

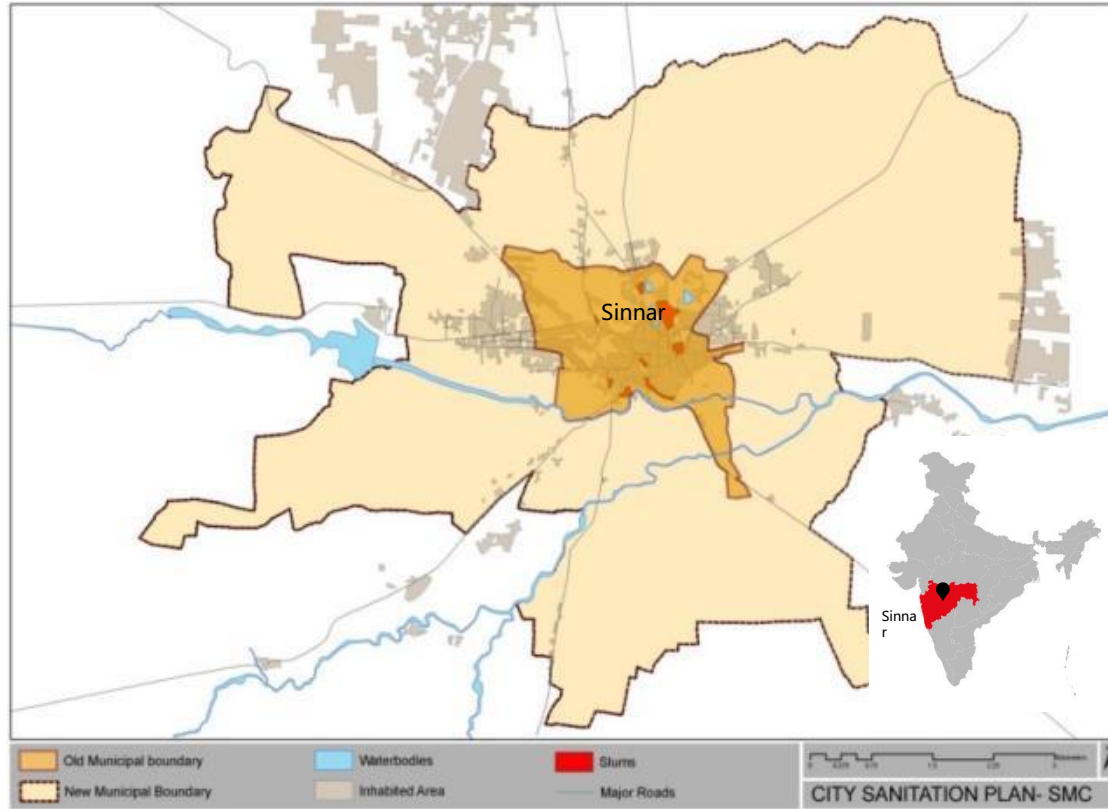


Inclusive Sanitation Service Delivery in Sinnar

A case of reuse of treated used water and sludge at Resource Center



Sinnar – a city with inclusive sanitation for all



82,000
Population



20,775
Households



52
Area (sq. Km)



14
Election
Wards



5,280
Slum
Population



1058
Slum
Households
(2021)

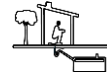
Sinnar is a city in Nashik District Indian state of Maharashtra, governed by a Municipal Council.

Sinnar – a city with inclusive sanitation for all



- A medium sized city in Maharashtra, India with a population of **82,000**
- **Representative of 4000+** small and medium cities of India`

Improved FSSM in Sinnar



90% access to own toilets with safe onsite containment



Scheduled emptying of septic tanks supported by Sanitation tax



Solar powered **Fecal Sludge Treatment Plant** and **Grey Water Treatment Plant**

