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Engaging the Private Sector in Urban Sanitation Services

A Review of South Asian Cities

Acknowledgements

This report version of the Review of BMGF/DFID Partnership Cities Project reflects feedback from all stakeholders who reviewed the report during the period November 2017 to April 2018.

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Executive Summary

Introduction

In 2013, BMGF/DFID initiated a partnership to promote private sector participation in non-networked sanitation and improve capabilities of sanitation service authorities to govern these partnerships. Targeted cities were expected to have a clear mandate to provide urban services for all, including for the non-networked poor and interest to develop and test models to engage the private sector in a coordinated, formal manner through structured service-level agreements (SLAs), as a form of pub-private partnerships, to ensure the delivery of equitable, sustainable sanitation services at a city level.

Nine cities (5 in Sub-Saharan Africa, 4 in South Asia) with demonstrated evidence of long term commitment to improving sanitation service outcomes were selected to benefit from this opportunity.

Figure 1 Value chain focus for SLAs across project cities in South Asia

With the second project phase drawing to a close in December 2017, BMGF/DfID commissioned IFMR LEAD, India, to undertake a rapid review of the outcomes of this partnership portfolio in South Asian cities and identify lessons which can be applied to future projects and in cities' future investments in sanitation services.

The focus of the review was on good practices and challenges emerging from these cities during the process of SLA design and implementation, the potential for SLA approaches to achieve inclusiveness in service provision and the sustainability of programme actions beyond partnership period.

Approach and Methodology

The review followed an overall framework developed during the inception period, which laid out key research questions and sub-questions which were broadly guided by the review requirements and scope outlined in IFMR's Terms of Reference and related discussions with the BMGF programme team. The framework aimed to understand progress, performance and key lessons against the primary portfolio objective of engaging private sector through performance-based measures in non-networked sanitation service provision. It also drew on the OECD-DAC criteria of Relevance, Effectiveness and Sustainability to examine strategic questions around this portfolio. Based on discussions with BMGF, the design and implementation of SLAs were also reviewed with respect to the resulting equity in service provision.

The review was guided by qualitative approaches, drawing on primary and secondary data collection methods and sources to answer key research questions and synthesis of findings. This involved desk review of project documents relating to SLA design and implementation and qualitative fieldwork and consultations in the partner cities to complement insights gleaned from the desk review. Qualitative fieldwork was conducted during October-November 2017 and used data collection instruments such as key informant interviews of project stakeholders and field observations of sanitation services extended through this engagement to examine various dimensions of SLA development and implementation. Information gathered through the various data sources was triangulated to establish the broader city-level narrative and analysis. For the regional synthesis report, analysis was done by comparing data across projects and in relation to sector and country strategies.

Key Findings

Analysis of the enabling environment for private sector engagement suggests that partnerships have made appreciable contributions to building institutional capabilities across various administrative levels and to private sector capacities towards developing PPPs for onsite sanitation services. All partnerships have made appreciable contributions to raising political attention to onsite sanitation, in crafting a rationale for private engagement and in consolidating public sector commitment into concrete institutional actions that allow testing of private engagement models in onsite sanitation services.

From a service performance standpoint, there is limited data on actual improvements to date on service access and quality. But contractual features suggest a strong orientation to service standards on access and quality. Achievement of outcomes hinges on the effectiveness of monitoring and regulation of provider performance.

With respect to the urban poor and most marginalized, there is limited data on actual improvements to this population segment and the potential for tangible benefits also appears uncertain. Variations in pro-poor orientation are observed between operators who have not-for-profit origins and pure private entities who are guided by profitability considerations. In the latter, serving urban poor residing in these areas is a responsibility that continues to rest with the service authorities.

From an environment standpoint, existing measures in terms of developing treatment plants and city-level awareness generation can yield some environmental improvements as this can encourage environmentally safe disposal and help curb illegal dumping practices. But, there is currently insufficient data around actual improvements realised at the point of treatment as environmental monitoring (water/soil quality) is not systematic. Containment issues are yet to be addressed across cities so actual

improvements from an environment standpoint, particularly in contexts of on-demand emptying, is unclear.

Several elements in the enabling environment bode well for sustainability - funding allocations for onsite sanitation within annual budgets, levy of sanitation tax, institutional understanding of service imperatives in onsite sanitation, improving capacities of public and private sector and institutional capabilities to engage private sector in service provision. But risks include - lack of enforcement around containment practices, absence of necessary licensing regulations and unproven markets for end-use products, dependence on grant funds for critical infrastructure.

