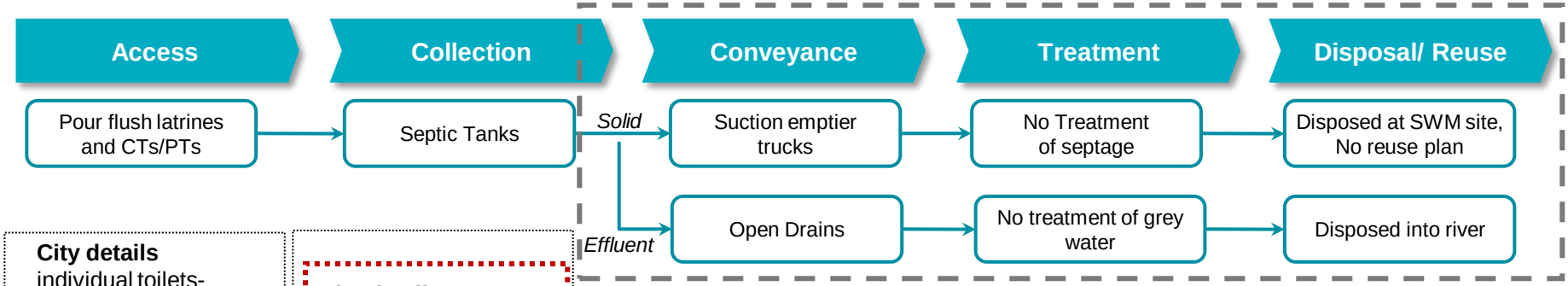
FSTP O&M training

FSTP site visit

Source: Primary analysis

Contents

FSSM Plan- Red to Green



City details
individual toilets- 26,845 HHs (79%)

Many non slum HHs are dependant on CT- 7000 HHs (21%)

City details
HHs Septic tanks- 26,845 (100%)

All CT and PT connected to septic tanks (100%)

Slum level details
individual toilets- 179 HHs (4%)

Dependent on community toilet- 3557 HHs (96%)

Slum level details
(27 slums)

15 slums with septic tanks 179 HHs

Mostly connected to open or kuchha drains

- ULB had 1 trucks of 5000 L capacity; very old so non functional most times
- 1 Private operator with two truck of 3000 litres each

- Irregular desludging, emptied only when full once in 8-9 years
- Manual log books for monitoring

- 20 KLD Faecal Sludge Treatment Plant (FSTP)
- Greywater and effluent are disposed in waterbodies without treatment
- 17.5 MLD STP under proposal
- Manual log-books for monitoring FS loads
- The city lacks a reuse plan for the treated water

Activities planned

- **Scheduled desludging** of septic tanks once in 3 years
- **Online monitoring systems**
- **FSTP capacity expansion**- ensuring 100% treatment of scheduled desludging load at FSTP.
- **Reuse plan** for treated wastewater and treated sludge, also, a plan for overall site development.

Source: Sanitation Dept data and discussion with Desludging driver, sanitary supervisors, etc. and SS20 database

FSSM plan of Satara (1/2)

	Activities	Impacts
1	**Scheduled desludging (3 year cycle) of septic tanks in the pilot zone** - Procurement of desludging trucks (one truck of 3000 litres capacity) - Operation and Maintenance of desludging truck	**Timely and affordable services** Regular desludging improves local environment, eliminates need **for manual desludging, and prevents solids overflowing from septic tanks** in open gutters which ultimately pollutes Panchganga river. Regular service to urban poor, without high user fees, enables them to get their septic tanks desludged and avoid any overflows. The households may also be encouraged to use the toilets, without worrying about the septic tanks getting filled up and having to pay high user charges to get them emptied. The O&M cost of the service for the Kolhapur Municipal Corporation will be covered through existing sanitation/sewerage or property tax.
2	**New 30 KLD Fecal Sludge Treatment Plant (FSTP)** - Design calculation and treatment technology of treatment plant - Construction of FSTP - Operation and Maintenance of FSTP	100% treatment of collected septage at treatment plant; Promote **reuse of treated wastewater and sludge; Sanitation wastepickers organisation "Kachra Sewak Sangh"** for carrying out O&M. This will contribute to their upward movement from wastepickers to managers. The waste picker group has complete right on the revenues from the sale of compost

