



# Exploring PPP Opportunities for Smaller Towns in Maharashtra

## Workshop Report

July, 2014

## ➤ Exploring PPP Opportunities for Smaller Towns in Maharashtra



### *Workshop Report*

4<sup>th</sup> July 2014

---

## ➤ Workshop on Exploring PPP opportunities for smaller towns in Maharashtra

*Organized by*

*CEPT University, Ahmedabad and AILSG, Mumbai*

*at*

*All India Institute of Local Self Government (AILSG), Fort Office, Mumbai*

4<sup>th</sup> July 2014

**CEPT** University

*With support from Dalberg Global Development Advisors*

## Brief about the workshop (1/2)

---

A workshop on “Exploring PPP opportunities for smaller towns in Maharashtra” was held in Mumbai as a part of support for city sanitation planning in the small towns of Maharashtra. The report provides key highlights based on the presentations and deliberations at the workshop.

Since 2012 CEPT University and AILSG, in partnership with Water Supply and Sanitation Department (WSSD), Government of Maharashtra and Maharashtra Jeevan Pradhikaran (MJP) have supported preparation of City Sanitation Plans (CSPs) for three small towns in Maharashtra – Ambajogai, Sinnar, and Wai. The CSPs assessed options for low cost sanitation and decentralized solutions for waste water management.

These cities have now requested technical assistance for implementing some of the solutions suggested in City Sanitation plans.

In response to this request, CEPT and AILSG teams have provided support to municipal councils of Wai and Sinnar to develop plans for making city ODF through a ‘Demand based own toilet scheme’ and improving onsite septage management through ‘Integrated fecal sludge management (IFSM)’. For Ambejogai, support is being provided to develop a ‘Decentralized wastewater management plan’ for selected areas.

3

## Brief about the workshop (2/2)

---

The support to these cities is being supported under the phase 1 grant titled as ‘Bringing sustainable and equitable sanitation services to small and medium towns in India’ from BMGF – DFID. The objective of this grant is to assess how cities can use binding service-level agreements and performance-based contracts with private sector partners as way to ensure the city-wide delivery of sustainable and equitable sanitation services. The PPP opportunities being discussed at this workshop include a.) Consumer financing options for demand based own toilet scheme and b.) Integrated Fecal Sludge Management plan.

The workshop participants included Chief Officers and technical staff from sanitation and solid waste departments of local governments from Wai and Sinnar, as well as representatives from MEETRA<sup>1</sup> (MJP<sup>2</sup>). The workshop was jointly organized by CEPT University, AILSG<sup>3</sup> and Dalberg Global Development Advisors, who are the partners for this project.

4

## Overall mission and approach

## Objective

*To support cities with developing and implementing inclusive strategies to provide universal access to sanitation services*

## Approach

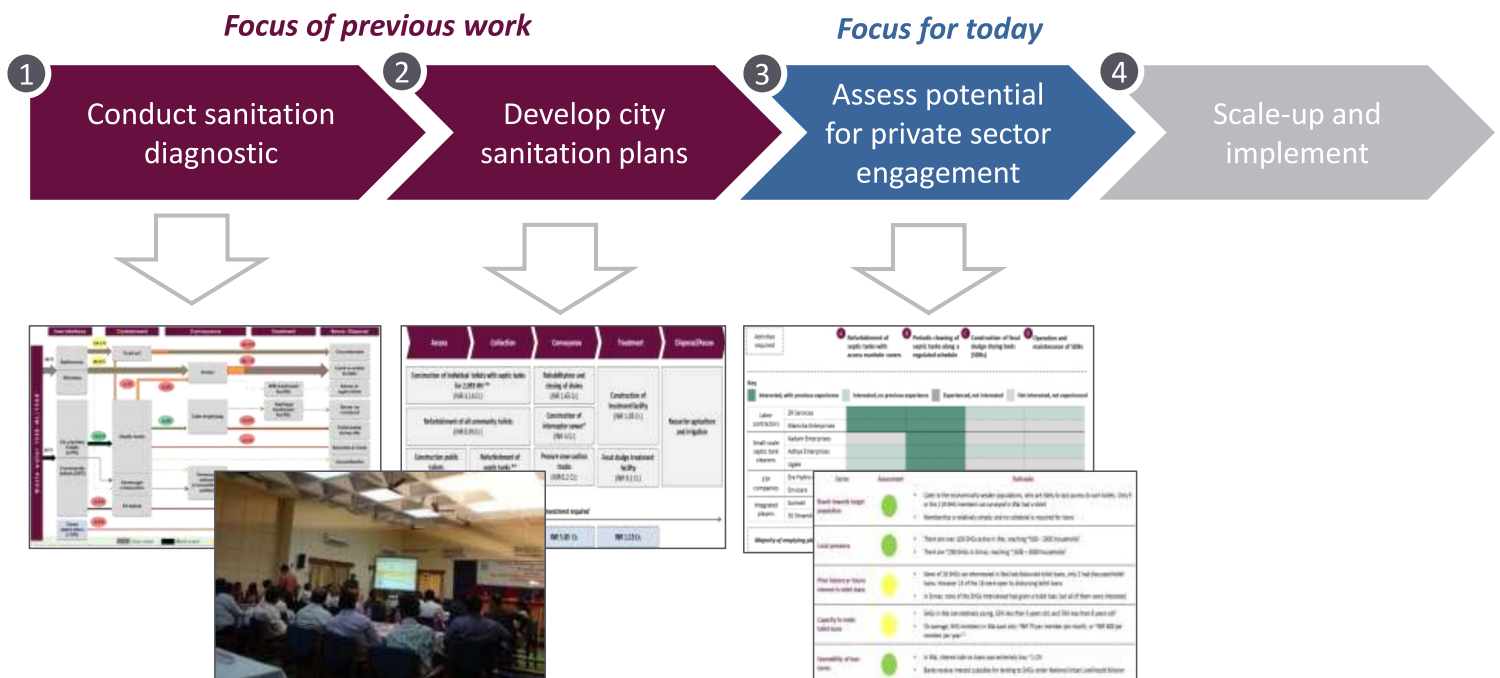


## Overall mission and approach

## Objective

*To support cities with developing and implementing inclusive strategies to provide universal access to sanitation services*

## Approach





# Exploring PPP opportunities for following solutions in each of the cities



7

## ➤ PPP opportunities for Integrated Fecal Sludge Management (IFSM) Plan

# The objective of today’s workshop is to discuss the potential for private sector engagement for the provision of these solutions

## Key objectives

- 1.**

*Discuss rationale for private sector engagement*
- 2.**

*Share findings from private sector research*
- 3.**

*Brainstorm key elements of structuring engagements*

## Areas for intervention

**Integrated fecal sludge management**

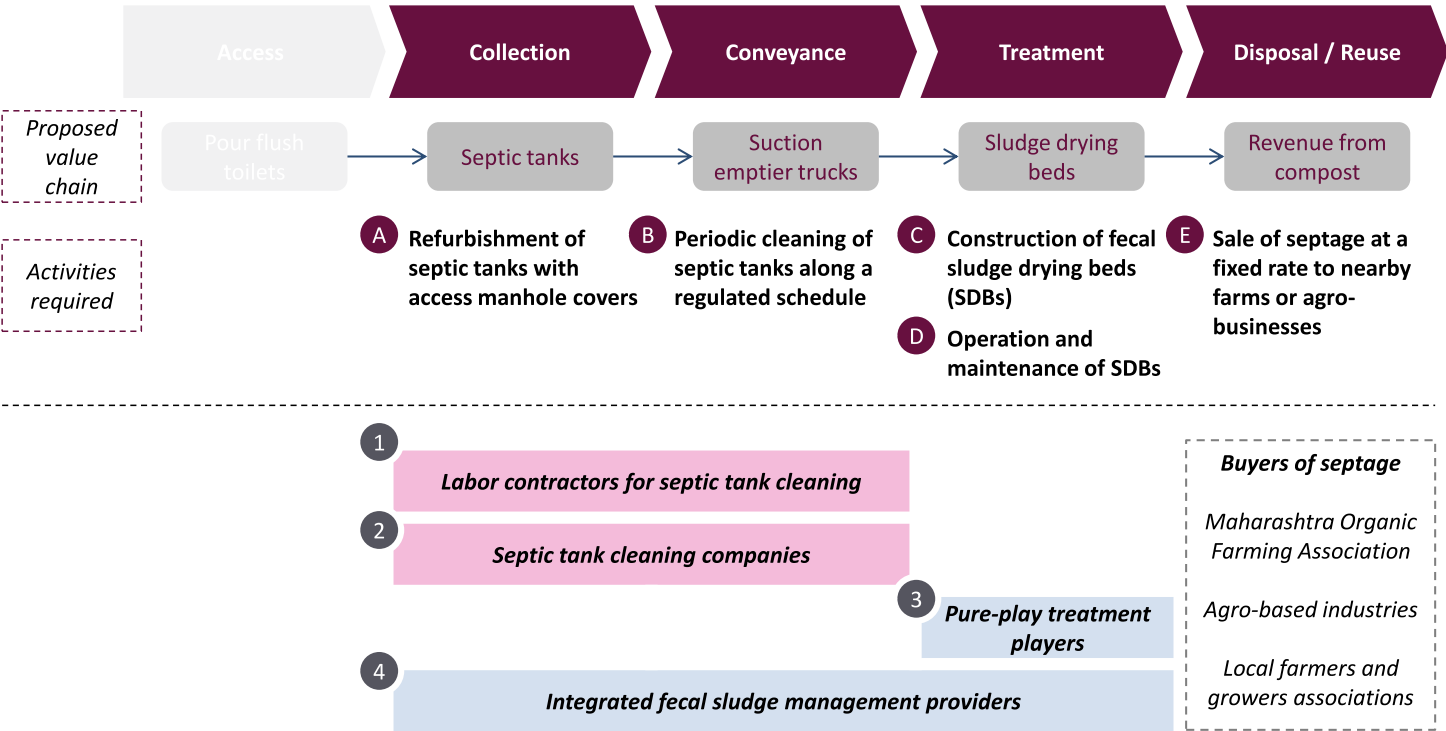
## Opportunities for private sector engagement