Across all cities, public investments required for scale and replication are limited by available resources and competing priorities, while private investments hinge on the business viability of service models. All cities have leveraged private investments for project operations and maintenance expenses. While there are limited actual examples of replication within and across cities, project components are believed to hold potential for replication and scale and proving business model viability is likely to help accelerate this process.

Implications and Lessons

- *__Engage private sector__ in areas where they are already active formal or informally and where market and revenue potential can be reasonably ascertained*
- *__Build institutional readiness__ by clarifying related legal and regulatory frameworks and institutional arrangements, embracing flexible procurement processes and de-risking through appropriate concessions and guaranteed funding streams*
- *__Support private operator in service components__ that impact business viability such as in demand generation and enabling access to critical and support infrastructure*
- *__Pay attention to critical regulatory mechanisms__ around containment, manual emptying, and product licensing*
- *Public sector must __play active role in monitoring__ provider performance and enforcing their obligations around service levels*.

Given that most of the city partnerships are in their early stages of engaging private sector in onsite sanitation service delivery, more time is needed to draw out full lessons from these approaches and their effectiveness in improving sanitation outcomes. Some emerging lessons from city partnerships in South Asia include:

- Private sector can be attracted to deliver onsite sanitation services at scale under PPPs, but the conditions under which the private sector can yield better value for money in comparison to public provision of these services or can supplement public investments for infrastructure development and service improvements in this sector remains an open question
- Strengthening the enabling environment and institutional readiness are fundamental – markers include clarified legal and regulatory frameworks and institutional arrangements, flexible procurement processes, de-risking through

appropriate concessions and guaranteed funding streams, building public and private sector capacities to structure and execute balanced PPPs, availability of public sector support in service components that impact business viability

- Facilitating candid dialogue between the public and private sector at all stages of contract design and implementation is also necessary to build partnerships that are based on mutual trust and shared risk and are therefore sustainable and can potentially generate value for money over the longer-term

- As service accountability vests with the public sector, their responsibility needs to continue and be well-resourced even after contract award. This requires active engagement in monitoring provider performance and enforcing their obligations around service levels. It also requires public sector ownership of environmental monitoring and regulation, considering that sanitation services carry implications on environment and public health which are of a public good nature

- How private sector participation can bring direct benefits to the poor is yet to be demonstrated. The evidence so far, particularly in PPPs involving pure private actors with a strong profitability-orientation, highlights the limitations of public-private partnerships in operating at city-scale. It highlights the citizen groups that typically get left behind in the process. A more active role from the public sector is desirable, both to understand the service challenges facing the poor and to evolve alternative public policy solutions where private engagement does not seem feasible or needs to be structured explicitly to address needs of those market segments

- Sustainability is a complex issue and a periodic, closer review of institutional change and sector ownership among key change agents, the performance and effectives of incentives and enforcement mechanisms within PPPs and to what extent contractual arrangements with the private sector are managed in a fair and balanced manner to portend a sustainable partnership is necessary

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Acronyms

BMGF	Bill and Melinda Gates Foundation
BNBC	Bangladesh National Building Code
BDT	Bangladeshi Taka
CDC	Community Development Committee
CEPT	Centre for Environment Planning and Technology
CPHEEO	Centre for Public Health and Environmental Engineering Organisation
CSP	City Sanitation Plan
CT	Community Toilet
DFID	United Kingdom Department for International Development
DPHE	Department of Public Health Engineering
FSM	Fecal Sludge Management
FSTP	Fecal Sludge Treatment Plant
GoI	Government of India
GoM	Government of Maharashtra
GPS	Global Positioning System
GWMC	Greater Warangal Municipal Corporation
HH	Household
IFMR	Institute for Financial Management and Research
IHSDP	Integrated Housing and Slum Development Programme
INR	Indian Rupee
IRF	Institutional and Regulatory Framework
JM	Jhenaidah Municipality
KCC	Khulna City Corporation
KDA	Khulna Development Authority
KM	Kushtia Municipality
MoU	Memorandum of Understanding
MoUD	Ministry of Urban Development
NGO	Non-governmental Organizations
O&M	Operations and Maintenance
PPP	Public-Private Partnership
SDC	Society Development Committee
SLA	Service Level Agreement
STS	Secondary Transfer Stations
SWM	Solid Waste Management
ToR	Terms of Reference
UN	United Nations
WASH	Water supply, Sanitation and Hygiene
WMC	Wai Municipal Council

I. Introduction

1.1 Background and Objectives

The sanitation sub-sector presents an important pathway to positive public health and environmental outcomes, but it is also one in which service gaps are acute and service provision wrought with challenges, particularly in rapidly urbanising developing country contexts. In these contexts, historically, low prioritisation of sanitation infrastructure has meant that cities are now grappling with infrastructure demands thrust upon them by large-scale urbanisation.

