



SMALL remains BEAUTIFUL

PRIVATE SECTOR PARTICIPATION
IN FAECAL SLUDGE & SEPTAGE
MANAGEMENT

2020

Shubhagato Dasgupta | SR Ramanujam | Yogesh Upadhyaya

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ABOUT THE POLICY BRIEFS

During the first phase of the Swachh Bharat Mission–Urban (SBM-U) in 2014-2019, toilet construction increased manifold. Resultantly, almost all households in India now have access to a toilet. However, the large-scale toilet construction under the SBM-U has not been matched with a concomitant expansion of the sewerage network, that currently caters to about merely one-third of the Indian households. The remaining households are dependent on On-Site Sanitation (OSS) systems such as septic tanks and pits, that are prone to overflow and require timely desludging. Further, instances of direct disposal of faecal sludge into open drains, either directly from toilets lacking an OSS system, or from malfunctioning OSS systems, manifest adverse environmental and public health impacts. Against this background, Faecal Sludge and Septage Management (FSSM) emerges as a fundamental need to manage the problems associated with collection, treatment and disposal of faecal waste.

Over the past few years, under AMRUT and SBM, the state governments have set up a number of treatment facilities or FSTPs (Faecal Sludge Treatment Plants) to address the issues related to treatment of faecal sludge. However, much less attention has been attributed to the collection and conveyance part of the FSSM value chain, creating a significant service gap, that is unviable to be solely addressed by the public sector. To address the service disparities, a host of private enterprises providing FSSM services has emerged in India, predominantly through an informal, small-scale operation. With an increasing recognition of the fundamental role of the private sector in bridging the gap between the availability and requirement of FSSM services, the launch of the National Faecal Sludge and Septage Management (NFSSM) Policy in 2017 further emphasised the need to redress the informality associated with the sector.

As a part of its research programme on urban sanitation, SCI-FI has been researching the nature and scope of private sector participation in urban sanitation services. Based on SCI-FI's interventions and research, a series of five Policy Briefs has been prepared in an effort to summarise the sector characteristics and the gamut of private participation in the collection, conveyance and treatment part of the FSSM sector. The five policy briefs in the series are titled as follows:



1. PPP experiences of Key Infrastructure Sectors: Learnings for FSSM
2. Designing a Framework to Facilitate Private Investments in FSSM
3. Characteristics of the FSSM Sector
4. Business Needs and Good Practices in the FSSM Sector
5. Framework for Finance Flows in the FSSM Value Chain

POLICY BRIEF 4



BUSINESS NEEDS AND GOOD PRACTICES IN THE FSSM SECTOR



1 BACKGROUND



In the previous policy briefs, we have discussed the Faecal Sludge and Septage Management (FSSM) sector needs and characteristics to understand the fundamental requirements of successful business models in this sector. To understand the “needs” of successful business models in the FSSM sector, it is important to first outline the conditions for businesses to serve the society under the discipline of competitive markets. The two key conditions for this discipline to work are

1. Businesses are able to establish a service provider relationship with the customer. This means that they can directly solicit customers, price their services, are exposed to competition and customers have a choice of

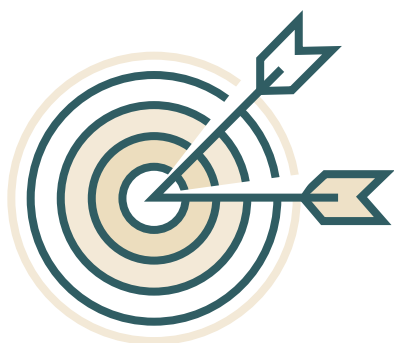
shifting if they do not perceive value. In other words, business should have freedom to change key aspects of their business.

1. Businesses can access financiers, obtain funding and are obliged to return the funds with interest or return. Financiers judge the business on capability and performance. Given the small size of the FSSM business, the loans are likely to be mobilised from family sources or as personal loan from local bank branches, non-banking finance companies or money lenders. In other words, funders should force exit of the businessman who is not efficient.

The FSSM market should also meet these requirements to attract business. Different business models

in the FSSM sector satisfy these requirements to different levels. For example, in the popular Public Private Partnership model, the access to customers is controlled through a contract with carefully designed performance parameters and payment terms. Customers may not have a choice to change their service provider since there is no competition. In some parts of the business, like treatment, it may not be possible to generate competition fully. Small cities may not have enough volumes to serve multiple treatment plants. Nevertheless, the objective would be to move towards a business-friendly model. In this Policy Brief, we explore some possible business models for successful private sector participation in FSSM.

