



# Scheduled Desludging

## Innovation in Maharashtra Cities for Citywide Inclusive Sanitation

Center for Water and Sanitation, CEPT University

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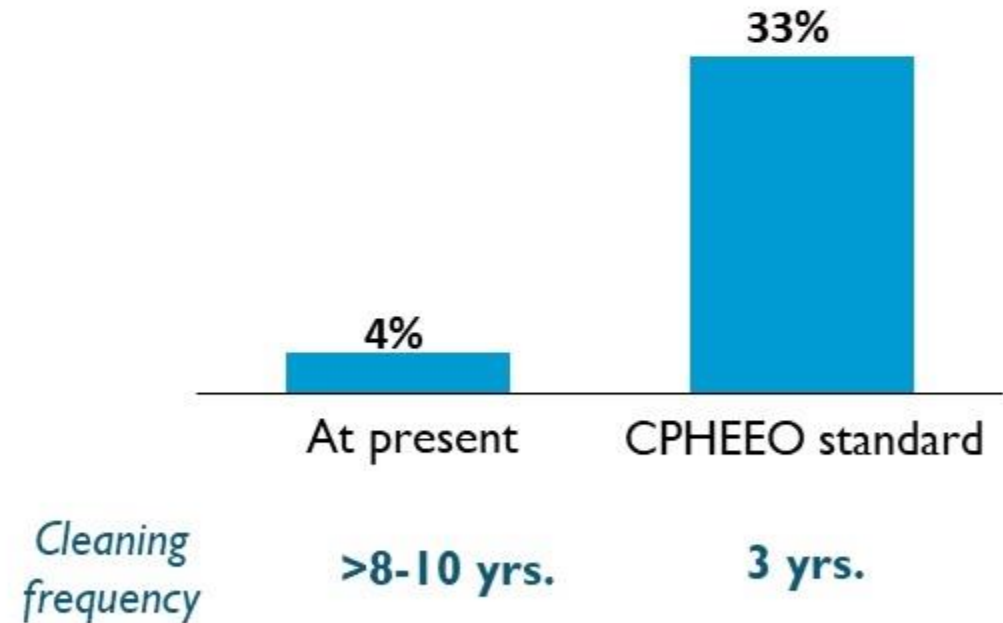


# Current practice of desludging in Indian cities is of complaint redressal and NOT a public service the way sewerage and Solid Waste Management are!

Common practice is of on-call demand based services as complaint redressal in India



Number of septic tanks cleaned annually by a small/medium ULB in India (As a % of total septic tanks)



# Environmental and social impacts



**Low desludging frequency**  
= poor efficiency of septic tank  
= poor quality of supernatant / effluent  
= Hardened sludge requires manual labour



With no designated sites for safe disposal, truck operators often have to resort to dumping on open ground or in water bodies



# What is Scheduled Desludging?

Under a scheduled desludging service...

**all septic tanks** in the city are visited **once** during a **fixed cycle**

and **mandatory** desludging is done...

according to a **predetermined schedule**...

by one or more **licenced service providers**...

Who are paid through **annuity payment** backed by ULB revenues

and deliver sludge safely to a **designated disposal site for treatment and reuse**



# Benefits of Scheduled Emptying



**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** - Likely reduction in BOD in septic tank effluent, as well as lower likelihood of septic tank overflows

# Wai and Sinnar council decided to involve private sector for Scheduled desludging

**Preliminary discussions with potential private providers to assess interest, concerns**

## **Ownership of assets**

The private party brings their own trucks for emptying and operate them for 3 years.

**Transparent bidding process through government approved process and websites**

## **Performance linked payments**

Payments based on achieving agreed targets of septic tanks emptied

Clauses to ensure safety standards - use of PPE and vigilance against manual scavenging