In the urban areas of Central and Southern Asia, onsite sanitation systems such as septic tanks or improved latrines is the predominant form of improved sanitation (WHO/UNICEF-JMP, 2017)[1].

Figure 2: Sanitation Statistics

Image Source: Creative Mania

While countries in this region have demonstrated commitment to the global agenda on sanitation by prioritising the sector, municipalities carrying service provision mandates are typically characterized by weak technical expertise, institutional capacities and funding sources to effectively meet service demands linked to urbanisation (HPEC, 2011) (WSP, 2016).

In 2013, the Bill and Melinda Gates Foundation (BMGF) and the UK Department of International Development (DfID) entered into a partnership to strengthen institutional capacities for engaging private sector in the delivery of non-networked sanitation services (hereinafter referred to interchangeably as fecal sludge management (FSM) or onsite sanitation services. In particular, this partnership sought to strengthen efforts to institutionalise public private partnerships as a viable mode of project and service delivery in non-networked sanitation and improve capabilities of sanitation service authorities to govern these partnerships. Proposals were solicited from cities that were interested to ensure the delivery of equitable, sustainable sanitation services at a city level. Targeted cities were expected to have a clear mandate to provide urban services for all, including for the non-networked poor, and interest to engage the private sector in improving sanitation outcomes.

The resulting portfolio consisted of twelve cities (5 in Sub-Saharan Africa, 7 in South Asia) with demonstrated commitment to improving sanitation service outcomes. Over two project phases, grantees

[1] an estimated 49% of the population in this region use on-site sanitation and 14% of the population reportedly have sewer connections

(public agencies and consultant organisations who had entered into partnerships with designated sanitation service authorities) were expected to: assess the enabling environment for private sector engagement in the city's sanitation sector; identify and structure sanitation projects that were appropriate to context for delivery by the private sector; and to build necessary capabilities within service authorities to support this engagement with the private sector. With technical assistance from grantees, service authorities were then expected to engage the private sector using performance-based contracts (referred to herein as service level agreements or SLAs) that were governed on the basis of monitored performance measures linked to service provision.

With the second project phase having drawn to a close in December 2017 for most grants in the portfolio, BMGF/DfID commissioned a rapid review of portfolio outcomes, with particular focus on the extent to which each had contributed to the development and implementation of SLAs, and what relevant challenges and good practices were emerging. In drawing out key lessons from the design and implementation of SLAs, the review was required to pay particular attention to aspects of equity in service provision and sustainability of actions beyond partnership period.

This document is a summary of lessons, challenges, and best practices identified by the authors based on a review of the city partnership projects implemented by BMGF/DFID grantees in South Asia.

Table 1: Regional Portfolio Profile

Country/ City	Area (sq.km)	Population (millions)	Grantee	City partner	Project period	Value chain focus for SLA	SLA development stage during review
Bangladesh							
Faridpur	22.36	0.13	Practical Action Bangladesh	Faridpur Paurashava	11/2014 - 11/2017	Emptying & Transport, Treatment & End-use	Contract award/management
Khulna	45.65	1.50	SNV Netherlands Development Organisation	Khulna City Corporation	01/2014 - 12/2017	Emptying & Transport, Treatment & End-use	Project structuring
Jhenaidah	32.40	0.16	SNV Netherlands Development Organisation	Jhenaidah Paurashava	01/2014 - 12/2017	Emptying & Transport, Treatment & End-use	Contract award
Kushtia	27.80	0.24	SNV Netherlands Development Organisation	Kushtia Paurashava	01/2014 - 12/2017	Treatment & End-use	Contract award/management
India							
Wai	3.60	0.03	CEPT University	Wai Municipal Council	11/2014 - 11/2017	Emptying & Transport	Contract award
Sinnar	51.00	0.07	CEPT University	Sinnar Municipal Council	11/2014- 11/2017	Emptying & Transport, Treatment & End-use	Contract award
Warangal	472	0.80	Administrative Staff College of India	Warangal Municipal Corporation	11/2014 - 05/2017	Access (Public Toilets)	Contract award/management

1.2 Review Approach and Methodology

The review framework for assessment of the BMGF/DFID city partnerships portfolio was broadly guided by the review requirements and scope outlined in IFMR's Terms of Reference and related discussions with the BMGF programme team. It was designed to assess progress and performance on both outputs and outcomes corresponding to the primary portfolio objective of engaging private sector through performance-based measures in non-networked sanitation service provision.

