

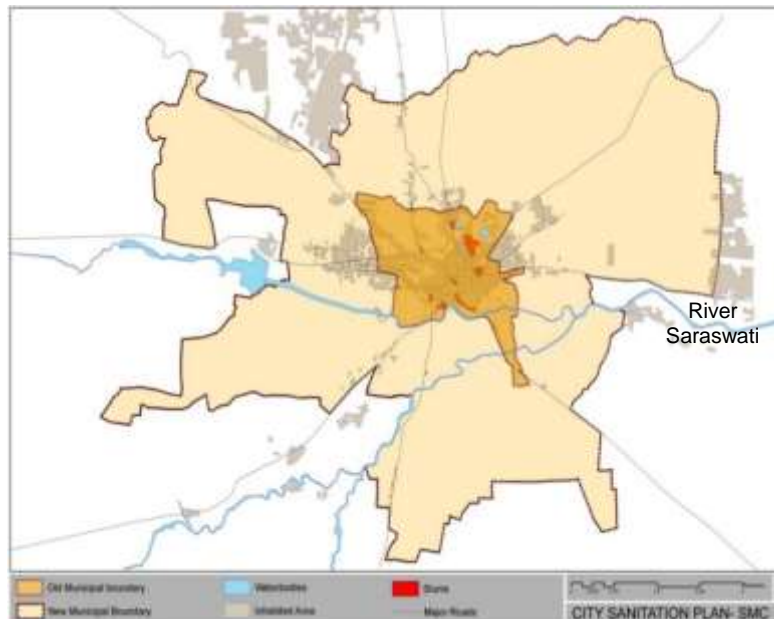
Balancing competing interests and harnessing opportunities for better wastewater governance

Case: New scalable business models for citywide sanitation: Sinnar City, India



Sinnar city, India

- Sinnar – 180 km from Mumbai
- Population ~70,000
- Fast growing city: Municipal area has grown from ~5 Sq. Km. in 2001 to ~51 Sq. Km. in 2011
- Flourishing industrial zones in east and north-west
- City council supported by CEPT for sanitation planning and implementation



Sanitation services in the city

Before



User interface

Open defecation and high dependence on community toilets



Collection

Majority of toilets connected to septic tanks (74%)
Tanks do not conform to design norms



Conveyance

Irregular emptying of septic tanks – “call when emptying needed” basis



Treatment & Disposal

No treatment facility for wastewater and septage
Untreated Effluent disposed into river
Untreated Septage dumped at solid waste dump site

After

City launched own toilet scheme + Swachh Bharat Mission → Recently declared Open Defecation Free, >80% households have toilets

City level Regulations and training of masons for proper design

Plan for Scheduled cleaning of septic tanks – once every 3 years
Private sector emptier involved - Levying a Sanitation tax to support operations

Fecal Sludge Treatment facility planned through private sector involvement
River and GW quality testing

Competing interests and conflicts

Responsible for sanitation services + adherence to laws

- Environmental protection laws and disposal quality standards
- Prohibition of Manual scavenging
- Public health safety
- Building bye-laws
- **BUT - Low technical capacity, manpower, funds**
- **Need to ensure adherence to norms and laws but no way to monitor operations !!**



Government



Households



Business



Farmers

Competing interests and conflicts



Government



Households

Business



Farmers



Sanitation sector: huge scale for business and maximize profits

- Emptying service as profitable business
- New innovative technologies in treatment and resource recovery
- Profit by selling of treated septage and water
- **But they need to adhere to govt. norms - Safe disposal, No env. pollution, Safety gear and no manual scavenging**