Fines on non-achievement of targets

**Awareness activities to be done by private contractor**

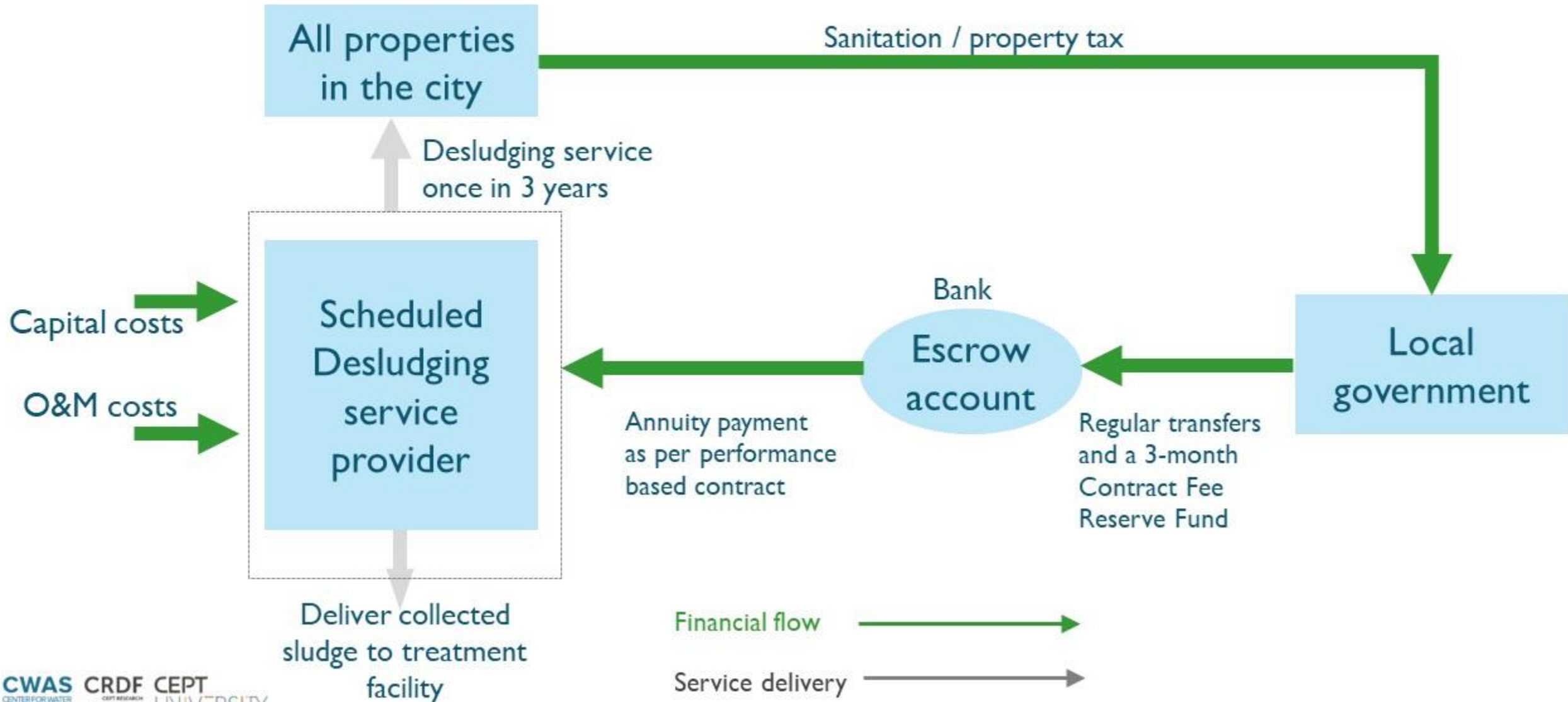
## **Escrow mechanism – reducing late payment risk**

An Escrow account is held by a third party bank.  
ULB needs to maintain a fixed balance in it = 3 months of payment