Dimensions of the Review

- Progress and lessons along PPP/SLA development stages - Project identification, Project Structuring, Procurement, Contract award and management
- Risk management
- Inclusiveness of poor
- OECD-DAC evaluation criteria – Effectiveness, Sustainability, Relevance

The framework was also guided by the Organization for Economic Cooperation and Development's (OECD's) Development Assistance Committee (DAC), which lays down specific criteria for evaluating development assistance [2] with the broader aim of improving the development effectiveness of aid. The OECD-DAC criteria[3] of Relevance, Effectiveness and Sustainability provided an appropriate framework for examining strategic questions around this portfolio. These questions included the extent to which: partnership goals resonated with key in-country stakeholders (Relevance), partnership activities attained objectives (Effectiveness), and benefits/results were likely to be sustained beyond the project period (Sustainability). Based on discussions with BMGF, the design and implementation of SLAs were also reviewed with respect to the resulting equity in service provision.

The review was implemented using qualitative approaches, drawing on both primary and secondary data collection methods and data sources to answer the key review questions and synthesis of findings. The review involved desk review of SLAs attempted and executed in the partner cities in South Asia as well as city and project documents relating to their design and implementation. It involved qualitative fieldwork and consultations in the partner cities to complement the insights gleaned from the desk review.

Using semi-structured/key informant interviews, the qualitative fieldwork, conducted during October-November 2017, examined a number of dimensions of project implementation relating to SLAs and impact from the perspective of the key stakeholders. These stakeholders included programme teams, city authorities, implementing staff, private contractors, civil society, and beneficiaries, where possible. Information gathered through the various data sources was triangulated to establish the broader narrative and analysis. For this regional synthesis reports, analysis was done by comparing data across projects and in relation to sector and country strategies.

[2] DAC Criteria for Evaluating Development Assistance, Organization for Economic Cooperation and Development (OECD), Available at: http://www.oecd.org/dac/evaluation/daccriteriaforevaluatingdevelopmentassistance.htm, accessed: September 2017

[3] The OECD-DAC criterion of Efficiency is also likely to be relevant in this context, the relatively limited time available for review rendered it difficult to undertake an assessment of cost-based efficiencies

1.3 Report overview

The remaining synthesis report is organised into the following chapters:

Chapter 2 sets out the regional context at baseline, covering an overview of demand and supply side dimensions of non-networked sanitation, policy and regulatory context both in sanitation and public-private partnerships and institutional arrangements around non-networked sanitation.

Chapter 3 sets out the review findings with respect to: the rationale for private sector engagement; the enabling environments; and the design and implementation of SLAs.

Chapter 4 sets out the overall assessment and lessons from SLA approaches pursued in the region and early evidence around: sustainability of programme performance; and the relevance of partnership goals with respect to private sector engagement.

Chapter 5 sets out broader implications and follow-up actions for future.

The Annexes referenced throughout the document are presented at the end of the report. Individual city reports are shared as separate documents.

1.4 Limitations to the Evaluation

To validate the parameters in our framework, we relied heavily on documents that were shared by the programme team and in-depth consultations with various stakeholders. This exposes our review to certain limitations corresponding to data availability, access and accuracy.

The relatively limited time available for review rendered it difficult to assess the entire range of activities undertaken by each city partnership. Our focus was therefore anchored on the SLA process, priority questions and contributing factors around its development and implementation.

Elements of the reform agenda in non-networked sanitation, particularly the influencing of related national policies are underway in each of these countries and have involved contributions from diverse sector actors. Any references to partner contributions to shaping national policies must therefore have to be seen in relation to the efforts of other agencies engaged in these efforts.