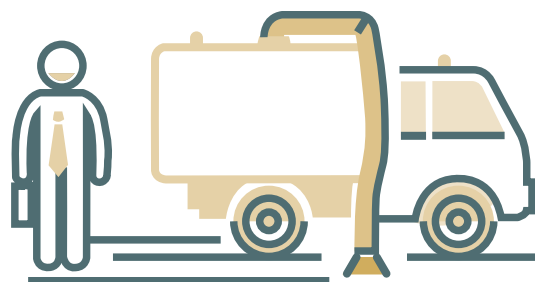
2 OBJECTIVE



This policy brief analyses the specific needs of the businesses engaged in various practices across the sanitation value chain, and outlines the potential models of private sector engagement. It also aims to evaluate the current regulatory norms to check whether

the environment is conducive to profitable and sustainable business practices. Further, through learnings from business models adopted in other South Asian countries, it aims to draw lessons of good practices and the viability of such models to be replicated in India.

3 BUSINESS NEEDS IN THE FSSM SECTOR



3.1 FSSM as a ULB managed public service

This is a default arrangement for most urban services (such as water supply, sewage or solid waste management). In a public service model, the ULB manages the service delivery. It may have staff on its rolls or on contract. It may also engage vendors (such as truck operators) or contractors (e.g. for treatment plant construction) but the ULB engages them. The staff, vendors and contractors are not paid by the customers directly for the service; it is the ULB that pays them. The key aspect here is that the ULB is the sole service provider who has access to the customer. This does not foster a business, it only encourages fragmented services. Stakeholders become employees, vendors or contractors to the ULB. It keeps financiers away from the business since in most cases ULBs fund the service delivery with own revenue or grants, and rarely with commercial borrowing. Financiers at the best may fund contractors and vendors in the background, but they have no direct involvement in the FSSM business. The accountability of this system to customers and financiers is low, as evidenced by many public services.

3.2 Subsidised model

In the subsidised model, the ULB may engage a single service provider, instead of emptying staff, vendors and contractors separately. The ULB pays the entrepreneur/business person and the customer only receives the service. This model provides an opportunity for an entrepreneur or a business to provide an integrated service. The relationship between the ULB and the entrepreneur/businessperson is more balanced as compared with a vendor or contractor. The ULB is still the sole service provider and the entrepreneur or businessperson provides a single point service on behalf of the ULB. The ULBs generally provide the finance upfront (as construction payment), therefore financiers are not able to participate in this model. The PPP models in FSTP fall in this category. The capital for construction is mostly provided by the ULB itself. The ULB also subsidises operations of the FSTP.

3.3 Advanced or evolved PPP

This operates similar to the subsidised model above with the difference that the customer pays for the service partly or fully. The facilities maybe built by the ULB but handed over to an operator who takes the risk of business. The

charges are likely to be regulated by the ULB and service standards that the business should meet are specified. However there is no competition and the ULB controls access to the customers through the contract.

The business may take higher level of risk, like the risk of inadequate volume in an FSTP. It also differs from the subsidised PPP arrangements since the customer pays the private business directly. If there is a shortfall in service (say, long waiting period for trucks at the FSTP) the feedback to the operator will be pronounced. In comparison, in facilities that are subsidised by the ULB, the truck may wait equally long, but since the service has a subsidy character, the feedback is not as pronounced. Given the larger size of the contract, it would attract entrepreneurs and financiers.

3.4 CSR led models

These models are similar to the subsidised model of the ULB, except that instead of the ULB, a philanthropic organisation may finance the costs. Generally capital costs are financed fully and operations may be subsidised for a few months or years, typically termed demonstration period. It is expected that the ULB takes

over the system and establishes an alternative financing mechanism. This model is useful as a demonstration of a new practice or technology, but shares the same weakness as the subsidised model; and possibly another weakness that the ULB does not have full ownership over the system.

3.5 Business model

A true business model will provide direct access to the customer and

will let the market determine prices. The emptying market in FSSM already operates in this principle in many cities. This market has come up even without conscious efforts by ULBs. Even where there are limited trucks in operation, a market price tends to develop. In some places the ULB also provides emptying service which also sends a price signal. Competition is possible and operators who advertise their phone numbers widely are more likely to be called.

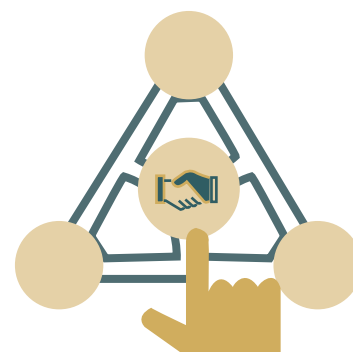
Given the sporadic nature of usage, switching is not really effective, but word of mouth feedback from neighbours can affect demand. This model does not work in treatment at present since the number of treatment facilities are limited or non-existent. However, in medium sized cities, it is possible to have more than one treatment facility and therefore competition is theoretically possible, but limited by distances.