**Emergency emptying also included in contract**



# Performance Linked Annuity Model (PLAM) for scheduled desludging



# Planning for Scheduled desludging in WAI and SINNAR

## 1. Zones of Emptying cycle

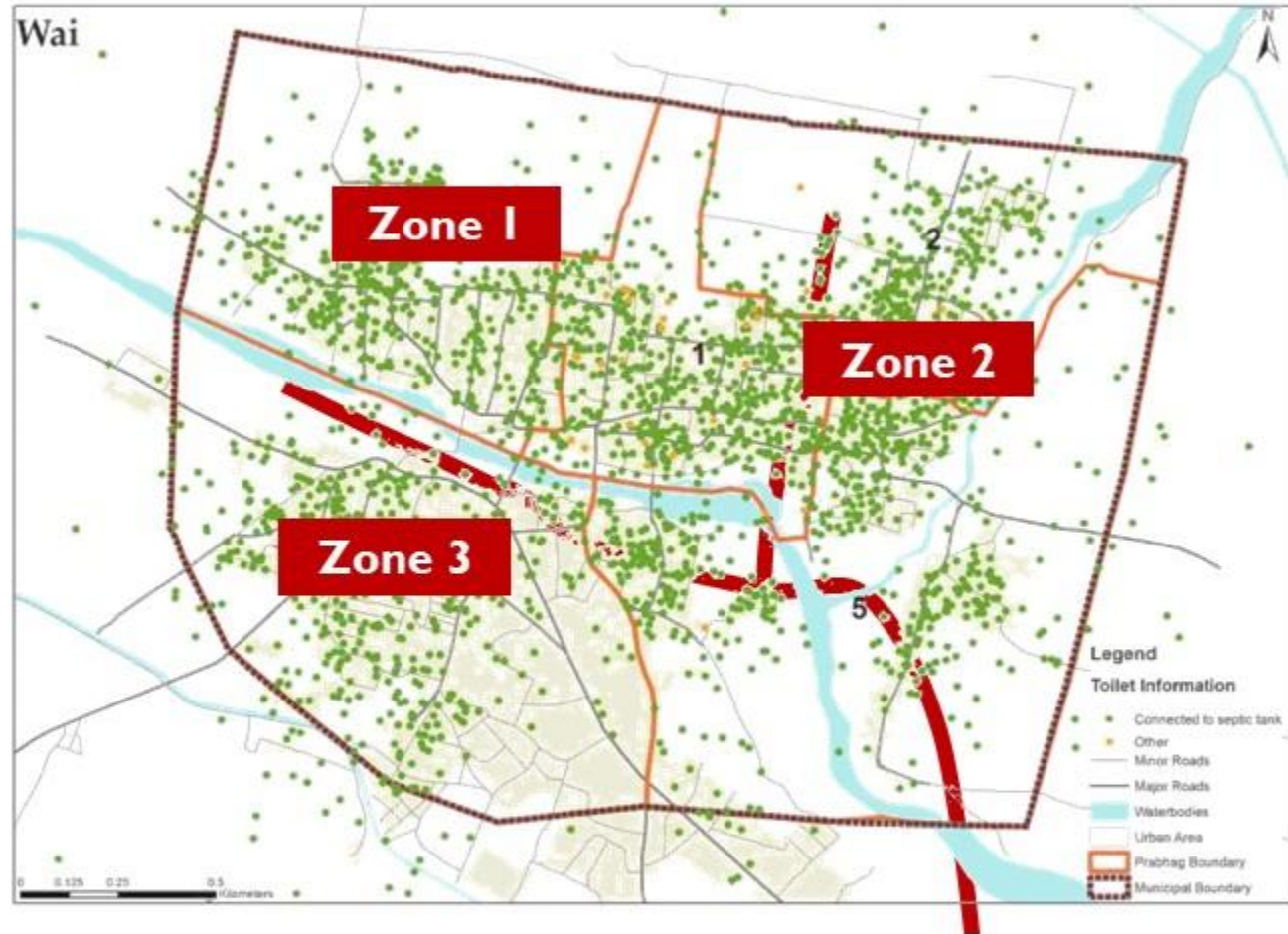
- The city was divided into 3 zones as per the citywide database on toilets and septic tanks.

## 2. Emptying Truck: Number and capacity

- Determine number and capacity of vehicles required for desludging operations.

## 3. Route planning

- Deciding the truck movement within the zone





# Awareness generation and communication



Household visits by desludger with info. leaflets



Paintings / banners in the city by SMC and WMC



WMC circulated small videos



Intimation through SMS







# Wai Nagarpalika

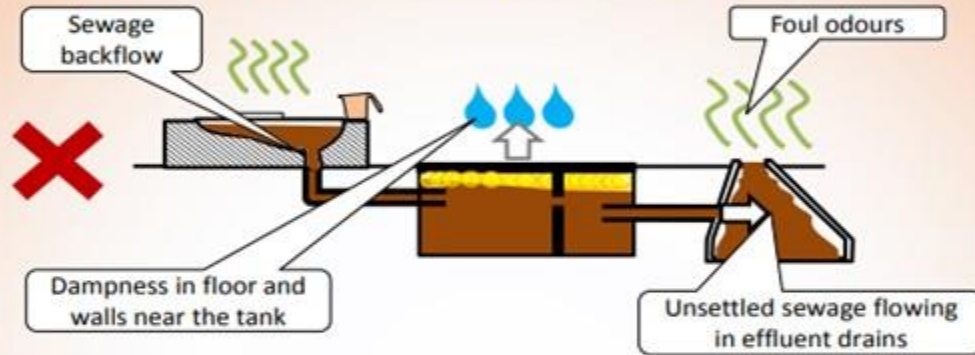
has devised a unique

## “Scheduled Emptying of Septic Tanks scheme”



A first of its kind in the country, under which septic tanks of each and every property of the municipal council will be emptied at least once in every 3 years

You clean your septic tanks only when it overflows...But are you aware of the side effects of not cleaning it periodically?