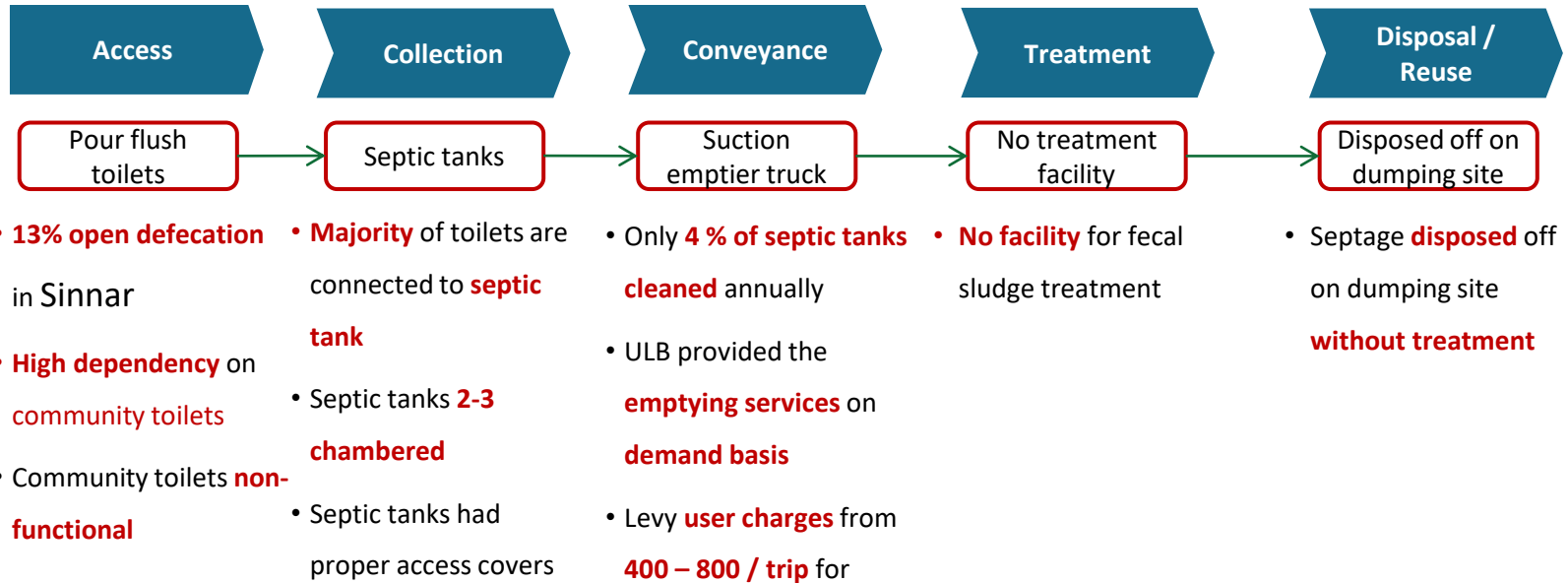


100% Reuse of the treated used water and the sludge at **garden and urban forest**



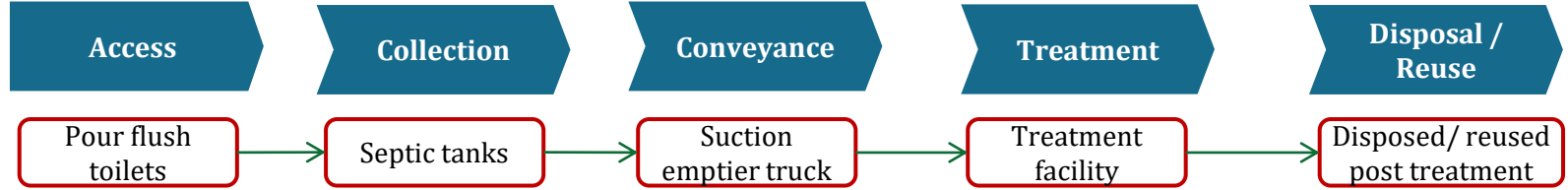
Sanitation Situation – in 2012

When we started..

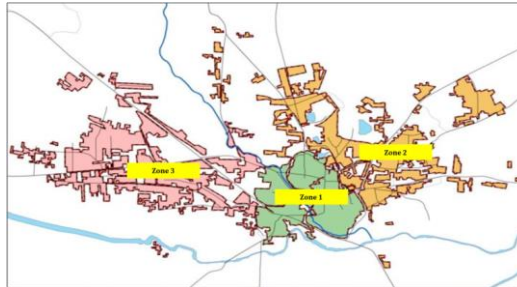


Sanitation situation in 2023

Existing Situation



- City has **attained ODF++ status** and **sustained** the same
- **Improved access** to **Individual toilet** and **toilet credit** has been explored
- All **Community toilet seats** have been made **functional**, **O&M assigned to private sector**
- **Toilet** and **septic tank database** has been generated
- **OD spot** is being developed into a **public space**
- **Scheduled emptying** of septic tanks at an **interval of 3 years** through **private sector**
- **Sanitation tax** levied for **financing O&M** of emptying services
- **Payment** to contractor through local taxes using **escrow mechanisms**
- Septage **treatment plant** has been **set up** in Sinnar
- **Sinnar FSTP - 14h FC funds**
- Reuse of treated water in **agriculture/urban forestry**.