TABLE 7 - COMPARISON OF BUSINESS MODELS



	1. Public service	2. Subsidy	3. Evolved PPP	4. CSR	5. Business
Free access to customers	No	No	Through ULB contract	No	Yes
Freedom of pricing	No	No	No	No	Yes
Competition and ease of switching service providers	No	No	No	No	Yes, depends only on sector limitations
Attracts entrepreneurs	No	Yes	Yes	Yes	Yes
Attracts financiers	No	No	Yes	No	Yes

4 CURRENT TRENDS IN FSSM – DO THEY ENCOURAGE A BUSINESS MODEL?



The Business and Evolved PPP models are more advanced as compared to the subsidy, CSR and public service models. However, ULBs are using the regressive models more than the advanced models.

Licensing and price regulation in emptying and transport:

Arguments are that a threshold quality of trucks and equipment have to be ensured and dumping of waste should be controlled. Therefore from a public health perspective licensing and price regulation in emptying are advocated. In reality, ULBs don't have a great track record of regulation. The quality of solid waste management trucks and equipment they operate or outsource does not build confidence. In any case, hazardous waste and bio medical waste which are transported through the city are not regulated by ULBs but by the Pollution Control Boards. Also, this is a market that has already developed on its own, has many of the features of free market (customers have a choice, trucks can be sold in another town if price points are not viable in one place etc). Therefore any move to over-regulate this activity will kill the

potential that exists for business to operate in FSSM.

Scheduled desludging:

The argument is that septic tanks have to be emptied once in three years (or two years). Some ULBs have gone to the extent of organising a scheduled emptying service paid for by the city through its own revenues. The merits of the scheduled emptying are overstated (discussed earlier). It only has the limited benefit of pre-empting caking and therefore the risk of manual scavenging. Further, the practice of scheduled desludging by ULB has an economic defect as well. Once a ULB decided to provide a scheduled desludging service, it is effectively killing the business model in emptying and transportation. The ULB would most likely organise a service through a centralised tender selecting one or two agencies. This kills the free market entry and competition. It pays for the service through its own revenue (since forcing people to empty their tank AND pay for it will not work) thus taking away the customer pays principle. Over a period of time, this would become as

inefficient as municipal solid waste collection; irregular and inefficient. Possibly worse since poor municipal solid waste management at least provides instant visual feedback and generates complaints.

Treatment plants:

Most cities in the near future will have only one treatment facility; therefore competition is not possible; and a mechanism for price fixing and licensing will be required in the short term. A model where emptying business pays the treatment facility and recovers the cost as a part of emptying fee would be a better model in this situation. To some extent, the truck operators will be able to force better performance levels (e.g. quicker emptying times) and also provide pushback if prices are high (since these have to be recovered from customers). If the ULB separates the treatment business and runs it with ULB subsidies, it is a weaker model. It is also possible to let private facilities come up in private land which entirely run on market principles. They can cater to bulk customers without any role for the ULB in price setting.

5 HOW CAN BETTER MODELS BE PROMOTED AND IN WHAT AREAS



Septic tank rehabilitation:

ULBs can promote masons to assess and rehabilitate/ repair septic tanks. The households pay for it themselves. For low income households, the ULBs can provide a subsidy, but transfer it directly to the households like Direct Benefit Transfer (DBT) approach. This has already been followed in the case of toilet construction under Swachh Bharat Mission. The DBT approach will promote business opportunities and enable masons to function as entrepreneurs – seeking customers, providing service and directly being paid by customers. Since a single person (mason) provides this service as a business, we can call this a **single person business model**.

Household surveys and maintaining data:

ULBs have to undertake this activity. In a normal course, ULBs will engage staff (on rolls or on contract) or a

survey agency. Instead, ULBs can promote a single person business model in this. ULBs can draft a scope of work for a single person to provide this service on clear performance criteria. This will promote individuals to take up this activity as a performance based business, the first step into making them entrepreneurs.

Maximise Business to Business or Bulk to Business (B2B) models:

It is possible to introduce business models in treatment. ULBs can encourage treatment plants in private land dedicated to bulk customers. ULBs can set criteria by which landowners can convert their land into a treatment facility. These can run as an integrated business of treatment and emptying as a single point service, privately financed and privately operated. There is no public funding involved and therefore, the ULB does not need to control or regulate prices. If the ULB already has a treatment plant (publicly owned) or the city has an emptying business, they will act as a counter weight to the private facility and provide price signals.