**A**





*Private sector engagement for refurbishment of septic tanks, regular septic tank emptying, construction and O&M of fecal sludge drying beds and sale of septage*

9

# We identified four kinds of players offering septage management services in nearby towns



## Players vary in their operations across the sanitation value chain

		Description
	<b>Labor contractor for septic tank cleaning</b>	Small players that employ workers to operate rented trucks, and also offer other allied facility management services
	<b>Septic tank cleaning companies</b>	Small companies that own 1-2 trucks and are generally specialized at septic tank cleaning
	<b>Pure play treatment companies</b>	Companies who specialize in constructing and maintaining sewage and water treatment technologies, including SDBs
	<b>Integrated fecal sludge management providers</b>	Large septic tank cleaning companies (Sumeet Group and 3S Shramik), who own multiple trucks and operate across Maharashtra. 3S Shramik also has the capacity to construct SDBs

Source: Private player interviews, Artwork from the Noun Project

11

## Players are willing to undertake the following activities in the sanitation value chain as per their competencies and interests

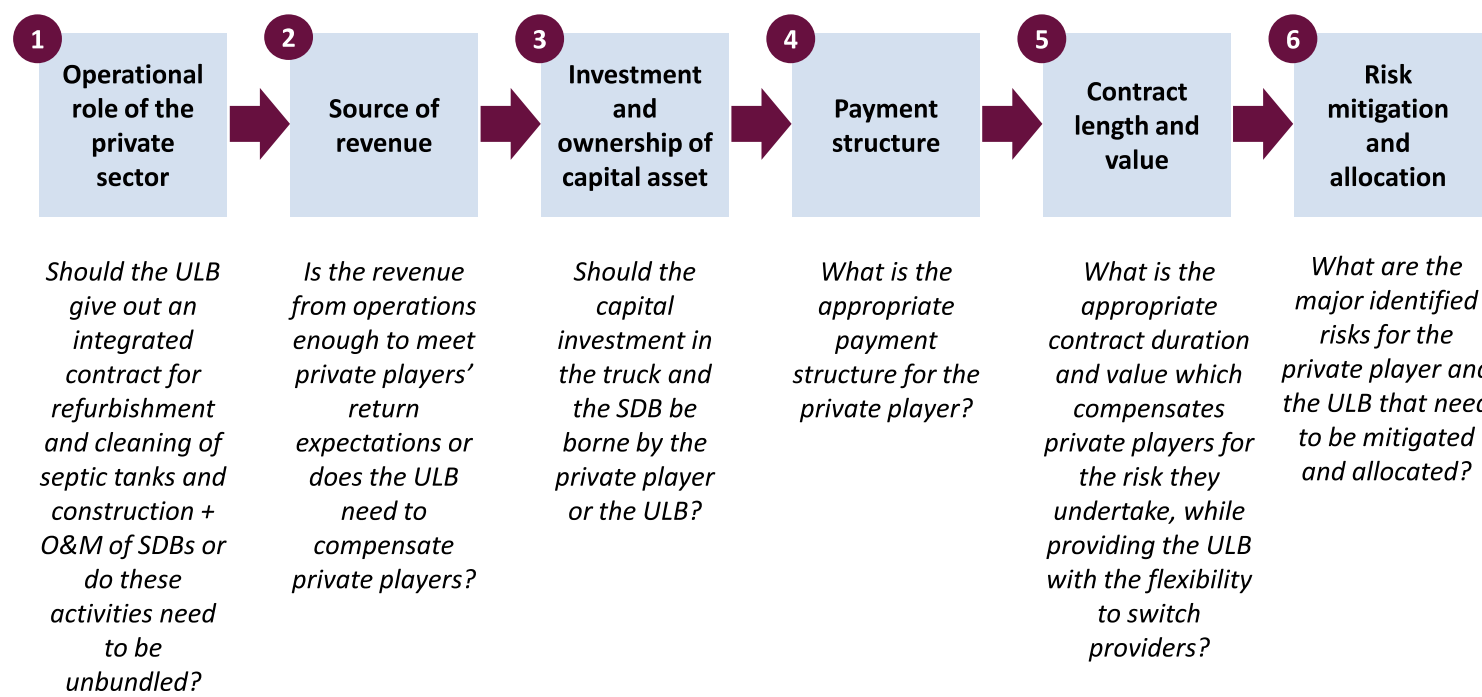
Activities required		A	B	C	D
		Refurbishment of septic tanks with access manhole covers	Periodic cleaning of septic tanks along a regulated schedule	Construction of fecal sludge drying beds (SDBs)	Operation and maintenance of SDBs
Key		Interested, with previous experience	Interested, no previous experience	Experienced, not interested	Not interested, not experienced
Labor contractors	ZR Services				
	Manisha Enterprises				
Small-scale septic tank cleaners	Kadam Enterprises				
	Aditya Enterprises				
	Ugale				
STP companies	Era Hydro-Biotech				
	Envicare				
Integrated players	Sumeet				
	3S Shramik				

Majority of emptying players had no previous experience in construction while the players in treatment had none in septic tank emptying