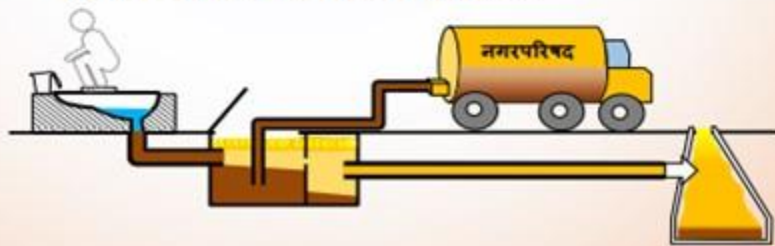


Septic tank should be emptied every 3 years  
Avail Nagarpalika services to empty!

And the good news is...

Nagarpalika will get in touch with you regarding your turn for emptying as per schedule and you do not have to pay for this.

**DON'T MISS YOUR TURN . . .**



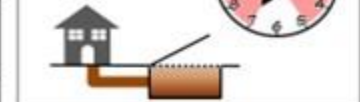
# Remember!



Service is available to each household once every 3 years



Contractor will call 2 days before scheduled visit



Contractor will visit between 7 am and 5 pm. Be present at home and ready! Keep Septic tank cover open for visit



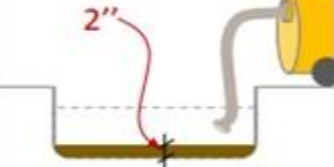
When constructing new septic tank, do not seal cover and give proper access