FSSM plan of Satara (2/2)

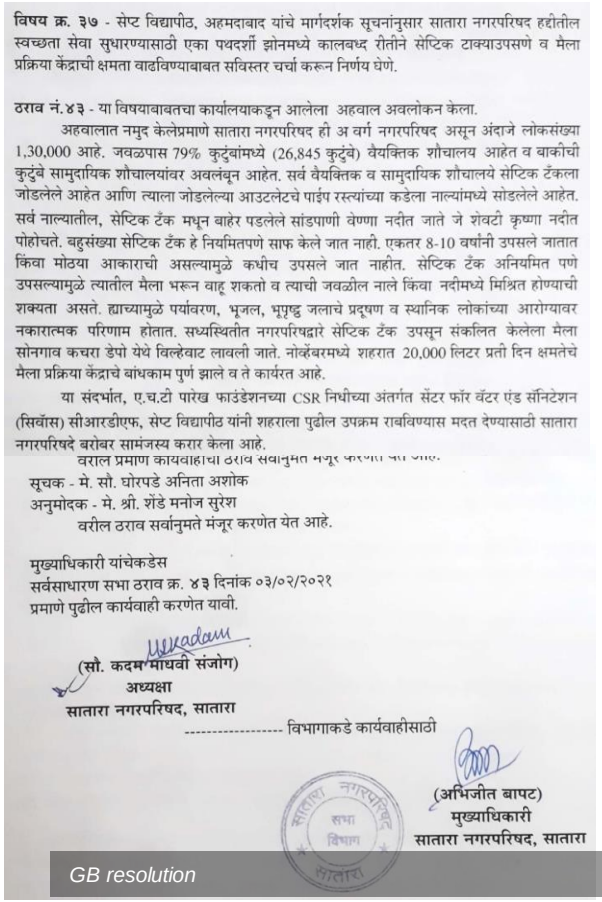
	Activities	Impacts
3	**Online Monitoring systems** - Sanitrack for scheduled desludging - GPS for tracking desludging trucks	Online monitoring system sanitrack used daily by KMC for recording and monitoring scheduled desludging. All entries are recorded digitally and analysis are captured in graphical form using dashboards.
4	**Capacity building of stakeholders** - Training and Sensitization of SMC officials - Training of sanitation workers, FSTP operators, etc. - Awareness program with citizens	Increased awareness and training of key stakeholders
5	**Reuse plan for Satara** - Assessment of current reuse practice; explore potential for other reuse options - Discussion with key stakeholders- FSTP operators, SMC officials, sanitation workers group	Increase reuse for treated wastewater and sludge

FSSM Plan was discussed and approved by the General Body (GB) of Satara Municipal Council

- **FSSM plan was presented and discussed with SMC Chief Officer (CO)** and other SMC officials. **Suggestions and feedback** were incorporated in the plan.

- CWAS presented the FSSM plan in the **GB meeting of SMC** and all members had given in-principal approval. Detailed note and presentation was submitted by CWAS.

- **Government resolution was formally passed on 3rd February, 2021** and approval was given to start implementation of activities on ground.



विषय क्र. ३७ - सेप्ट विद्यापीठ, अहमदाबाद यांचे मार्गदर्शक सूचनांनुसार सातारा नगरपरिषद हद्दीतील स्वच्छता सेवा सुधारण्यासाठी एका पथदर्शी झोनमध्ये कालबध्द रीतीने सेप्टिक टाक्याउपसणे व मैला प्रक्रिया केंद्राची क्षमता वाढविण्याबाबत सविस्तर चर्चा करून निर्णय घेणे.

ठराव नं.४३ - या विषयाबाबतचा कार्यालयाकडून आलेला अहवाल अवलोकन केला.