Source: Private player interviews

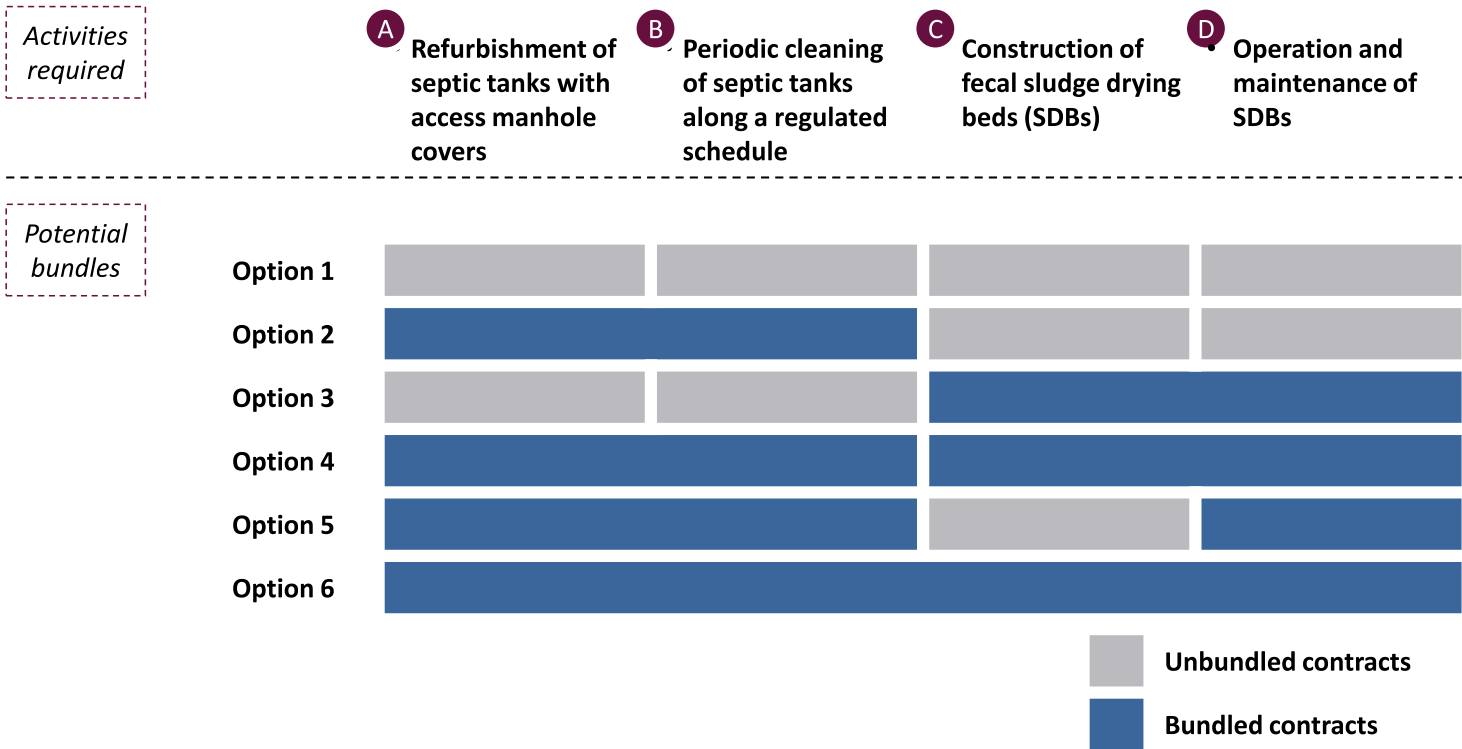
12

# We followed a six step process to structure a private sector engagement for integrated fecal sludge management



13

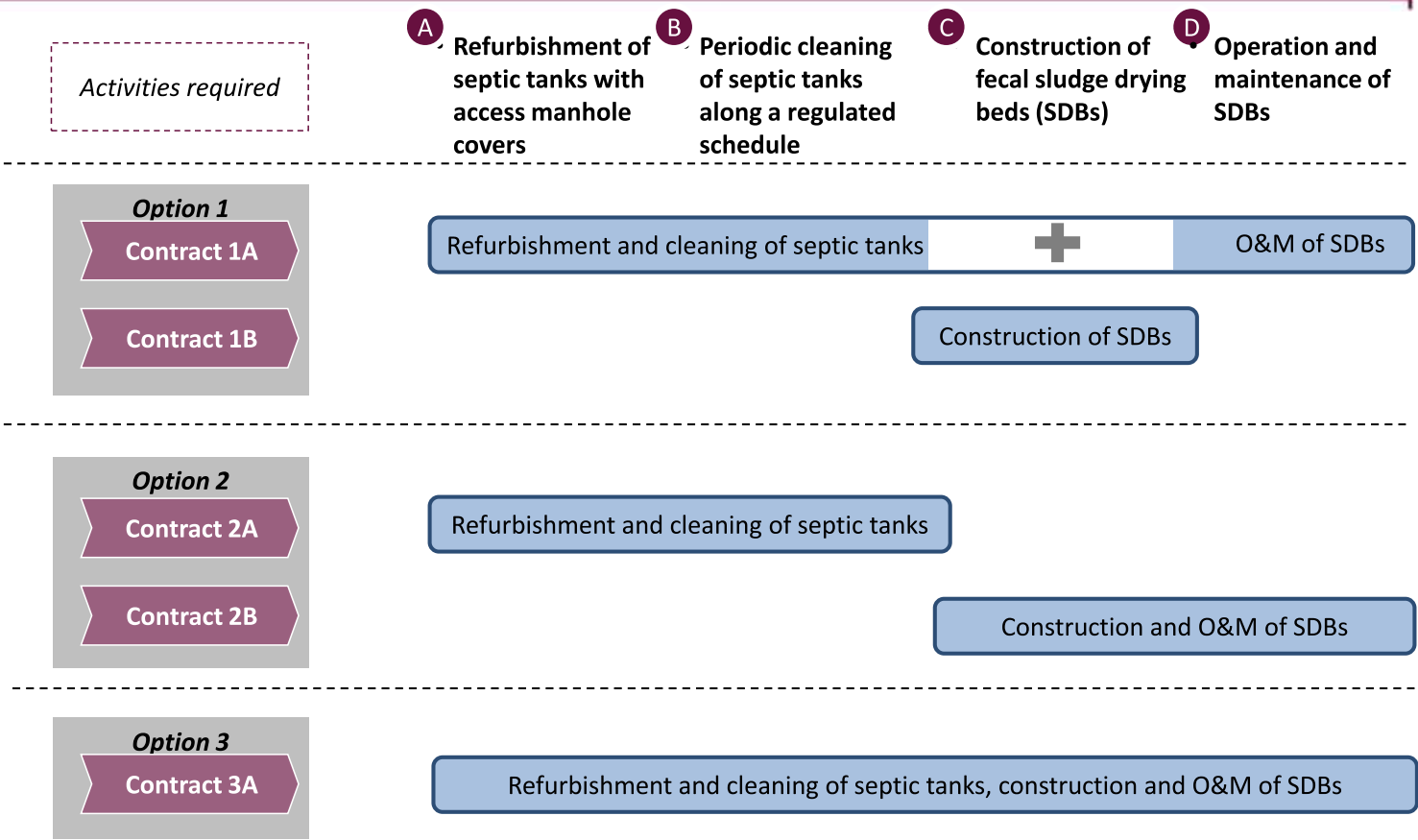
## 1 Operational role: There are various possible contract combinations depending on how IFSM activities are bundled together



Since the elements of integrated fecal sludge management are highly connected and success of one element is closely tied to the success of the others, bundled contracts would align performance incentives and ensure accountability



# 1 Given the interest and capabilities of identified players, there are three possible options for contract bundles



## 2 Source of revenue: There is demand for sludge among small and medium farmers, but willingness to pay is unclear

“Larger farmers who export their crops are bound by restrictions on the use of animal and human waste. **Sludge can be sold mainly to small and marginal farmers**, who lack access to synthetic fertilizers.”

- Mr. Vishwanath, Biome

“**Fecal sludge cannot be used in organic farming** due to concerns about e-coli and shigella infections. However, it is often used by small farmers as ‘son-khad’.”

- Madhav Pandit, Maharashtra Organic Farming Federation

“We make compost from solid waste. The market is extremely seasonal. Creating a continuous market for this waste is tough. People say that you are creating compost from waste so we don’t want to use it. **Source is very important.**”

- Mr. Ravikrishna Pochiraju, Waste Ventures

“**I often have to pay farmers** to dump sludge in their farms, I do not think the sale of septage is a viable revenue source.”

- Aditya Enterprises

“It (sale of septage) is possible, **but will require investment in marketing and distribution**, which we do not do.”

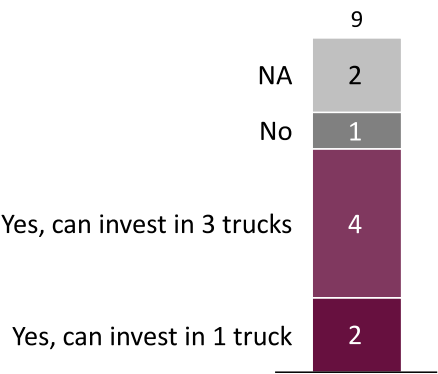
- Kadam Enterprises

Source: Private player interviews

17

## 3 Capital investment: While the private players are willing to invest in suction emptying trucks, they do not want to invest in the construction of SDBs

Willingness to invest in a suction emptier truck  
(Number of players)



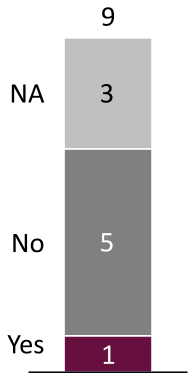
“**Yes, I can procure a truck** and operate it on the regulated schedule... I can use (the truck) for other business in case the contract does not work out.”

- Kadam Enterprises

“**I cannot afford to buy more than one truck.** I have just ordered a truck, and faced financial troubles there too.”

- Ugale Septic Tank Cleaning Services

Willingness to invest in a sludge drying bed  
(Number of players)



“**Payment needs to be mile-stone based**, ~40% up-front, 50% when materials are delivered to the site and 10% post-completion.”

- Envicare

“**It would be interesting** to explore an integrated contract structured as a build-operate-transfer concession agreement.”

- 3S Shramik

Source: Field interviews

18

### 3 Capital investment: Private sector investment in trucks has significant benefits for the ULB

#### Benefits to public sector

- ✓ **Ease of procurement:** ULB procurement of the truck would require floating a tender, inviting, evaluating and negotiating bids. This is likely to be time consuming, and involve transaction costs that can be avoided if the private player purchases the truck.
- ✓ **Aligns private sector incentives:** Private sector investment in trucks incentivizes the player to use and maintain the truck well.
- ✓ **Allows investment in quality:** ULBs are often bound to minimize cost, while the private sector can invest in quality trucks with longer lifecycles and additional features like water jets.

#### Benefits to private sector

- ✓ **Facilitates access to finance:** Having a contract from the ULB can make it easier for the private player to raise capital for the truck and negotiate better financing terms.
- ✓ **Provides a platform for business expansion:** A contract with the ULB serves as a low-risk platform for private sector players to scale by providing access to guaranteed demand to recoup investment in a truck.

