



## Sinnar city, India Sanitation story

- 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



2012-13	2014	2014	2014	2017	Now moving from ODF towards ODF+
City Sanitation Plan prepared	Own Toilet Scheme: Subsidy for household toilets	Resolution for IFSM plan	Convergence of Own toilet scheme with Swachh Bharat Mission	Sinnar declared ODF city	



## Sanitation services in the city – before and after intervention

	User interface	Collection	Conveyance	Treatment and disposal
<b>Before</b>	<ul style="list-style-type: none"> <li>• Open defecation and high dependence on community toilets</li> </ul>	<ul style="list-style-type: none"> <li>• Majority of toilets connected to septic tanks (74%)</li> <li>• Tanks do not conform to design norms</li> </ul>	<ul style="list-style-type: none"> <li>• Irregular emptying of septic tanks – “call when emptying needed” basis</li> </ul>	<ul style="list-style-type: none"> <li>• No treatment facility for wastewater and septage</li> <li>• Untreated Effluent disposed in river</li> <li>• Untreated Septage dumped at solid waste dump site</li> </ul>
<b>After</b>	<ul style="list-style-type: none"> <li>• City launched own toilet scheme + Swachh Bharat Mission → Recently declared Open Defecation Free, &gt;80% households have toilets</li> </ul>	<ul style="list-style-type: none"> <li>• City level Regulations and training of masons for proper design</li> </ul>	<ul style="list-style-type: none"> <li>• Plan for Scheduled cleaning of septic tanks – once every 3 years</li> <li>• Private sector emptier involved - Levying a Sanitation tax to support operations</li> </ul>	<ul style="list-style-type: none"> <li>• Fecal Sludge Treatment facility planned through PSP</li> <li>• River and Groundwater quality testing</li> </ul>

## Moving towards ODF+ with Integrated Fecal Sludge Management



<h3>Regular septic tank emptying</h3> <ul style="list-style-type: none"> <li>• City divided in 3 zones. 2 trucks will annually desludge ~4000 septic tanks annually</li> <li>• Tender floated and awarded to a Pune city based contractor</li> <li>• Escrow account created to mitigate payment concerns</li> </ul>	<h3>IEC activities for FSM</h3>	<h3>Water quality testing</h3> <ul style="list-style-type: none"> <li>• Water samples from river, drains, Bore wells, open wells, hand pumps from all across the city</li> <li>• To know Impact of STE work on quality of Effluent</li> </ul>	<h3>Treatment Plant</h3> <ul style="list-style-type: none"> <li>• Floated Design-Build-Operate-Transfer basis tender for Fecal sludge treatment plant</li> </ul>
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## Competing interests and conflicts

Government	Households	Business	Farmers
<p>Responsible for sanitation services + adherence to laws</p> <ul style="list-style-type: none"> <li>• Environmental protection laws and disposal quality standards</li> <li>• Prohibition of Manual scavenging</li> <li>• Public health safety</li> <li>• Building bye-laws and technical considerations</li> <li>• BUT - Low technical capacity, manpower, funds</li> <li>• Need to ensure adherence to norms and laws but no way to monitor operations !!</li> </ul>	<p>Need low-cost and no-hassle service</p> <ul style="list-style-type: none"> <li>• No regulations on toilet/septic tank design</li> <li>• Irregular emptying!!</li> <li>• Need to pay higher for emergency cleaning</li> <li>• Health concerns from environmental pollution and un-emptied septic tanks</li> </ul>	<p>FSM emerging sector for business. Want to scale up business and make maximum profits</p> <ul style="list-style-type: none"> <li>• Emptying service as profitable business</li> <li>• New innovative technologies in treatment and resource recovery</li> <li>• Profit by selling of treated septage and water</li> <li>• But they need to adhere to govt. norms - Safe disposal, No env. pollution, Safety gear and no manual scavenging</li> </ul>	<p>Using Wastewater is cheaper than buying water during shortage</p> <ul style="list-style-type: none"> <li>• Water shortage during summer</li> <li>• Ready to use even untreated wastewater available at low or no-cost</li> <li>• But there is Groundwater pollution risk</li> <li>• After treatment- have to pay higher for treated wastewater</li> </ul>
<ul style="list-style-type: none"> <li>• Sanitized town</li> <li>• Environment and public health protection?</li> <li>• Large funds not required</li> </ul>	<ul style="list-style-type: none"> <li>• Sanitary toilets</li> <li>• Regular Emptying?</li> <li>• Lower/competitive emptying charges</li> </ul>	<ul style="list-style-type: none"> <li>• Business at large scale</li> <li>• High quality vehicles</li> <li>• Payment risk mitigated with escrow account</li> </ul>	<ul style="list-style-type: none"> <li>• Treated water and compost for farming?</li> </ul>