II. Baseline Summary

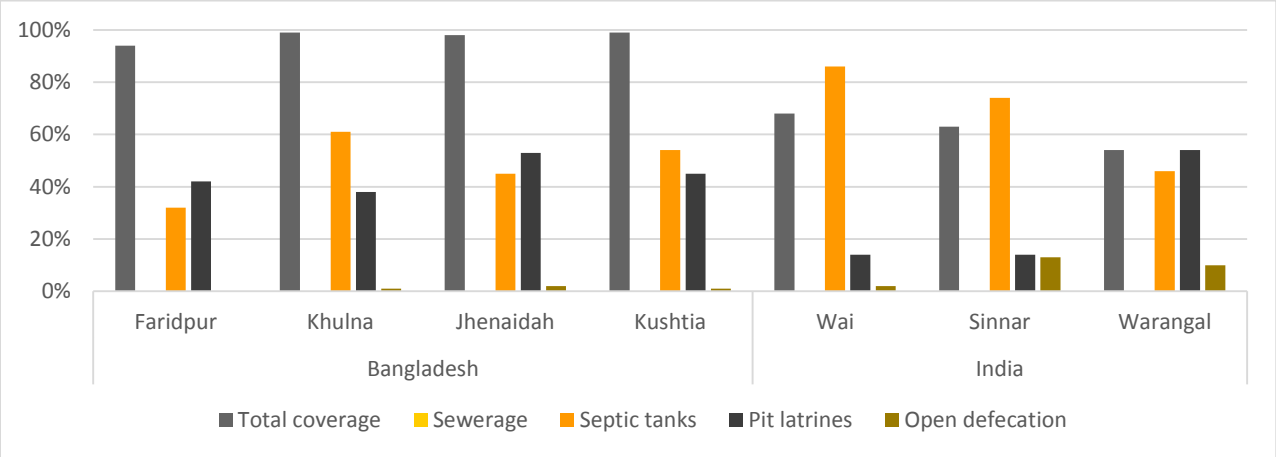
2.1 City Sanitation Profile

At the time of project design in 2014, a majority of the population in the four cities in South Asia relied on on-site sanitation facilities, mostly septic tanks and pit latrines of variable technical standards and upkeep. Access to latrines was higher in the cities of Bangladesh (almost 100%), while more than a quarter of the populations in the two Indian cities lacked access to sanitary latrines (Figure 2). Containment was characterised by environmentally unsafe, technically deficient designs. There was a high prevalence of septic tanks without soak-pits, discharging into nearby drains and open environment, while the improved status of pit latrines could not be clearly determined from baseline profiling of these cities. There were variations in size, dimensions and siting of septic tanks depending on space availability.

Enforcement of design standards around containment was reportedly poor and attributed to slow development of and limited institutional familiarity with technical standards and guidelines for construction and maintenance of on-site sanitation systems.

In addition to their negative implications on environment and public health, these containment practices also meant that household demand for emptying services was low as septic tanks did not fill up at rates or require emptying at frequencies prescribed in national guidelines applicable at that time.

Figure 3 City Sanitation Profile



The sanitation profiling exercise undertaken by city partners also suggested poor and unsafe desludging and disposal practices, with limited regard for health, environment and worker safety considerations (Table 3). All cities had access to mechanised desludging facilities. There was a higher reported prevalence of manual scavenging in the Bangladesh cities. In Bangladesh, this service was reportedly cheaper and quicker. In India, the Employment of Manual Scavengers and Construction of Dry Latrines (Prohibition) Act, adopted in 1993, prohibits the employment of manual scavengers and construction of dry latrines. As a result, there was no officially reported incidence of manual scavenging in the two Indian cities. Actual incidence rates were also reported by project teams in the Indian cities to be insignificant or none. Except Warangal, there were no private service providers for mechanised emptying services in any of the other cities.

None of the cities, with the exception of Kushtia, had access to fecal sludge treatment facilities or designated sludge disposal sites. There was a high reported prevalence of Illegal dumping of emptied sludge in water bodies and other open spaces in all cities. Official estimates were not available in any of the cities on quantity of fecal sludge generated or emptied and disposed. Markets for sludge-based end-use products did not exist.

Table 3 provides an overview of the sanitation profile at each of the project cities in South Asia at baseline.

2.2 Policy and Regulatory Context

At the time of project design, both countries in South Asia lacked a well-defined policy framework for fecal sludge management. From a service provision and environmental standpoint, several legal instruments existed to regulate sanitation services.