Source: Private player interviews

19

### 4 Payment structure: Different activities across the value chain will require different payment structures

Key activities	Payment structure	Rationale
Refurbishment of septic tanks	Fixed fee per unit	Refurbishment is a one time activity in which the cost per tank is known, but the number of tanks is not. Hence a fixed fee per refurbished tank is paid
Regular cleaning of septic tanks	Recurring fixed fee	Because of the ULB HH survey, the number of tanks to be cleaned and the schedule is well determined. Hence it is an ongoing activity for which a fixed monthly fee is paid given the schedule being followed
Emergency Cleaning of septic tanks	Fixed fee per emptying service	The emergency septic tank emptying service can be provided by the ULB using its own vehicle. The fee of this would be kept high as a deterrent for users to not opt out of regulated services
O&M of SDBs	Recurring fixed fee	O&M of SDBs is an ongoing activity for which the costs and procedures are well defined. Hence, a recurring fixed fee is paid
Construction of SDBs	Overall fixed fee	Construction of SDBs would be a one time activity. Since the design is specified by the ULB, the costs would be well known. Hence, an overall fixed fee can be given

20

## 5 Contract valuations range from INR ~ 11-45 lakhs for Wai, ~INR ~28-80 lakhs for Sinnar and INR ~6-23 lakhs for Ambajogai

### Contract valuations for Wai and Sinnar

S. No	Types of contract	Contract length	Wai			Sinnar			Ambajogai <sup>1</sup>	
			Annual contract value (INR, Lakhs)	Sanitation tax per residential property (INR)	Sanitation tax per non-residential property (INR)	Annual Contract value (INR, Lakhs)	Sanitation tax per residential property (INR)	Sanitation tax per non-residential property (INR)	Annual Contract value (INR, Lakhs)	Sanitation tax per residential property (INR)
1A	Refurbishment and regular cleaning of septic tanks with O&M of SDBs	2 - 3 years	15-17	~190	~230	32-36	~270	~320	12-14	~590
1B	Construction of SDBs	Duration of construction	24-28	N.A.	N.A.	40-45	N.A.	N.A.	6-10	N.A.
2A	Refurbishment and regular cleaning of septic tanks	2 - 3 years	11-13	~140	~170	27-32	~230	~270	10-12	~530
2B	Construction and O&M of SDBs	1 year	28-33	N.A.	N.A.	45-51	N.A.	N.A.	7-11	N.A.
3A	Refurbishment and regular cleaning of septic tanks with construction and O&M of SDBs	2 - 3 years	39-45	~190	~230	72-81	~270	~320	17-23	~590

Notes: Does NOT include costs for refurbishment which will be paid on a per tank basis. Assumes a tax collection efficiency of 80% and

Non-residential properties paying 20% more tax than residential properties

(1): Only 2,694 HH with septic tanks in selected prabhags of Ambajogai are assumed to pay taxes to compensate the ULB

Source: Private player interviews

21

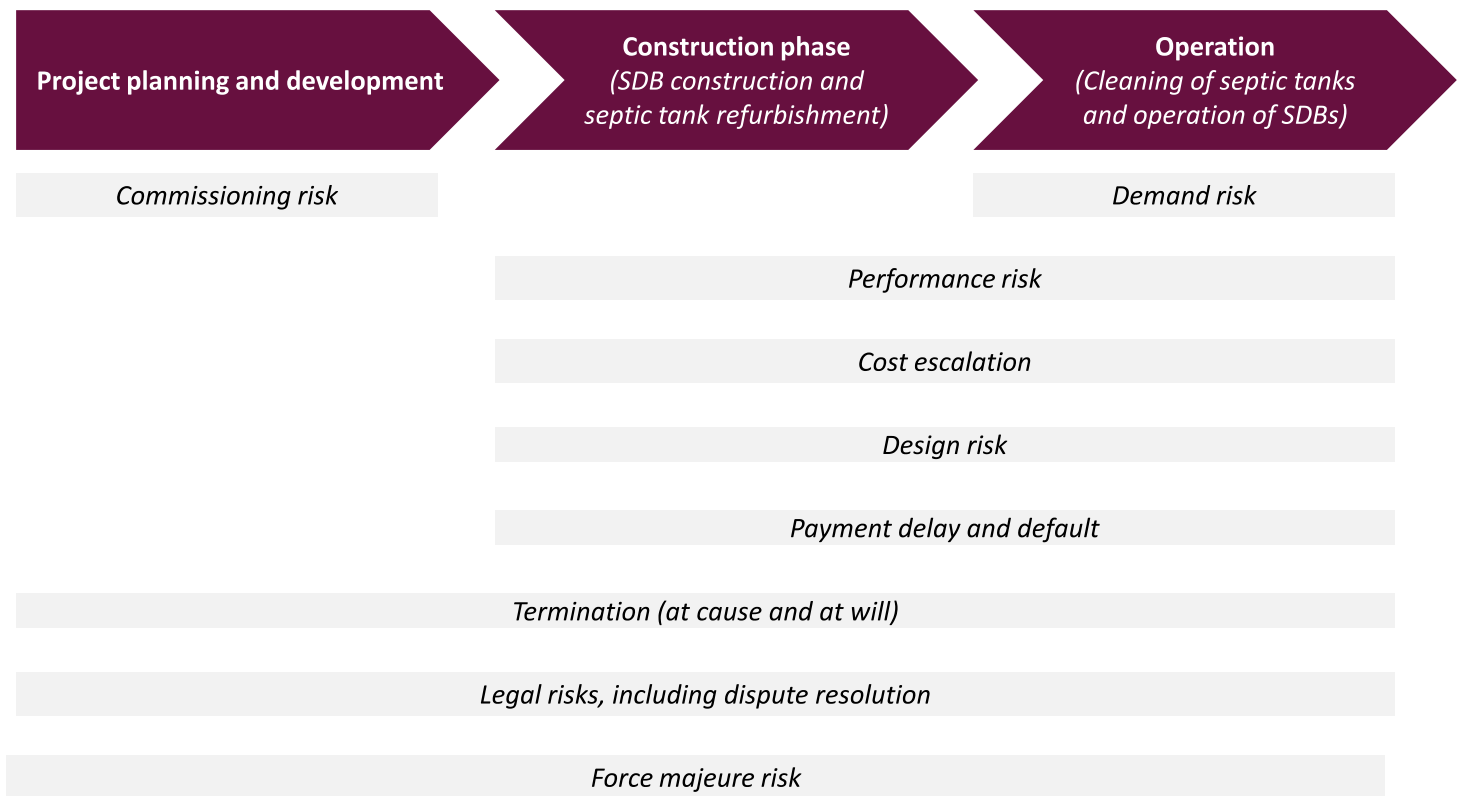
## 5 Summary of potential contract structures

	Source of revenue	Ownership of asset	Payment method	Contract length and value
1A Refurbishment and cleaning of septic tanks + O&M of SDBs	ULB	Private player	Recurring fixed fee with Fixed fee per unit for refurbishment	2-3 year, ~INR 32-36 lakhs in Sinnar , ~INR 15-17 lakhs in Wai and ~INR 12-14 lakhs in Ambejogai annually
1B Construction of SDBs	ULB	ULB	Overall fixed fee on a pre-decided schedule	~ INR 40-45 lakhs in Sinnar ,~24-28 lakhs in Wai and ~6-10 lakhs in Ambejogai lasting the time period of construction
2A Refurbishment and cleaning of septic tanks	ULB	Private player	Recurring fixed fee with Fixed fee per unit for refurbishment	2-3 year, ~INR 27-32 lakhs in Sinnar , ~INR 11-13 lakhs in Wai and ~INR 10-12 lakhs in Ambejogai
2B Construction and O&M of SDBs	ULB	ULB	Overall fixed fee on a pre-decided schedule + recurring fixed fee for O&M	12-18 months, Construction cost plus ~5-6 lakhs annually for O&M in Sinnar and ~4-5 lakhs in Wai
3A Integrated contract involving refurbishment, cleaning of septic tanks, construction and O&M of SDBs	ULB	Trucks – Private SDBs- ULB	Recurring fixed fee for cleaning and O&M with Fixed fee for Construction and Fixed fee per unit for refurbishment	Payment for refurbishment, cleaning and O&M as in 1A above; payment for construction as in 1B above

22



## 6 Risk mitigation: There are several types of risks that must be managed across the lifecycle of any public private partnership



Source: ADB, "Toolkit for Public Private Partnerships in Urban Water Supply for the State of Maharashtra, India; Ministry of Finance, Government of India, "PPP Toolkit for Improving PPP decision-making processes in water and sanitation, PPIAF, Vijay Sarma, "Risks in PPP projects in Western India"

23

## 6 Risk mitigation: Private players highlighted a number of concerns with public private partnerships that need to be addressed

<b>Termination</b>	<p>"The contract should have a clause defining a 3 month notification period in case of termination. It should also have a dispute resolution mechanism."</p> <p>– Kadam Enterprises</p>
<b>Delayed payments</b>	<p>"Ideally, bills should be cleared in 30 days, and for late payments, interest should be paid at the rate of 8% per annum."</p> <p>– Manisha Enterprises</p>
<b>Transparent procurement</b>	<p>"We would rather not deal with the ULB directly, there are always issues with internal politics. If there is a mediator in between then we would be interested."</p> <p>– Envicare</p>
<b>Cost escalation</b>	<p>"For a fixed-fee contract for regulated schedule, we cannot offer 24 hour emergency service. We will only work 8 hours a day, otherwise it is likely that we will over-use our truck."</p> <p>– Aditya Enterprises</p> <p>"Another key issue is the escalation of fuel costs. The contract should clearly account for that."</p> <p>– ZR Enterprises</p>
<b>Performance risks</b>	<p>"If we work on a regulated schedule, it will be difficult to get household signatures. That will become complicated, and I don't want my payment to suffer."</p> <p>– Ugale Septic Tank Cleaning Services</p> <p>"I have tried to do a regulated schedule on my route, but that has been difficult. People always say, "come back later", and it falls apart."</p> <p>– Aditya Enterprises</p>

24

## 6 Risk mitigation: Building a strong system for performance based monitoring and payment is critical to managing performance risk (1/2)