Competing interests and conflicts



Government



Households



Business

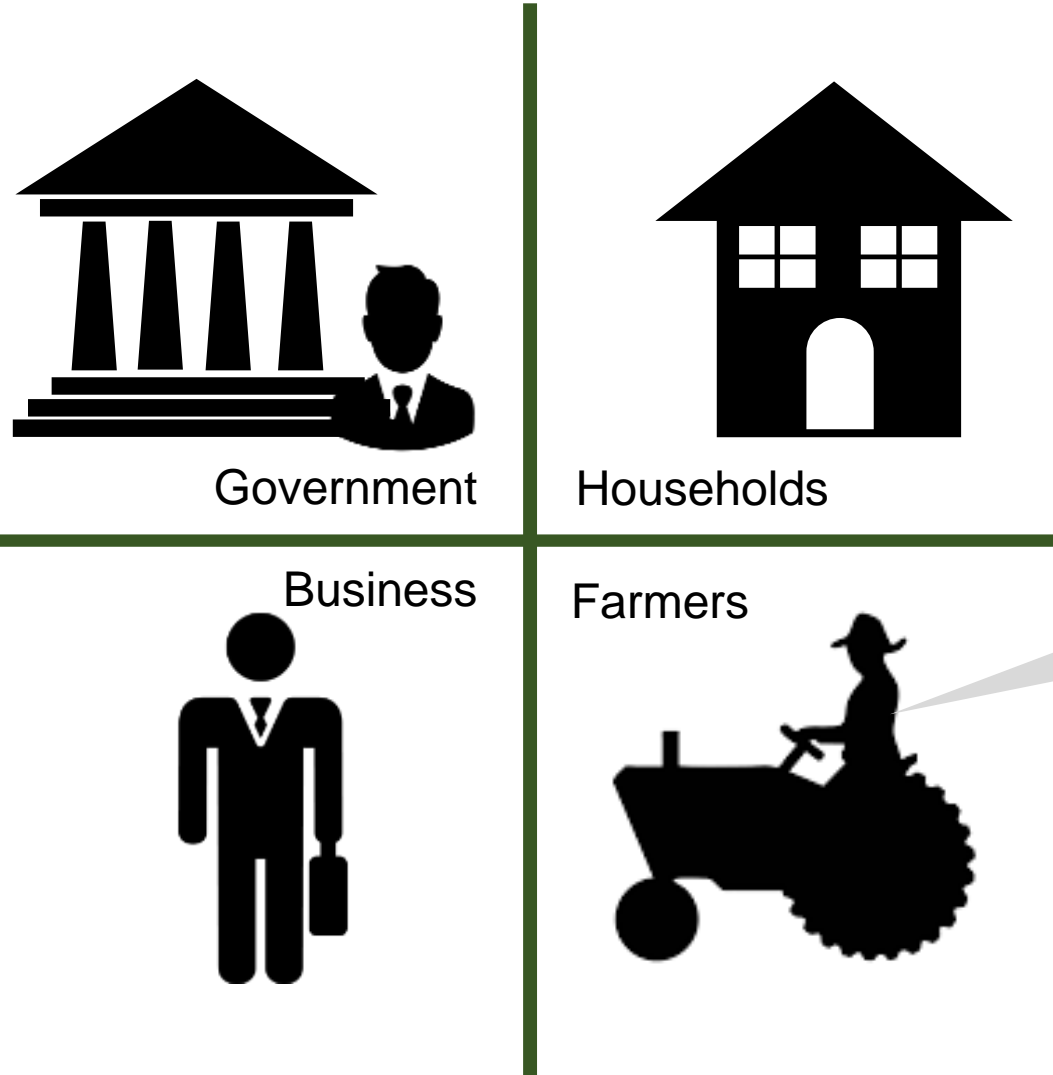


Farmers

Need low-cost and no-hassle service

- No regulations on toilet/septic tank design
- Irregular emptying!!
- Need to pay higher for emergency cleaning
- Health concerns from environmental pollution and un-emptied septic tanks

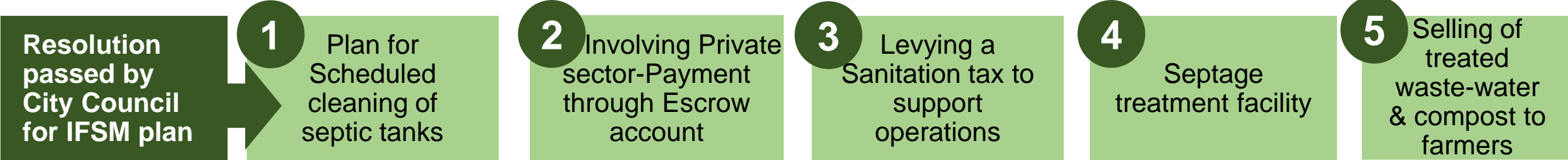
Competing interests and conflicts



Using Wastewater is cheaper than buying water during shortage

- Water shortage during summer
- Ready to use even untreated wastewater available at low or no-cost
- But there is Groundwater pollution risk
- After treatment- have to pay higher for treated wastewater