अहवालात नमुद केलेप्रमाणे सातारा नगरपरिषद ही अ वर्ग नगरपरिषद असून अंदाजे लोकसंख्या 1,30,000 आहे. जवळपास 79% कुटुंबांमध्ये (26,845 कुटुंबे) वैयक्तिक शौचालय आहेत व बाकीची कुटुंबे सामुदायिक शौचालयांवर अवलंबून आहेत. सर्व वैयक्तिक व सामुदायिक शौचालये सेप्टिक टँकला जोडलेले आहेत आणि त्याला जोडलेल्या आउटलेटचे पाईप रस्त्यांच्या कडेला नाल्यांमध्ये सोडलेले आहेत. सर्व नाल्यातील, सेप्टिक टँक मधून बाहेर पडलेले सांडपाणी वेण्णा नदीत जाते जे शेवटी कृष्णा नदीत पोहोचते. बहुसंख्या सेप्टिक टँक हे नियमितपणे साफ केले जात नाही. एकतर 8-10 वर्षांनी उपसले जातात किंवा मोठया आकाराची असल्यामुळे कधीच उपसले जात नाहीत. सेप्टिक टँक अनियमित पणे उपसल्यामुळे त्यातील मैला भरून वाहू शकतो व त्याची जवळील नाले किंवा नदीमध्ये मिश्रित होण्याची शक्यता असते. ह्याच्यामुळे पर्यावरण, भूजल, भूपृष्ठ जलाचे प्रदूषण व स्थानिक लोकांच्या आरोग्यावर नकारात्मक परिणाम होतात. सध्यस्थितीत नगरपरिषद्वारे सेप्टिक टँक उपसून संकलित केलेला मैला सोनगाव कचरा डेपो येथे विल्हेवाट लावली जाते. नोव्हेंबरमध्ये शहरात 20,000 लिटर प्रती दिन क्षमतेचे मैला प्रक्रिया केंद्राचे बांधकाम पुर्ण झाले व ते कार्यरत आहे.

या संदर्भात, ए.च.टी पारेख फाउंडेशनच्या CSR निधीच्या अंतर्गत सेंटर फॉर वॅटर एंड सॅनिटेशन (सिवॉस) सीआरडीएफ, सेप्ट विद्यापीठ यांनी शहराला पुढील उपक्रम राबविण्यास मदत देण्यासाठी सातारा नगरपरिषदे बरोबर सामंजस्य करार केला आहे.

वरील प्रमाण कार्यवाहीचा ठराव सर्वानुमत मंजूर करणेत येत आहे.

सूचक - मे. सौ. घोरपडे अनिता अशोक
अनुमोदक - मे. श्री. शेंडे मनोज सुरेश
वरील ठराव सर्वानुमते मंजूर करणेत येत आहे.

मुख्याधिकारी यांचेकडेस
सर्वसाधारण सभा ठराव क्र. ४३ दिनांक ०३/०२/२०२१
प्रमाणे पुढील कार्यवाही करणेत यावी.

(सौ. कदम माधवी संजोग)
अध्यक्षा
सातारा नगरपरिषद, सातारा

---------- विभागाकडे कार्यवाहीसाठी

(अभिजीत बापट)
मुख्याधिकारी
सातारा नगरपरिषद, सातारा

GB resolution

Source: SMC Officials, Sanitation Department

THANK YOU

CWAS CENTER FOR WATER AND SANITATION | CRDF CEPT RESEARCH AND DEVELOPMENT FOUNDATION | CEPT UNIVERSITY

About us

The Center for Water and Sanitation (CWAS) is a part of CEPT Research and Development Foundation (CRDF) at CEPT University. CWAS undertakes action-research, implementation support, capacity building and advocacy in the field of urban water and sanitation. Acting as a thought catalyst and facilitator, CWAS works closely with all levels of governments - national, state and local to support them in delivering water and sanitation services in an efficient, effective and equitable manner.

cwas.org.in
pas.org.in

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

CEPT_CWAS

cwas.cept

cwas.cept

cwas.cept

Annexure- 1: The sanitation challenge in India

Septage management has been neglected in Indian cities due to lack of technical guidance, inadequate resources, skills and lack of finance

64% Indians use on OSS (on site sanitation) [1]

600 people died cleaning septic tanks and sewers in the past 25 years

Lack of an **Integrated Citywide approach** towards faecal sludge and septage management

48% of the urban Indian households depend on **onsite facilities** such as septic tanks [3]

70-80% of the sewage in Urban India is left **untreated** posing environment & health risks [2]