	Risk	Mitigation	Allocation of remaining risk
Cleaning of septic tanks	Private player uses manual scavenging for cleaning septic tanks or SDBs	<ul style="list-style-type: none"> <li>Requirement of safety gear for all personnel</li> <li>A clear description of activities that constitute manual scavenging</li> </ul>	<ul style="list-style-type: none"> <li>Contract terminated if complaints of manual scavenging are received from HH or ULB staff</li> </ul>
	Private player does not clean septic tanks as per schedule	<ul style="list-style-type: none"> <li>Portion of monthly payment tied to number of HH signatures collected whose septic tanks have been cleaned</li> <li>Undertaking random inspections of HH whose signatures have been submitted</li> <li>A complaint redress mechanism to be opened by the ULB for the HH</li> </ul>	<ul style="list-style-type: none"> <li>Penalties imposed if number of cleanings is lower than specified in the contract, or if discrepancies found during random sampling, or if complaints not dealt with</li> <li>Large or persistent breaches can lead to termination</li> </ul>
	Private player damages tanks during cleaning	<ul style="list-style-type: none"> <li>As above</li> </ul>	<ul style="list-style-type: none"> <li>Work would have to be remedied within a specified days of complaint and the cost borne by the private player</li> </ul>
	Private player spills septage during transportation	<ul style="list-style-type: none"> <li>A complaint redress mechanism to be opened by the ULB for the HH</li> </ul>	<ul style="list-style-type: none"> <li>Complaints of spillage and illegal dumping must be addressed within a specified period, to avoid a fine</li> </ul>
	Private player dumps septage in the open	<ul style="list-style-type: none"> <li>A portion of monthly payment is tied to signatures collected from the SDB operator</li> </ul>	<ul style="list-style-type: none"> <li>If the number of complaints exceeds a specified number in a time period, the contract can be terminated</li> </ul>



25

## 6 Risk mitigation: Building a strong system for performance based monitoring and payment is critical to managing performance risk (2/2)

	Risk	Mitigation	Allocation of remaining risk
Refurbishment of septic tanks	Septic tanks are damaged during or as a result of refurbishment	<ul style="list-style-type: none"> <li>Specify the type of materials required</li> <li>Payment tied to the number of signatures from HH with repaired septic tanks</li> <li>ULB to undertake random inspections of HH whose signatures have been submitted</li> <li>A complaint redress mechanism to be opened by the ULB for the HH</li> </ul>	<ul style="list-style-type: none"> <li>Work would have to be remedied within a specified days of complaint and the cost borne by the private player</li> <li>Penalties imposed if discrepancies are found during sampling, or if complaints are not dealt with in a timely manner</li> <li>Persistent breaches may lead to termination</li> </ul>
Construction of SDBs	Sludge drying beds do not meet specified design	<ul style="list-style-type: none"> <li>Specify the design and materials to be used in consultation with town consultants</li> <li>Payment made in installments on the completion of construction milestones</li> <li>Regular reporting by the player and monitoring by the ULB</li> </ul>	<ul style="list-style-type: none"> <li>If work is found to be faulty at any stage, payment to be withheld until the corrections are made</li> </ul>
O&M of SDBs	Sludge recovered from SDBs is not sufficiently treated	<ul style="list-style-type: none"> <li>Regular checks to be undertaken by the sanitation department to measure sludge properties</li> <li>X% of O&amp;M payment to be conditional on the sludge meeting specified qualities</li> </ul>	<ul style="list-style-type: none"> <li>If specified standards not met, a warning to be given, followed by fines.</li> <li>Persistent breaches may lead to termination</li> </ul>

26

## 6 Risk mitigation: Contracts must also clearly manage at will and at cause termination by the private player and the ULB



	Risk	Mitigation	Allocation of remaining risk
 Termination at cause	<ul style="list-style-type: none"> <li>• ULB does not fulfill contract conditions</li> <li>• Private player does not meet service standards</li> </ul>	<ul style="list-style-type: none"> <li>• Ensuring a clear monitoring mechanism for transparent contract execution</li> <li>• Disputes to be handled through frequent communication and by an agreed upon third party mediator</li> <li>• As above</li> </ul>	<ul style="list-style-type: none"> <li>• Private player compensated for investments, the cost of winding down and foregone profits</li> <li>• Private player compensated for some portion of capital investments performance bank guarantee<sup>1</sup> seized</li> </ul>
 Termination at will	<ul style="list-style-type: none"> <li>• ULB terminates the contract for reasons unrelated to player performance</li> <li>• Private player terminates the contract due to reasons unrelated to ULB compliance with contract terms</li> </ul>	<ul style="list-style-type: none"> <li>• Up-front discussions with key stakeholders to create buy-in for private sector engagement</li> <li>• Frequent communication between ULB and private player</li> <li>• Frequent communication between ULB and private player</li> </ul>	<ul style="list-style-type: none"> <li>• X month notice period required</li> <li>• Private player compensated for investments, the cost of winding down and foregone profits</li> <li>• Performance bank guarantee returned</li> <li>• X month notice period required</li> <li>• Private player forfeits the performance bank guarantee</li> </ul>

Note: The private player can be required to put down a performance bank guarantee at the beginning of the contract to compensate the ULB in case of at-will termination by the private player. The guarantee is returned to the private player at the end of a successfully executed contract, or in case of at will termination by the ULB

Source: Adapted from 'Improving sanitation outcomes through service level agreements' – Castalia Partners

27

## 6 Risk mitigation: Provisions need to be made for payment delays and cost escalation to protect private player and public interests

	Risk	Mitigation	Allocation of remaining risk
 Payment delays	<ul style="list-style-type: none"> <li>• ULB is unable to make timely payments towards the project</li> </ul>	<ul style="list-style-type: none"> <li>• Ensuring budgetary allocation for contracts before procurement</li> <li>• Establishment of an escrow account for payment</li> </ul>	<ul style="list-style-type: none"> <li>• ULB to pay interest for the payment, delayed by X months or more, at a negotiated rate of interest</li> </ul>
 Cost escalation	<ul style="list-style-type: none"> <li>• Cost of inputs increase over the course of contract</li> </ul>	<ul style="list-style-type: none"> <li>• Adjustment of contract value annually for inflation</li> <li>• Inclusion of a cost re-negotiation clause</li> </ul>	<ul style="list-style-type: none"> <li>• Private player would be responsible for bearing the cost escalations within the negotiated period</li> </ul>

## Deliberations on PPP options and risk mitigation for IFSM

### 1 PPP opportunities and risk management for activities related to citywide Integrated Faecal Sludge Management.

#### PPP Contract Options :

---

- ✓ The three contract options (as per slide 14) were discussed at length. Both cities have shown interest in exploring these PPP options.
- ✓ In general, both cities have shown a preference for the third option which is based on an integrated contract.
- ✓ However, depending on further meetings with potential private players, they are also open to exploring the second option which is separate contracts for refurbishment along with cleaning of septic tanks and construction and O & M of sludge drying beds.
- ✓ For improving the performance of the private sector, the cities have agreed that performance incentive clauses will be needed in the contract for selection options.

29

## Deliberations on PPP options and risk mitigation for IFSM

### 1 PPP opportunities and risk management for activities related to citywide Integrated Faecal Sludge Management.

#### Preparation and risk mitigation :

---

- ✓ Various risks for the ULB as well as for the private sector were discussed (as per slides 24-27). For each key risk, related mitigation /management measures were also discussed.
- ✓ To mitigate the cost escalation risk, the cities have agreed to add a clause regarding annual increment in contract value. This will need to be agreed on before entering into a contractual agreement.
- ✓ There was discussion regarding private sector risk perception related to likely delays in contract payments by city governments. Cities agreed regarding the need to set up an escrow account type mechanism to avoid delayed payments to the contractor.
- ✓ For successful implementation of IFSM plan the cities have recognized the need to create a property level data base on sanitation system.
- ✓ The key area of concern for the local governments is monitoring of these IFSM activities. The cities have agreed to set up an appropriate monitoring system. This may also be linked to a complaint redressal mechanism to monitor the activities of IFSM.

30



## Deliberations on sources of funds for O & M of IFSM activities

### 2 Assessing sources of finance for meeting the management fees under the proposed contracts – for O & M expenses

- ✓ Cities have agreed to explore the levy of a sanitation tax to meet the contractual expenses of the private sector.
- ✓ The analysis of contract values and municipal finances suggest that the ULBs will have to increase their existing property tax levels by 10 – 20 % to compensate the private players for providing this IFSM services (as per slide 20)
- ✓ The city officials will deliberate over the idea whether to introduce a new tax or levy the tax as a part of their existing consolidated property tax system with the council members.

31

## Deliberations on sources of funds for capital expenditure of IFSM activities

### 3 Capital expenses for sludge drying bed and refurbishment of septic tanks





- ✓ It was agreed that the payment for capital expenditure for sludge treatment facilities will be mobilized by the ULBs. There are options for ULBs to mobilize loans from various financial institutions such as Maharashtra Urban Development Fund (MUDP), local commercial banks and the national public agency such as Housing and Urban Development Corporation (HUDCO).
- ✓ Based on the deliberations, the ULBs have shown interest in accessing loans for meeting the capital costs sludge treatment facilities. The municipal financial analysis done under the CSP also shows that it is possible for these two ULBs to take on such debt. They are also willing to meet the initial capital expense for the pilot exercise from their own funds.
- ✓ In the framework of an integrated contract there may also be the possibility of exploring funding through the Government of India's Viability Gap Funding (VGF) scheme.
- ✓ The ULB City officials felt that the cost of refurbishment should be borne by households themselves. If necessary, local governments can procure the materials and make it available to households at appropriate fixed rates.