6 OBSERVED GOOD PRACTICES ACROSS SOUTH ASIA



Malaysia:

In Malaysia, while the local governments were responsible for both water and sewerage services, they usually lacked the capacity to provide adequate sewerage services. In response, Malaysia nationalised sewerage services in 1993, and transferred the wastewater assets to the federal government, and offered services through a single, private concessionaire, **Indah Water Konsortium (IWK)**. From 1993 to 2008, IWK built sewers, developed desludging services, constructed septage and wastewater treatment facilities across the country, and, together with the regulatory agency, established clear policy guidelines and standard operating procedures for developers and wastewater operators. The provision of sewerage services was regulated and licensed by one regulatory body **Suruhanjaya Perkhidmatan Air Negara (SPAN)**. Now private entrepreneurs are also allowed with IWK, however many operate as sub-contractors to IWK due to the security provided by the latter in securing work for them.¹

Philippines:

In June 2012, the Philippine Government approved the **National Sewerage and Septage Management Program (NSSMP)**. NSSMP provided up to a **40% cost share to local cities and municipalities to implement sewerage projects**. It also launched a national program to promote FSSM and the values associated with regular septic tank cleaning. NSSMP also provided technical assistance and targeted outreach and training to motivate and build the capacity of local officials to undertake FSSM programs. The national government did not share costs with local governments. These programs were to be designed, operated, and maintained at a significantly lower cost, with operation and maintenance expenses spread among the municipality, private companies, and end users through fees (tariffs).²

Vietnam

Over three-quarters of urban households in Vietnam rely on septic tanks. Both public and private septage collection companies exist; the public companies dispose of waste in septage treatment facilities, where they exist, and landfills. The private companies tend to dispose of septage in waterways and drains, contributing to high levels of water pollution that cost Vietnam \$780 million each year in health, water, and economic losses. Until 1999 the national government of Vietnam had not issued regulations on septage collection, treatment, or disposal. Through the “Orientation for Urban Sewerage and Drainage Development” (OUSDD), Vietnam leveraged almost \$850 million in official development assistance for cities and provincial towns to construct sewerage and drainage infrastructure. Subsequently, the Government passed a decree that emphasised on sludge management, FSSM, resource recovery and household connection. Several policies were laid down to encourage private sector participation. The World Bank and Asian Development Bank provided assistance in FSSM in three large cities. This led to other cities forming regulations on septic tank emptying requirements. Research studies were conducted to arrive at appropriate faecal sludge treatment technologies. In terms of cost recovery, the wastewater tariff was increased step-wise and cross subsidiary options were explored.³

1 Source: A Rapid Assessment of SEPTAGE Management in Asia, USAID, January, 2010.

2 Source: A Rapid Assessment of SEPTAGE Management in Asia, USAID, January, 2010.

3 Ibid.

7 CONCLUSION



This policy brief outlines five models of private sector engagement in FSSM, namely, ULB managed, subsidised, advanced PPP, CSR and business. These models represent a spectrum of private sector engagement with different degrees of ULB intervention and varying price determination strategies. Further, it compares these business models vis-à-vis parameters such as access to customers, freedom of pricing, competition and ease of switching

service providers, attractiveness for entrepreneurs and financiers, and concludes that a traditional business model substantially facilitates these conditions.

The fifth and the last Policy Brief in the Series, 'Framework for Finance Flows in the FSSM Value Chain', provides a detailed assessment of how various business models compare, and what are underexplored possibilities.



ACKNOWLEDGEMENT

The Policy Brief Series is prepared under the research programme, Scaling City Institutions for India (SCI FI) funded by the Bill and Melinda Gates Foundation (BMGF).

The authors are appreciative of the varied contributions by fellow CPR researchers towards the completion of the Policy Brief. In particular, the authors wish to thank Anindita Mukherjee, Arushi Gupta, Kshitij Jaiswal and Shaurya Gupta for providing comprehensive support on finalization of the series of Policy Briefs.

The series has been designed by Ms. Sristi Bhatt and Atul Verma.

SCI-FI, CPR is responsible for the content of this publication.

SCALING CITY INSTITUTIONS FOR INDIA (SCI-FI)

Sanitation programme at the Centre for Policy Research (CPR) is a multi-disciplinary research, outreach and policy support initiative. The programme seeks to improve the understanding of the reasons for poor sanitation, and to examine how these might be related to technology and service delivery models, institutions, governance and financial issues, and socio-economic dimensions. Based on research findings, it seeks to support national, state and city authorities develop policies and programmes for intervention with the goal of increasing access to inclusive, safe and sustainable sanitation. Initiated in 2013, the programme is primarily funded by the Bill and Melinda Gates Foundation (BMGF).



Dharma Marg, Chanakyapuri,
New Delhi 110021
WWW.CPRINDIA.ORG



<https://scifi.cprindia.org/>