Figure 4: Policy and Regulations in India

Environment Protection Act, 1986 Water Prevention & Control of Pollution Act, 1974

- Extend to any agency or inidivudal that discharges pollutants (including treated & untreated sewage) into the environment
- Local governments & public utilities responsible for service provision required to comply with discharge norms for effluent released from sewage treatment plants

73rd and 74th Constitutional Amendment Acts

- Confer responsibility for planning & delivery of urban services including sanitation with urban local bodies under their local municipal laws
- 12th schedule of the 74th CAA, 1992: "public health, sanitation, conservancy & solid waste management" are a critical responsibility of urban local bodies

Municipal Acts and Regulations in Indian States (including Maharashtra & Telengana)

- Refer to management of solid & liquid wastes; do not contain detailed rules for septage management
- Confer on municipalities their functions and the authority to carry out these functions
- Civic fines & penalties can be levied for violating these legal provisions

Another relevant legal instrument in India is the Employment of Manual Scavengers and Construction of Dry Latrines (Prohibition) Act which was adopted in 1993 to prohibit the employment of manual scavengers as well as construction of dry latrines. In addition, the Indian Standards and Codes of Practice, as notified by the Bureau of Indian Standards provide technical/engineering norms that are relevant to sanitation and related facilities. These include technical norms for installation of septic tank, around design, construction, secondary treatment and disposal of septic tank effluent as well as general requirements for suction machines for cleaning sewers and manholes. Similar guidelines around onsite facilities are provided in the 2013 Manual on Sewerage and Sewage Treatment Systems, of the Central Public Health and Environmental Engineering Organisation (CPHEEO), Government of India.

In Bangladesh, the Local Government (Paurashava) Act, 2009 (amended in 2010) confers responsibility for water, sanitation and waste management upon local governments, including ensuring collection and

disposal of refuse across the city. The Bangladesh Environment Conservation Act, 1995, has provisions for handling effluents and discharge. The Bangladesh National Building Code (BNBC-GoBD, 2006) provides the necessary technical norms for septic tank design, construction, operations and maintenance and treatment and disposal. This includes provision of discharge norms for septic tanks effluents and desludging frequencies of septic tanks. National licensing frameworks for sludge-based end products were absent in both countries, carrying negative implications on any efforts to create markets for sludge-based end-use products.

With regards to public-private partnerships, the Government of Bangladesh introduced a policy and strategy for public-private partnerships (PPP) in 2010. This strategy facilitated the development of private engagement in public service delivery and helped improve regulations around PPPs. Implementation efforts included institutionalising a PPP cell to support the identification, structuring, procurement, management and oversight of PPP projects. PPPs received further legitimacy with the enactment of the PPP Act in 2015. In India, central or state governments may establish PPPs. To ensure unrestrained private participation, interested states have created a legal environment with the explicit purpose of enabling and supporting PPPs. These states have been more effective in structuring and implementing PPP projects across sectors. In Maharashtra, the state PPP policy is pending cabinet approval; at present the proposed policy has dedicated modules for sectors such as roads and bridges, ports, irrigation, water and sanitation and tourism.

In both countries, priority sectors for developing PPPs included water and sanitation, but project prevalence had been higher in the transport and energy sectors and networked provision of water and sanitation. While national governments recommended PPPs as a mode of service delivery, there was limited evidence of regulated private sector engagement in onsite sanitation services in the project cities or elsewhere in Bangladesh and India. There was, likewise, an absence of technical guidance for the engagement of private sector in onsite sanitation services.

2.3 Institutional Arrangements

Prior to the city partnership project, institutional awareness around health and environment outcomes linked to non-sewered sanitation was poor across cities. Equally poor was cities' understanding of the service imperatives under each stage of the onsite sanitation value chain. Consequently, systematic and regulated approaches to onsite sanitation services were absent.

The Municipal Acts in each of the project cities vested the responsibility for sanitation services with the city government (hereinafter referred to as service authority) (Table 2). There were no explicit references to onsite sanitation within the Municipal acts, and bylaws and institutional mandates around onsite sanitations services were not present. Onsite sanitation service provision, however, was broadly understood to fall under the ambit of sanitation or conservancy services handled by the service authority. In addition to city governments holding purview for sanitation services, a variety of other government entities shared responsibility for sanitation elements; and the concerned sanitation department within the service authority was responsible for multiple services.

In Bangladesh, the Conservancy Department was the designated city sanitation authority responsible for overall waste management. It has historically focused only on managing solid waste. All Bangladesh cities require national government approvals for sanctioning civic service budgets. National government approvals were also needed for sanctioning a dedicated organogram for onsite sanitation services, which was absent in all Bangladesh cities.