32

## ➤ Consumer financing options for demand based own toilet scheme

33

### We have explored five different types of credit providers in these towns

Self help groups (SHGs)	Micro-finance institutions (MFIs)	Credit societies	Commercial banks	Housing finance companies (HFCs)
 <p>Groups of 5-10 women of similar socio-economic background, that make loans to members at low interest rates, financed through member contributions and commercial loans</p>	 <p>Financial institutions targeting economically weaker sections who do not have access to traditional banking, generally with a periodic repayment and peer liability model</p>	<p>Chaitanya Credit Cooperative Society</p> <p>Jalaram Co-Op Credit Society Limited</p> <p>Financial institutions owned and controlled by members, who make deposits and can avail of loans</p>	 <p>Commercial banks accept deposits and make loans to individuals and business enterprises, generally in an EMI model with a defined rate of interest</p>	 <p>Financial institutions in the primary business of housing loans. HFCs vary in the stringency of collateral requirements, but often lend to customers not served by commercial banks</p>

- Source: Reserve Bank of India, National Housing Bank, Monitor Inclusive Markets, "Building houses, Financing Homes", 2010

34

## Self Help Groups

25 SHGs interviewed

30 SHGs interviewed

	Wai	Sinnar
No. of SHGs	155	284
No. of SHGs formed before 2005	20	15
No. of SHGs formed after 2005	135	115 (Having accounts)+ 154 (Without Accounts)
No. of members per SHG	5-20	5-20
SHGs with bank accounts	155 (all)	130
Banks having SHG accounts	Bank of Maharashtra, State Bank of India and Bank of Baroda	Bank of Maharashtra, State Bank of India, Bank of Baroda and Union Bank of India
SHGs that have taken loans	40	31
Average monthly contribution per member	Rs. 75/-	Rs. 75/-
Average savings till date	Rs. 10,000/-	Rs. 15,000/-
Avg. no. of members in a SHG that have a toilet	2	1
Loan amount taken per SHG	Min. 50,000/- Max. 2,00,000/-	Min. 70,000/- Max. 3,00,000/-
Size of internal loans (Rs.)	Min: 1000 Max: 7000 (Depending on the age of group, members and saving capacities)	Min: 1000 Max: 10000 (Depending on the age of group, members and saving capacities)





## Self Help Groups

	Wai	Sinnar
Rate of interest	9% to 12% p.a.	9% to 12% p.a.
Loan Repayment period	1 to 7 years (depending upon the amount and type of loan. )	1 to 7 years (depending upon the amount and type of loan. )
Collateral requirement	No	No
Internal Loans disbursed to members in the past	Y (Out of 25 SHGs interviewed, only 14 SHG has disbursed internal loans)	Y (Out of 30 SHGs interviewed, 25 have disbursed internal loans)
Rate of Interest for internal loans	1% per month	2% per month
Purpose of loans	Income generating activities, house improvement, education, medical, domestic use	Income generating activities, house improvement, education, medical, domestic use
Willingness towards group toilets	Group (Out of 25 SHGs interviewed, 15 prefer group toilets)	Group (Out of 30 SHGs interviewed, 17 prefer group toilets)
Willingness to take toilet loans	Y (Out of 25 SHGs interviewed, 23 SHGs are willing to take toilet loans)	Y (Out of 30 SHGs interviewed, 15 SHGs are willing to take toilet loans)
Avg amount that can be spent for constructing toilet from personal savings	Rs. 5000/-	Rs. 5000/-

One SHG with 17 members, formed in 2005, can lend around Rs. 7000 internally to its 4 members at a time.

## Micro – Finance Institutions

No MFIs are currently operational in Wai. Few MFIs in Pune were interviewed who are operational in towns near Wai and have history of extending toilet loans.

				
	IRCED	MANN DESHI MAHILA SAHAKARI BANK	SURYODAY	GRAMEEN KOTA
Year of Establishment	1994	1997	2008	1999
Interest rates	11% (flat)	15% (flat)	26% (diminishing)	21% (diminishing)
Promoted toilet loans	✓	✓	X	✓

4 MFIs are currently operational in Sinnar. MFIs in Nashik were also interviewed who may extend their services in Sinnar

### MFIs operational in Sinnar

			
ASMITHA	SPANDANA	HDFC MF	CHAITANYA
Year of Establishment	2006	2013	2008

### MFIs operational in Nashik, which were interviewed

			
SURYODAY	EQUITAS	GRAMA VIDYAL	UJJIVAN
2012	2012	2012	2009

Ujjivan has plans to start operations in Sinnar

37

## Micro – Finance Institutions

- MFIs follow the JLG (Joint liability groups) model. MFIs lend to group of female members belonging to APL or BPL families.

	Asmitha Microfin	Spandana Spoorty Financial Limited	HDFC Microfinance	Chaitanya - Sahara Grameen Mahila Swayamsandhi	Suryodaya Microfinance	Equitas Micro Finance Private Limited	Grama Vidiyal Microfinance Limited	Ujjivan Financial Services
Number of groups	340	120	9	9 (many in rural)				
Number of members in Sinnar	1700	1200	90	90	-	-	-	-
JLG Model used	✓	✓	✓	✓	✓	✓	✓	✓
Collateral requirement	x	x	x	x	x	x	x	x
Avg no of members per group	5	10	10	10	5	5	5	5
Documents required to sanction loans			Aadhar card, Ration Card, Voter ID, PAN card					
Encourage savings before lending			✓ Rs. 100 – 500 / month	✓ Rs. 200 / month				
Cashless transactions	✓							✓
Income cap	As per the RBI norms the income cap for the lenders is Rs. 1,20,000 per annum							

In one group of 12, at least 8 should have their own houses, rest 4 should be tenants for more than 3 years



## Micro – Finance Institutions

	Asmitha Microfin	Spandana Spoorty Financial Limited	HDFC Microfinance	Chaitanya - Sahara Grameen Mahila Swayamsandhi	Suryodaya Microfinance	Equitas Micro Finance Private Limited	Grama Vidiyal Microfinance Limited	Ujjivan Financial Services
Min. loan amount given till date (Rs. )	Rs. 15,000	Rs. 6,000	Rs. 6,000	-	Rs. 15,500	Rs. 15,000	Rs. 10,000	Rs. 8,000
Max. loan/member given till date (Rs. )	Rs. 40,000	Rs. 30,000	Rs. 17,500	Rs. 22,000	Rs. 22,000	Rs. 50,000	Rs. 20,000	Rs. 30,000
Rate of Interest (flat)	13%	14%	11%	-	11%	-	-	-
Rate of Interest (diminishing)	25%	27.7%	20%	24%	26%	23.5%	26%	23.6%
Income Generating loan	✓	✓	✓	✓	✓	✓	✓	✓
Repayment period (years)	1 – 2	1 – 2	1 – 2	1 – 2	1 – 2	1 – 2	1 – 2	1 – 2
Educational purpose				✓				
Home Improvement								✓
Provided loans to construct toilet				✓				✓

- Ujjivan and Chaitanya are the only organization which have given loans for construction of toilets. Loans from other MFIs have been used for constructing toilets but the purpose of loan was stated as income generating to the MFI.
- As per the RBI rules a person can take a loan from max 3 institutions at a time, total loan amount adding up to Rs. 50,000.

## Loan used for constructing a toilet



### Suvarna Lokhande, 43 (Tailoring Business)

Suvarna Lokhande runs a tailoring business. She is a member of Sumananjali Bachat Gat, a JLG started with Spandana in 2008. The group has 10 members like Suvarna, each involved in different economic activities like papad making, laddoo making, running beauty parlor, tailoring etc. They have been taking loans from Spandana since 2008, loan amounts ranging from Rs. 10,000 to Rs. 50,000.

Last year (2013) she took a **loan worth Rs. 45,000 as income generating loan but constructed a toilet instead.**

Before constructing our own toilet, the family had to walk for 20 minutes to reach the community toilet. Moreover, it was very inconvenient during rainy season and at nights. Heavy traffic on the roads also poses a major problem. Therefore, she decided to construct an individual toilet.