Improved citywide Fecal Sludge and Septage Management in Sinnar

Till the date, **4723 septic tanks have been desludged** covering 8583 properties and **3.4 Cr liters + of septage has been treated** at the FSTP (including CT/PT)

- Since the implementation of scheduled desludging...
 - ✓ **5-7 septic tanks desludged per day** as compared to **7-8 per month in 2017** when demand desludging was happening
 - ✓ **80%+ acceptance rate** from HHs for scheduled service
- Sanitation workers now wear **safety gear regularly**
- Households pay **sanitation tax** instead of high user charges for desludging
- **All the fecal sludge** collected from the **households and the community and public toilets** is transported and **treated at the FSTP**.
- The FSTP is being **operated and maintained** by engaging **private operator**.



All the treated used water and septage is efficiently reused by engaging SHGs

- **8000 square** meters of urban forest and landscaped area in midst of barren land.
- More than **1400 trees of 16+ species** are planted
- All treated **water** is used for **watering the plants** through a **drip irrigation system**
- The treated **sludge** is used as **fertilizers** at the urban forest or **taken away by farmers.**
- The **quality** of the treated products are **regularly monitored** through testing the samples.
- **Meaningful livelihood** generation for SHG's by **formally engaging** them to maintain the garden and urban forest



Environmental and Socio-economical impacts of the project

Reuse of treated water contributing to carbon mitigation



- ~ **46 Million+** Litres of fresh water has been saved due to reuse of treated used water
- **10,000 sqm of land developed** in the form of urban forest and garden by reusing treated water
- **CO2 equivalent to 2268 metric ton** sequestered over 25 years **through the urban forest and garden** at the FSTP
- **CO2 equivalent to 231 metric ton** to be **mitigated over 25 years through solar units** at the FSTP and GWTP

Empowering women through provision of livelihood and safe sanitation



- **Formal engagement** of women SHGs at the FSTP and SGWTP leading to **financial empowerment**
- **Training and handholding** support has helped to build their **confidence and performance**
- Improved access, safe conveyance, treatment and reuse of fecal sludge has helped in **reducing pollution, thereby improving health and overall, well being**

IT enabled monitoring systems for FSSM, especially to monitor safe and inclusive service delivery . . .

Real time" monitoring

No need to process data for results



Easy to Operate

Reduce paper work, Minimize human error



Monitors performance

of FSSM services



Photo stamping,

Geo stamping,

Signatures



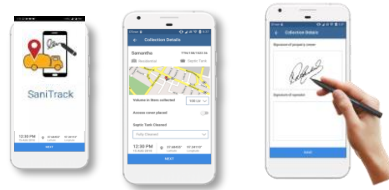
Unique database



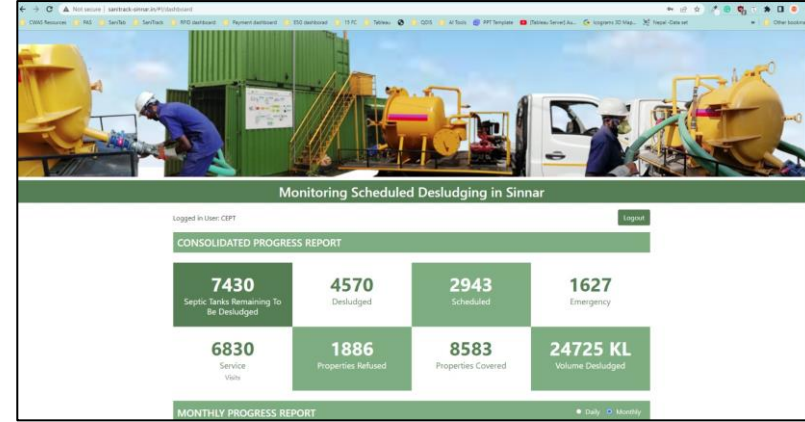
SaniTab



SaniTrack



SanQ



Through these systems, we are able to map whether the vulnerable areas have been serviced and whether the FS is safely discharged and treated at FSTP . . .