3,65,000 – 5,00,000 deaths in children (under 5 years) due to Diarrheal diseases

1.Source: http://cpheeo.gov.in/upload/uploadfiles/files/Advisory%20Note%20on%20Septage%20Management%20in%20Urban%20India.pdf
2. http://amrut.gov.in/upload/newsrelease/5a5dc55188eb0FSSM_Policy_Report_23Feb.pdf
3. Census 2011

Annexure 2: Slum details

Ward No.	Area Name	Name Of Slums	Population	HHs in slums	No. Of Toilets	No. Of Community toilets
Ward 1	Deshmukh Colany Sadar Bazar					
Ward 2	Kanga Colany, sadar Bazar					
Ward 3	Gavthan Sadarbazar Peth	Laxmi Tekdi	3750	750	**32**	4
Ward 4	Utekarnagar, Sadarbazar	Bhimabai Ambedkar Nagar	570	114	**60**	2
Ward 5	Powai Naka	Kamathi Pura	1205	241	0	4
Ward 6	Kesarkar Peth	Raviwar Peth	435	87	**14**	5
Ward 7	Mhalar Peth	709 Guruwar Peth, Pantacha Got	750	150	**38**	8
Ward 8	Shaniwar Peth	427 Shaniwar Peth	150	30	**1**	1
Ward 9	Karanje Tarf					
Ward 10	329, Babar Colany, Karenje Peth	Akashwani Colony & Matkar Colony, 146 Wadar Wasti Pratapganj Peth	5985	1197	0	3
Ward 11	Pratapganj Peth					
Ward 12	Shaniwar Peth	492 Guruwar Peth, 272 Shaniwar Peth	560	112	0	4
Ward 13	Bhavani Peth, rajpath					
Ward 14	Machi Peth	270 Guruwar Peth, 56a/1 Kesarkar Peth, 38/105 Kesarkar Peth, Kesarkar Peth Ep-63	240	48	**12**	7
Ward 15	Adalat Wada,shaniwar Peth	184a Guruwar Peth, Machi Peth	300	60	**9**	8
Ward 16	Futka Talav	Yadogopal Peth	320	64	0	4
Ward 17	Rajwada	Ramacha Got	90	18	0	5
Ward 18	Chimanpura Peth	Chimanpura Peth	100	20	**9**	4
Ward 19	Ramacha Goth	501 Pol Wasti, 502,503 Patra Chal, Power House, Nana Chowk	3125	625	**4**	5
Ward 20	Mangalwar Peth	617 Mangalwar Peth, Samarth Mandir, Dastgir Colony	1100	220	0	10

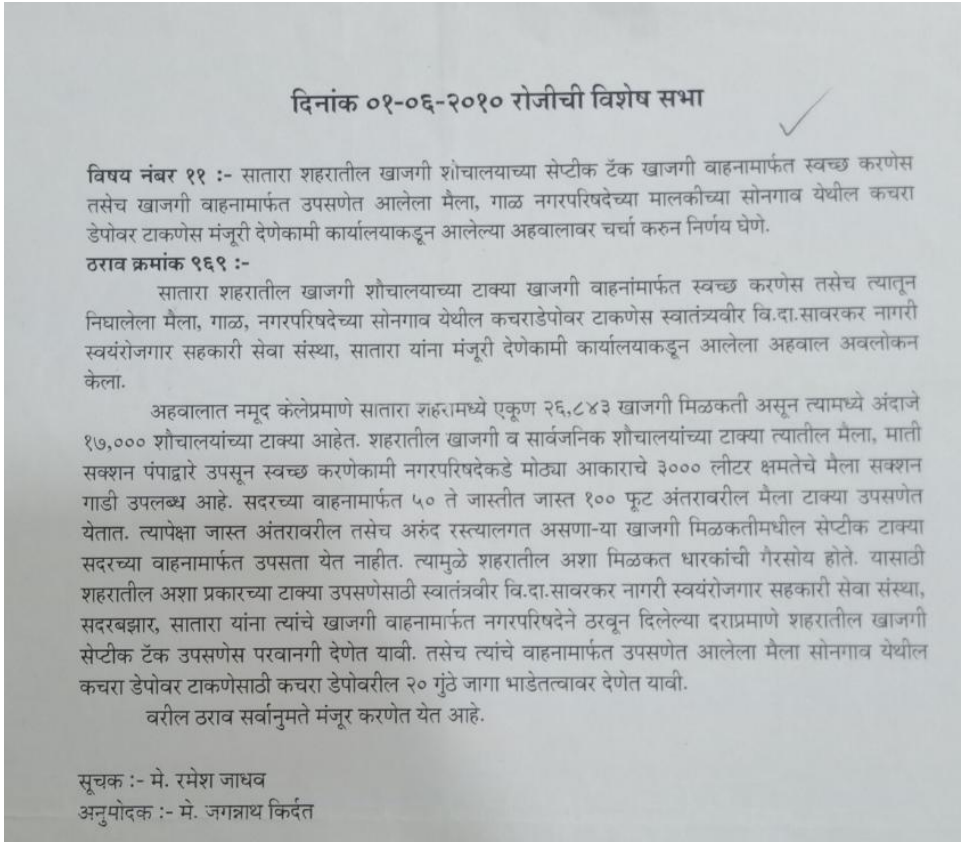
Source: Slum survey and site visit, PMAY Department