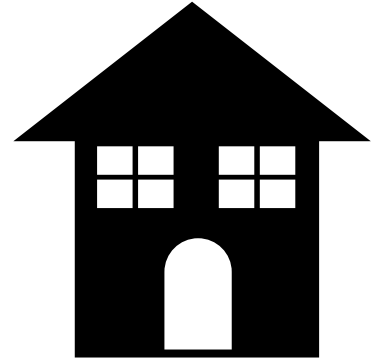
Sinnar wastewater treatment framework



- Sanitized town
- Environment and public health protection?
- Large funds not required



Government



Households

- Sanitary toilets
- Regular Emptying?
- Lower/competing emptying charges

- Business at large scale?
- High quality vehicles
- Payment risk mitigated with escrow account



Business



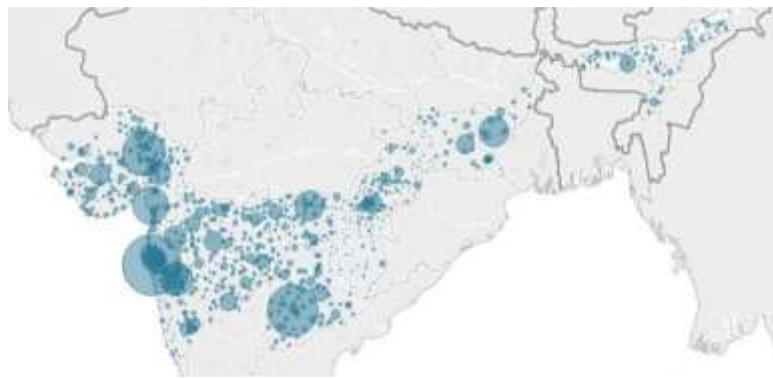
Farmers

- Treated water and compost for farming?



PAS Project - Performance Assessment System for urban water supply and sanitation

Annual service delivery profile for 900+ cities in India across 6 states



Supporting Swachh Bharat Mission in Maharashtra state

Financing Water and Sanitation

Sanitation Planning tools

Onsite sanitation Action research

Equity in Municipal Services

City level support for citywide sustainable sanitation

Capacity Building activities

Urban Water Security

Thank you . . .

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CEPT
UNIVERSITY

C-WAS

Center for water
and Sanitation

CEPT University: Our role

1 Action-research

C-WAS at CEPT University is established to focus on improving water and sanitation services in India.

Involved in planning & implementation of sustainable sanitation services in towns in India.



Frameworks, models, tools and capacity building for citywide sanitation

- End to end FSM planning
- Innovative sanitation financing
- Engagement of private sector through profitable business models

2 City support



Technical support for FSM planning and implementation to **small and medium towns** in Maharashtra, India

3 State support for SBM

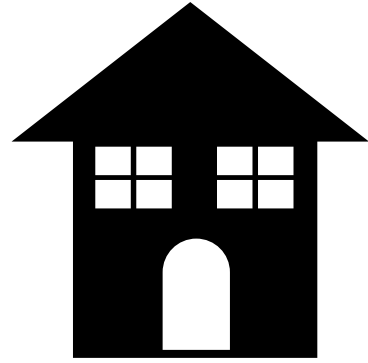
Partner to **State Government** of Maharashtra for implementation of Swachh Bharat Mission (Clean India Mission) in Maharashtra



Lessons from city level actions
→ **State and National strategies, Policies and Guidelines**



Competing interests in FSM



Sinnar city creating a win-win scenario by involving private sector through well balanced contracts

Scheduled cleaning plan for septic tanks



Contract with Private sector emptier



Levying a Sanitation tax to support operations

Septage treatment facility



DBOT mode



Selling of treated waste-water & compost to farmers

Sanitation services in the city – before intervention



User interface

1. Recently declared Open Defecation Free under the Swachh Bharat Mission



Collection

2. Majority of toilets connected to septic tanks (74%)
3. Tanks do not conform to design norms



Conveyance

4. Septage emptied once every 8-10 yrs – not regular. Effluent flows in open drains
5. City owns 1 suction truck which works on a call-when-needed basis



Treatment & Disposal

6. No treatment facility for wastewater and septage
7. Untreated Effluent disposed into river
8. Untreated Septage dumping at solid waste dump site