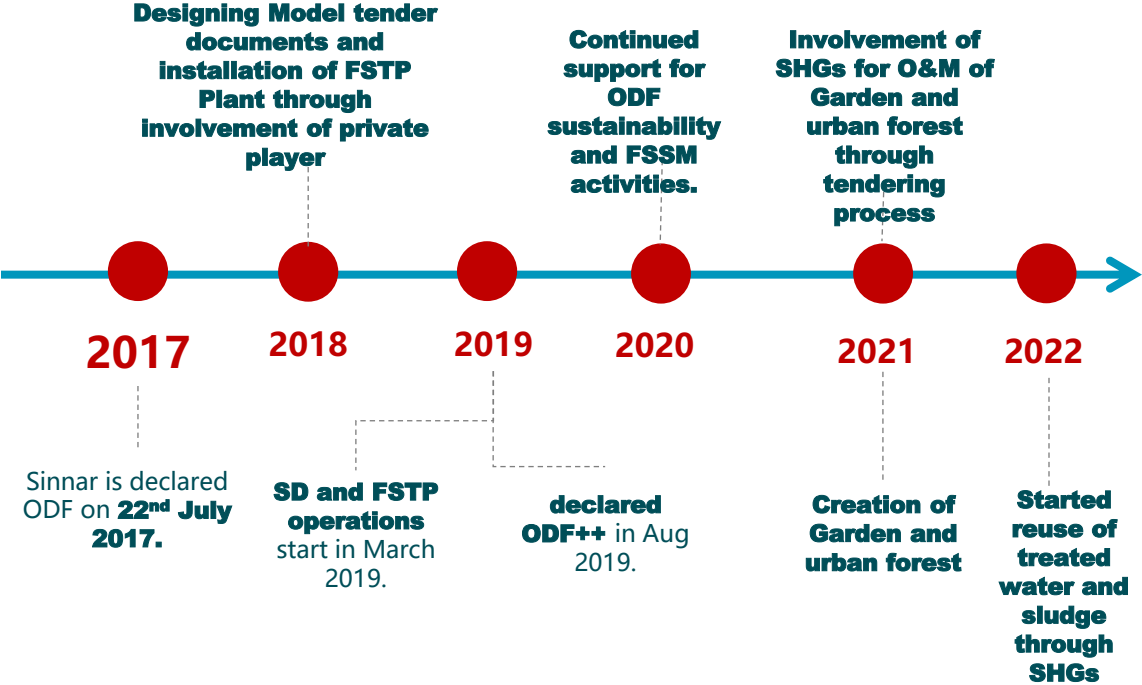
Sinnar Municipal Council (SMC) – CWAS, CEPT Partnership

After the **City Sanitation Plan** was prepared, two main proposals based on Sinnar's priorities were drafted – i) Making Sinnar ODF and ii) safe management of fecal sludge

CWAS provides SMC with planning, implementation and monitoring support for SBM and FSSM



Sinnar selected for developing **City Sanitation Plan**. City in consultation with Govt. of Maharashtra and MJP



Designing Model tender documents and installation of FSTP Plant through involvement of private player

Sinnar is declared ODF on **22nd July 2017**.

SD and FSTP operations start in March 2019.

declared ODF++ in Aug 2019.

Continued support for ODF sustainability and FSSM activities.