Toilet details	
Toilet cost	Rs. 45,000
Technology	Pour flush (septic tank – outlet connected to open drains)

Loan details	
Loan amount	Rs. 45,000
Amount repaid	Rs. 18,000
Repayment period	2 years
Interest rate	27.70%

## Credit Co-operative Societies

11 credit cooperatives  
interviewed of the total ~20

15 credit cooperatives  
interviewed of the total 35

	Wai	Sinnar
<b>No. of members</b>	Min. 500- Max. 3000 (Only in Wai city)	Min. 350- Max. 2000 (Only in Sinnar city)
<b>Average monthly income of members</b>	7,500/-	10,000/-
<b>Type of loans given</b>	Personal, Vehicle, Gold, Mortgage, Cash Credit, Hire Purchase, Home, Term loan	Personal, Vehicle, Gold, Mortgage, Cash Credit, Hire Purchase, Home, Term loan
<b>Documents required</b>	Address proof, ID proof, photos, cheques, mortgage papers, 2 guarantors, income returns	Address proof, ID proof, photos, cheques, mortgage papers, 2 guarantors, income returns
<b>Range for rate of interest</b>	9% - 18% p.a.	12.5% - 20% p.a.
<b>Repayment Period</b>	1 to 7 years (depending upon the amount and type of loan)	1 to 7 years (depending upon the amount and type of loan)
<b>Collateral requirement</b>	Collateral required for a loan amount more than Rs. 25,000/-	Collateral required for a loan amount more than Rs. 25,000/-

41

## Credit Co-operative Societies

	Wai	Sinnar
<b>Loans given to non members</b>	Yes (have to become a B class/ temporary member)	Yes (have to become a B class/ temporary member)
<b>Loans given to SHGs</b>	No	No
<b>Loans given for constructing toilets in the past</b>	Yes (2 out of 11 co-operatives are currently offering toilet loans as a separate category of loans, 1 has offered toilet loans as a part of housing loans)	No
<b>Willingness to extend sanitation loans</b>	Yes (Of the 11, 6 showed willingness to extend sanitation loans)	Yes (Of the 15, 15 showed willingness to extend sanitation loans)

*Requirements in terms of documents and guarantors etc. are more*

*Personal loans taken are sometimes used for construction of toilets, but there is no separate category for toilet loans*

42

# Credit Co-operative Societies

	Sai Devnadi Khore Grameen Bigarsheti Sahakari Pata sanstha	Dhanalaxmi Nagari Sahakari Patasanstha, Khadakpura	Amruta Mahila Nagari Sahakari Patasanstha	Yash Nagri Sahakari Patasanstha	Bhaichand Hirachand Raisoni Multi State Co-operative Credit Society	Jijamata Mahila Nagari Sahakari Patasanstha	Sinnar Nagari Sahakari Patasanstha	Dilip Anna Shinde Nagari Sahakari Patasanstha	Vighnaharta Nagari Sahakari Patasanstha	Shri Sai Nagari Sahakari Patasanstha	Shri Siddheshwar Gramin Bigarsheti Sahakari Patasanstha
No. Of Members (Sinnar)	2000	1000	1100	700	1500	671	2000	2000	950	2000	387
Min. loan amount given till date (Rs. )	5,000	10,000	5,000	10,000	5,000	10,000	20,000	5,000	5,000	10,000	20,000
Max. loan amount given till date (Rs. )	15,00,000	10,00,000	1,50,000	10,00,000	10,00,000	10,00,000	5,00,000	2,00,000	10,00,000	50,00,000	50,000
Average Rate of Interest	15%	16%	16%	15%	20%	16%	15%	16%	16%	15%	15%
Repayment period (years)	1 – 7	1 – 7	1 – 7	1 – 7	1 – 7	1 – 7	1 – 7	1 – 7	1 – 7	1 – 7	1 – 3
Collateral required	for amount >Rs. 25,000	for amount >Rs. 25,000	for amount >Rs. 25,000	for amount >Rs. 25,000	for amount >Rs. 25,000	for amount >Rs. 25,000	for amount >Rs. 25,000	for amount >Rs. 25,000	for amount >Rs. 25,000	for amount >Rs. 25,000	for amount >Rs. 25,000
Loans to SHGs	X	X	X	X	X	X	X	X	X	X	X
Provided loans to construct toilet	X	X	X	X	X	X	X	X	X	X	X
Willingness to promote toilet loans	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

43

# Commercial Banks

Assessment of commercial banks was done with respect to SHG lendings in Wai and Sinnar.

	Bank of Baroda	ICICI Bank	HDFC	SBI	BOM	Union Bank of India
SHG accounts present	✓	✓	✗	✓	✓	✓
BPL group accounts present	✓	✗	✗	✓	✓	✓
APL group accounts present	✓	✓	✗	✓	✓	✓
Income generating loans provided	✓	✓	✓	✓	✓	✓
Collateral requirement	✗	✗	✗	✗	✗	✗
Rate of interest	15.0%	10.0%	10.3%	10.5%	12.0%	10.3%
Action in case of defaults	Legal notice and home visits					
Experience in lending to BPL groups						
Extended sanitation loan in the past	✗	✗	✗	✗	✗	✗
Willingness to promote sanitation loans						
Reasons for not willing to promote san loans	Low repayment rates, many defaulters			Low repayment rates, many defaulters		✗Low repayment rates, many defaulters
Minimum salary requirement	Rs. 20,000	Rs. 17,000	Rs. 15,000	Rs. 10,000	Rs. 25,000	Should be salaried employee.

The banks require no collateral for the loans upto 1 lakh but need income proof for salaried employees (as salary slips) or audited income accounts of 2 years for professionals.

44

## Supply side study

### Micro finance institutions – Credit cooperatives – Commercial Banks

#### MFIs

“Asmitha extends income generating loans only and our organization observes high loan repayment rate. **Even if people take loans for consumption activities like toilet construction they will repay the loan on time.**”

Branch Manager, Asmitha

“We provide ~200 loans per month, out of these 5-6 loans every month are for construction of toilets. **People take loans and pay back loans on time.**”

- Branch Manager, Ujjivan

“In case of formal ‘toilet loan’, may be **good to create groups with all the members without toilets**, but there may be additional requirements in terms of security/ collateral from the members “

- Branch Manager, Spandana

#### Credit Coops

“At present we do not provide sanitation loans. Sanitation is a very important issue and should be addressed with appropriate methods. **Loans for construction of toilets should be promoted.** Organization heads should promote sanitation loans.”

- Branch Manager, Sridevnadi Khore Grameen Bigarsheti Patasansta

“Toilets are the basic need and so promoting sanitation loans is a very good idea, but the issue is that **currently there are no grants and waivers from the government for defaulter loans for credit cooperatives.**”

Branch Manager , Vignaharta Nagari Sahakari Patasanstha

#### Com. Banks

“Our **experience in lending to BPL SHGs is poor and we observe many defaulters**, where as our experience in lending to APL SHGs is quite good and loan repayment rates are high.”

-Branch Manager, Union Bank of India

- Source: interviews with Credit coops, MFIs, commercial banks

45

## Demand Side Study- Interviews with households

	30 households without toilet were interviewed	35 households without toilet were interviewed
	Wai	Sinnar
Range of income	1200 - 20000	500 - 18000
Average saving capacity per month	550	950
Willingness towards group toilets	23 of 30	23 of 35
Willingness towards taking loans	15 of 30	23 of 35
Range of own contribution for toilet	5000 - 15000	1000 - 20000
Preferable amount of toilet loan to be taken (Avg.)	16000	19000
Awareness towards loans/ institutions	20 of 30	18 of 35

“ My daughters have grown up and we needed a toilet at home. Therefore I took a loan from credit co-operative society for constructing an individual toilet”

“Everyone in our house resort to open defecation. Our relatives do not visit us as we do not have a CT nearby or an individual toilet. We feel it is very important to have a toilet. We are very much willing to take a loan for toilet”

“ I never thought of taking a loan for constructing a toilet. But yes, that is a good option”































“ I feel the need of constructing a toilet but I don’t think any institution will lend me a loan. I do not have a capacity to repay the loan on time.”

“I have taken an internal loan of Rs. 5000/- through SHG for construction of toilet in the year 2009 as we had to walk 20-25 mins. to reach to the community toilet”

- Source: Interviews with households


























46

## Summary of lenders for consumer finance for toilets

Factors	Self help groups (SHGs)	Micro-finance institutions (MFIs)	Credit societies	Commercial banks	Housing finance companies (HFCs)
<b>Income Groups</b>					
Very poor / BPL					
poor					
Other low income group					
Middle income group					
<b>Housing Type</b>					
Informal housing					
Formal housing					

47

## Credit providers vary in their areas of strength, but SHGs, MFIs and HFCs emerge as the most promising options

Factors	Self help groups (SHGs)	Micro-finance institutions (MFIs)	Credit societies	Commercial banks	Housing finance companies (HFCs)
Reach towards target population					
Local presence					
Prior history or future interest in toilet loans					
Capacity to make toilet loans					
Favorability of loan terms					

There are many opportunities for households to mobilize credit finance for building their own toilets. With capacity building support, SHGs can play an important role for the poor. The poor can also be reached through MFIs. MFIs will need a credit line of lower cost funds and grants to meet mobilization costs. Banks and HFCs can provide access to other (low and middle income households) that can offer mortgages. A key aspect will be to facilitate households to make their own possible choices from potential lenders.