Total number of slums: 27

Total number of individual household toilets (IHHTs): 179

Total number of community toilets in slums: 64

Annexure 3: License of private desludging operator



दिनांक ०१-०६-२०१० रोजीची विशेष सभा

विषय नंबर ११ :- सातारा शहरातील खाजगी शौचालयाच्या सेप्टीक टँक खाजगी वाहनामार्फत स्वच्छ करणेस तसेच खाजगी वाहनामार्फत उपसणेत आलेला मैला, गाळ नगरपरिषदेच्या मालकीच्या सोनगाव येथील कचरा डेपोवर टाकणेस मंजूरी देणेकामी कार्यालयाकडून आलेल्या अहवालावर चर्चा करुन निर्णय घेणे.

ठराव क्रमांक ९६९ :-

सातारा शहरातील खाजगी शौचालयाच्या टाक्या खाजगी वाहनांमार्फत स्वच्छ करणेस तसेच त्यातून निघालेला मैला, गाळ, नगरपरिषदेच्या सोनगाव येथील कचराडेपोवर टाकणेस स्वातंत्र्यवीर वि.दा.सावरकर नागरी स्वयंरोजगार सहकारी सेवा संस्था, सातारा यांना मंजूरी देणेकामी कार्यालयाकडून आलेला अहवाल अवलोकन केला.

अहवालात नमूद केलेप्रमाणे सातारा शहरामध्ये एकूण २६,८४३ खाजगी मिळकती असून त्यामध्ये अंदाजे १७,००० शौचालयांच्या टाक्या आहेत. शहरातील खाजगी व सार्वजनिक शौचालयांच्या टाक्या त्यातील मैला, माती सक्शन पंपाद्वारे उपसून स्वच्छ करणेकामी नगरपरिषदेकडे मोठ्या आकाराचे ३००० लीटर क्षमतेचे मैला सक्शन गाडी उपलब्ध आहे. सदरच्या वाहनामार्फत ५० ते जास्तीत जास्त १०० फूट अंतरावरील मैला टाक्या उपसणेत येतात. त्यापेक्षा जास्त अंतरावरील तसेच अरुंद रस्त्यालगत असणा-या खाजगी मिळकतीमधील सेप्टीक टाक्या सदरच्या वाहनामार्फत उपसता येत नाहीत. त्यामुळे शहरातील अशा मिळकत धारकांची गैरसोय होते. यासाठी शहरातील अशा प्रकारच्या टाक्या उपसणेसाठी स्वातंत्रवीर वि.दा.सावरकर नागरी स्वयंरोजगार सहकारी सेवा संस्था, सदरबझार, सातारा यांना त्यांचे खाजगी वाहनामार्फत नगरपरिषदेने ठरवून दिलेल्या दराप्रमाणे शहरातील खाजगी सेप्टीक टँक उपसणेस परवानगी देणेत यावी. तसेच त्यांचे वाहनामार्फत उपसणेत आलेला मैला सोनगाव येथील कचरा डेपोवर टाकणेसाठी कचरा डेपोवरील २० गुंठे जागा भाडेतत्वावर देणेत यावी.

वरील ठराव सर्वानुमते मंजूर करणेत येत आहे.

सूचक :- मे. रमेश जाधव
अनुमोदक :- मे. जगन्नाथ किर्दत