Involvement of SHGs for O&M of Garden and urban forest through tendering process

Creation of Garden and urban forest

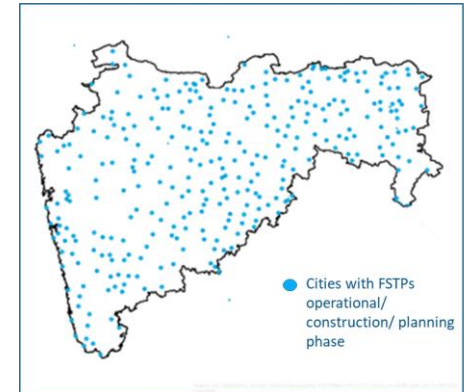
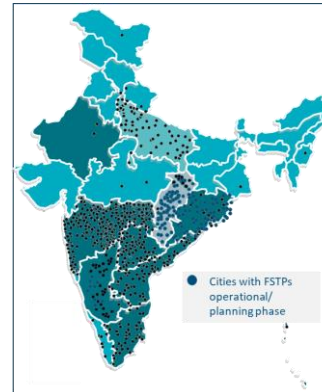
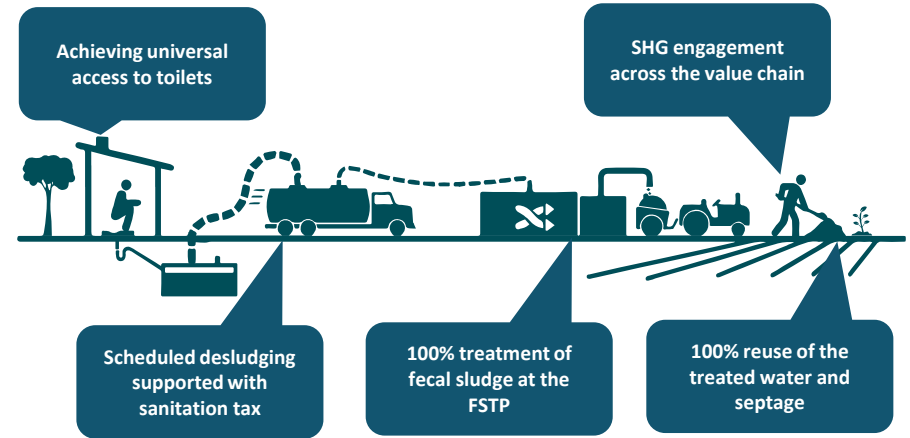
Started reuse of treated water and sludge through SHGs

CWAS has an MoU with SMC to support Sinnar for sanitation improvement activities



Learnings from Sinnar are being scaled up in Maharashtra and other states of India

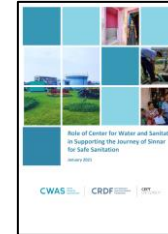
- Experiences and lessons from Sinnar have been translated into **policies and guidelines at State and National level**
- National level initiatives such as 'Swachha Bharat Mission 2.0' mandates **provision of scheduled desludging service** as a part of ODF++ protocol
- **1000+ FSTPs** in planning or implementation phase in **India**, **300+** FSTPs alone coming up in **Maharashtra**.
- **Resource recovery and use of clean energy** if adopted in these cities would contribute towards achieving **SDG 6**.
- **SBM-NULM convergence** initiative launched at the national level is also being implemented in Maharashtra.



Awards and achievements

Documentations: all the initiatives from sinnar have been extensively documented in the form of [movies](#), [reports](#), [e-flip book](#), papers etc and are widely disseminated at various **national and international platforms**. The learnings from Sinnar have also guided the policy development at the state and national level.

Awards and recognitions:



7th CSR impact awards

(An initiative of CSRBOX with support from Dalmia Bharat Foundation) under the WASH small project category.



2nd prize in 9th FICCI water awards

Sinnar was a part of CWAS's entry for the which received 2nd prize in the urban wastewater management category



AVPN constellations awards

Sinnar was a part of CWAS's entry for the which won the prize in the 'climate action category'.

Partnerships and collaborations



Government of
Maharashtra

एकच लक्ष्य
शहरे स्वच्छ
स्वच्छ महाराष्ट्र अभियान (नागरी) २.०



BILL & MELINDA
GATES foundation



Department
for International
Development

CWAS
CENTER
FOR WATER
AND SANITATION

CRDF
CEPT RESEARCH
AND DEVELOPMENT
FOUNDATION

CEPT
UNIVERSITY



Panse Consulting
Engineers Pvt. Ltd.
(Environmental Consultants)



A scenic view of a dam or reservoir. In the foreground, a large, grey concrete pipe runs diagonally across the frame. To the right, a yellow building with a window and a balcony is visible. The middle ground shows a calm body of water reflecting the sky and surrounding greenery. In the background, there are rolling hills and mountains under a clear sky. The text 'THANK YOU' is overlaid in large, white, bold letters on the left side of the image.

THANK YOU