Cleaner should be wearing proper safety gear



No one should enter tank! Manual scavenging is prohibited by law



Leave 2 inches of sludge when emptying



There should not be any spillage or damage to septic tank



After emptying sign the receipt given by contractor



No payment is to be done to the contractor



Do not put acid/harsh chemicals, or solid waste in you septic tanks



There should not be any spillage in the city or disposal in drains



Septage should only be disposed at designated treatment plant



# IT enabled monitoring and database creation

“Real time” monitoring  
No need to process data  
for results



Easy to Operate,  
Reduce paper work,  
Minimize human error



Can view progress easily  
and process payments



Photo stamping,  
Geo stamping,  
Signatures



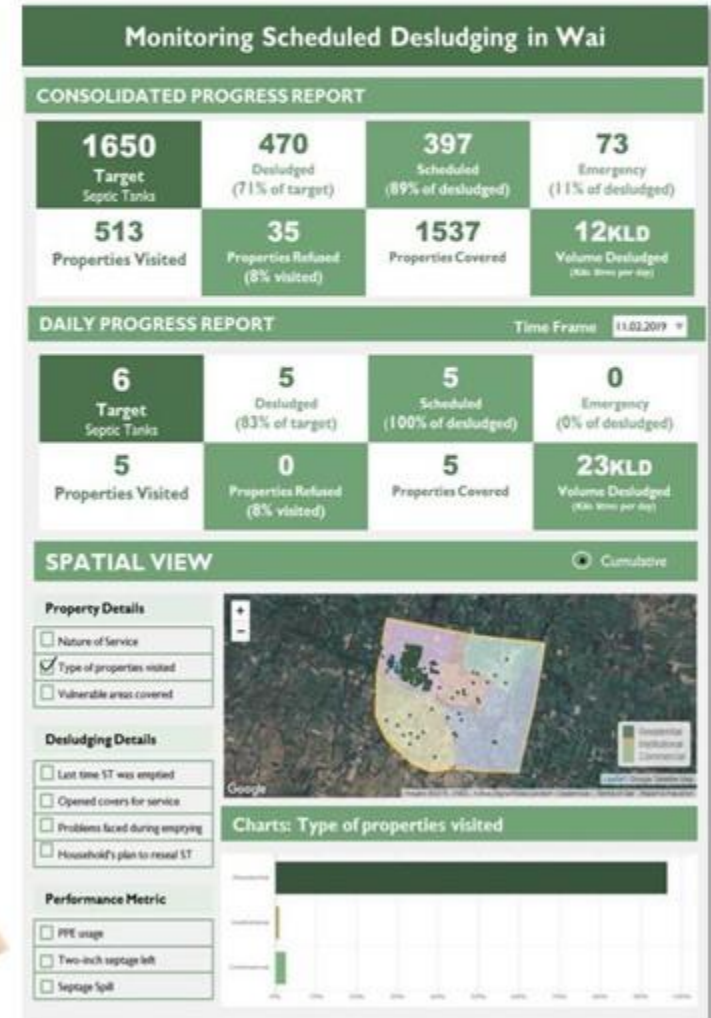
Unique database



## SaniTab

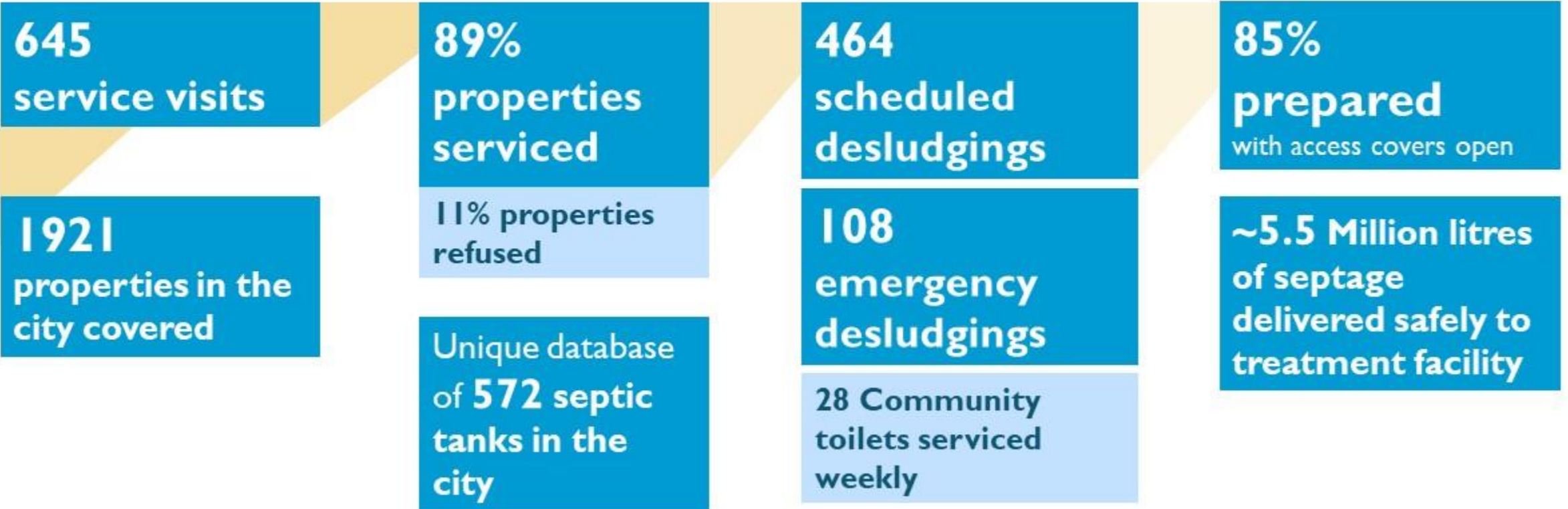


## SaniTrack



# What has been achieved by scheduled desludging in Wai

## Results after 1 year of scheduled emptying



26 August 2019



# Scaling up in Maharashtra

- Model Tenders for Scheduled emptying and DBO tender for FSTP is ready and other cities in Maharashtra are using it.
- Model city Sinnar and Wai have begun on scheduled emptying
- Based on Sinnar and Wai experience, training of 130 ULBs selected from Maharashtra for developing FSSM plans – 90% report plans to take up same model to become ODF++
- Learnings from Sinnar and Wai have been translated into policies and guidelines at State and National level
- Resource materials available for cities
  - Model tender documents
  - Case studies of Wai and Sinnar
  - Awareness materials
  - Monitoring tools developed





# Thank you

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#### About us

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

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