48

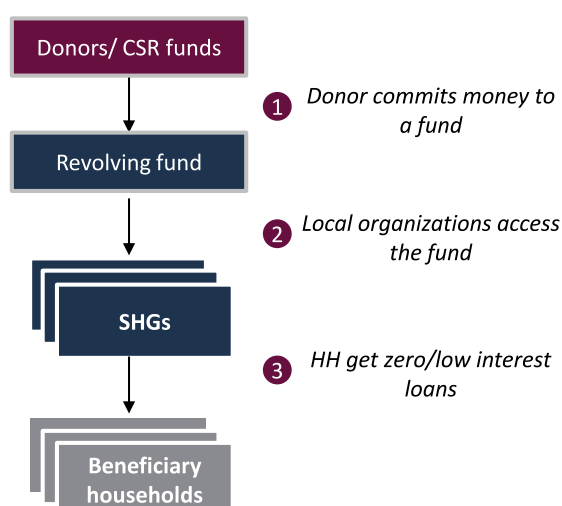
# An enabling environment for these credit providers will be needed to enable or strengthen their presence in sanitation/toilet financing

Credit Source	Opportunities	Challenges	Enabling policies and actions
<b>Self-help groups</b>	<ul style="list-style-type: none"> <li>Strong local presence</li> <li>Reach lower income populations</li> <li>Low interest rates</li> </ul>	<ul style="list-style-type: none"> <li>Lack financial strength to make loans of adequate size</li> <li>Limited history of providing toilet loans</li> </ul>	<ul style="list-style-type: none"> <li>Revolving fund for toilets</li> <li>Awareness drive</li> </ul>
<b>Microfinance institutions</b>	<ul style="list-style-type: none"> <li>Reach lower income populations</li> <li>Established history of providing toilet loans</li> </ul>	<ul style="list-style-type: none"> <li>Limited presence in Wai</li> <li>High interest rates</li> <li>Regulatory barriers on lending for non-income generating activities</li> </ul>	<ul style="list-style-type: none"> <li>Credit lines or partial subsidies for lending for toilets to individuals and SHGs</li> <li>Grants to support mobilization and set-up costs</li> </ul>
<b>Credit cooperatives</b>	<ul style="list-style-type: none"> <li>Strong local presence</li> <li>Strong financial capacity</li> </ul>	<ul style="list-style-type: none"> <li>Stringent loan requirements for collateral, ID proof, etc.</li> <li>Limited history of providing toilet only loans</li> </ul>	<ul style="list-style-type: none"> <li>Credit lines or partial subsidies for lending for toilets to individuals and SHGs</li> <li>Connect with SHGs to avail of interest subsidies</li> </ul>
<b>Commercial banks</b>	<ul style="list-style-type: none"> <li>Strong local presence</li> <li>Strong financial capacity</li> <li>Moderate interest rates</li> </ul>	<ul style="list-style-type: none"> <li>Stringent loan requirements for collateral, ID proof, etc.</li> <li>Limited history of providing toilet only loans</li> </ul>	
<b>Housing finance companies</b>	<ul style="list-style-type: none"> <li>Target lower income populations</li> <li>Strong financial capacity</li> </ul>	<ul style="list-style-type: none"> <li>Lack local presence</li> <li>Previous history with toilet loans unknown</li> </ul>	

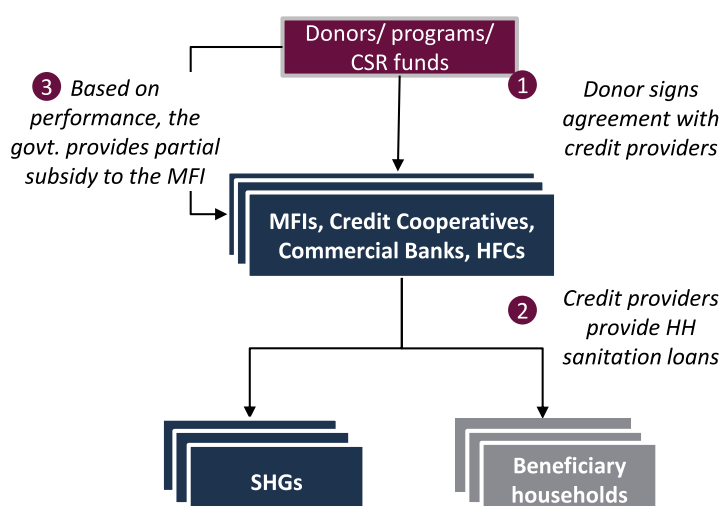
49

## It is possible to leverage limited funds through revolving funds by SHGs and subsidies to other credit providers

### Self help groups and Credit cooperatives



### Micro credit institutions



- Local SHGs and credit cooperatives can be given access to a **revolving fund** to provide **sanitation loans** to households at zero/low interest rate
- Previously used in the **Total Sanitation Campaign in India**, where a revolving fund with a maximum corpus of INR 5 million was set up at the village level
- Source: Total Sanitation Campaign website, GPOBA website

- The local government can **provide performance based subsidy to MFIs** for providing sanitation loans to households at low interest rate
- Previously used in the **GPOBA 'Maji Ni Maisha'** project in Kenya, where a local MFI (K-rep bank) was given 40% subsidy once the water project was completed to repay a part of the loan to community water project

50



## Deliberations on Implementation of 'own toilet scheme'

### 1 Implementation mechanism and eligibility criteria for the scheme

#### Implementation mechanism for the demand-based own toilet scheme:

- ✓ Both city councils have approved this innovative scheme with a commitment to fund the pilots using their funds from their own budgets. The suggested implementation mechanisms were discussed at length. Both cities have agreed to the proposed overall implementation mechanism.
- ✓ Both cities have shown a preference for appointing a third party as a monitoring agency during implementation of scheme at the city level. However, for the pilot phase for first 100 households, ULB s themselves will perform the role of monitoring agency.
- ✓ Cities expressed interest in exploring options of new toilet designs and prefabricated toilets which may reduce the block costs further.
- ✓ Cities have also expressed interest in organising a 'toilet fair' in their cities for interested toilet providers as this will enable interested households to choose types of toilets as per their own requirement. It will also help establish links among potential buyers and sellers in a market place environment.

51

## Deliberations on Implementation of 'own toilet scheme'

### 1 Implementation mechanism and eligibility criteria for the scheme

#### Eligibility criteria for the scheme:

- ✓ The eligibility criteria for applicant households in terms of requirement of property related documents from them was discussed in detail. Both cities expressed concerns towards granting permissions for constructing toilets considering the legal provisions. However, they have also shown an inclination to open a call for applications and consider potential cases.
- ✓ Both cities have also agreed to reconsider relaxation of stringent conditions for building permissions to construction of toilets and explore further necessary provisions to tackle these issues.

52

## Deliberations on consumer financing for toilets

---

### 2 Making available different credit options to citizens

#### Provide platform to lenders and consumers to interact

---

- ✓ Household level assessments of financial capacities highlighted the need of financing beyond the partial subsidy provided by the city councils. The assessment also showed the potential demand for credit for toilets in both cities. Assessment on the lenders' side shows positive interests by many lenders in lending sanitation loans in these cities.
- ✓ Both the cities have agreed to promote the idea of consumer financing for toilets through credits etc.
- ✓ Cities have shown interest in organising a 'lenders' fair' in their cities, which will enable households have a better idea about credit options and for the lenders to have an idea about the city conditions.

53

---

## Appendix

54

## Workshop Agenda

11.30 – 11.45	Welcome and Introductions
11.45 – 12.00	Vision and Objectives of the meeting
12.00 – 12.45	Presentation on integrated fecal sludge management proposal for Wai / Sinnar / Ambejogai and possible PPP options for the same.
12.45 – 13.30	Brainstorming session on integrated fecal sludge management
13.30 – 14:15	Presentation on Own toilets proposal for Wai / Sinnar and possible consumer financing options for the same.
14.15 – 15.00	Brainstorming session on consumer financing for own toilets
15.00 – 15.30	Follow up and next steps in integrated fecal sludge management and consumer financing for own toilets

55

## Workshop Participants

Sr.No	Name of Participant	Organization
1	Asha Raut (Chief Officer)	Wai Nagar Parishad
2	N.V. Gosavi (Sanitary Inspector)	Wai Nagar Parishad
3	Ravindra Vithal Deshmukh (Sanitary Inspector)	Sinnar Nagar Parishad
4	Chandrakant Gajbhiye	MEETRA (MJP), Nashik
5	Prashant S. Kulkarni	MEETRA (MJP), Nashik
6	Manisha Pandita	Dalberg Global Development Advisors, Mumbai
7	Romit Mehta	Dalberg Global Development Advisors, Mumbai
8	Ahmed Nadeem Khan	Dalberg Global Development Advisors, Mumbai
9	Dr. Dinesh Mehta	CEPT University, Ahmedabad
10	Dr. Meera Mehta	CEPT University, Ahmedabad
11	Aasim Mansuri	CEPT University, Ahmedabad
12	Dhruv Bhavsar	CEPT University, Ahmedabad
13	Paresh Chajjed	CEPT University, Ahmedabad
14	Dr. Sneha Palnitkar	AIILSG, Mumbai
15	Utkarsha Kavadi	AIILSG, Mumbai
16	Pallavi Mukane	AIILSG, Mumbai
17	Naznin Lalani	AIILSG, Mumbai
18	Dhanshree Zende	AIILSG, Mumbai
19	Pallavi Palsokar	AIILSG, Mumbai

56

## The Performance Assessment System (PAS) Project

The 'Performance Assessment System – PAS' is a five-year action research project, initiated by the CEPT University, Ahmedabad, with funding from the Bill and Melinda Gates Foundation. It supports development of appropriate tools and methods to measure, monitor and improve delivery of urban water and sanitation services in the states of Gujarat and Maharashtra. The PAS Project comprises three components of performance measurement, monitoring and improvement.

The PAS Project is supporting the development of City Sanitation Plans (CSP) to achieve open defecation free status for four small cities in Maharashtra, which are Wai, Hingoli, Ambajogai and Sinnar. These cities were selected by the Water Supply and Sanitation Department, Government of Maharashtra, and Maharashtra Jeevan Pradhikaran (MJP). A framework for city-wide assessment using the full value chain for urban sanitation has been developed, which is being used in developing these CSPs. Initial workshops were organised by the MJP with officials of these cities to discuss the CSP approach. Draft plans for these cities are ready and will be discussed with city officials.