In India, conservancy services such as solid and liquid waste management usually fell under the service authority's Public Health department. These departments were usually saddled by multiple service responsibilities and efforts around onsite sanitation services were mostly passive and demand-driven. Existing institutional arrangements at that time around onsite sanitation services were therefore characterised by diffused accountability and limited focus on regulation.

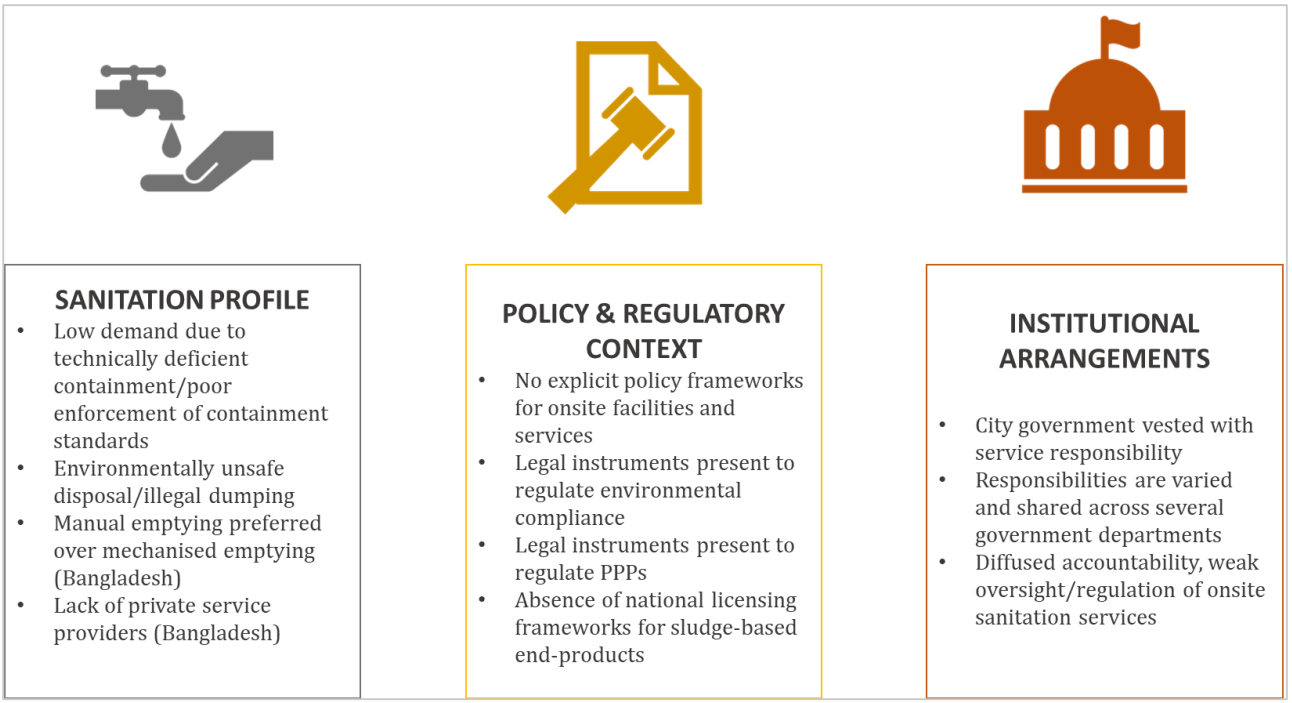
Table 2: Institutional Responsibility Matrix for Conservancy/Sanitation Services

City	Planning & Execution	O&M	Tariff fixation & Collection	Environmental regulation	Technical assistance
Faridpur	City govt.	City govt.	City govt.	DoE	DPHE
Khulna	City govt.	City govt./ CBO	City govt./ CBO (collection)	DoE	DPHE
Jhenaidah	City govt.	City govt.	City govt.	DoE	DPHE
Kushtia	City govt.	City govt.	City govt.	DoE	DPHE
Wai	City govt.	City govt.	City govt.	PCB-DOE	WSSD, GoM
Sinnar	City govt.	City govt.	City govt.	PCB-DOE	WSSD, GoM
Warangal	City govt.	Private operator	City govt./ Private operator(collection)	PCB-DOE	

Except Warangal, all other cities had a strong tradition of government-provided onsite sanitation services – primarily in emptying and transport - aided by *ad hoc* capital equipment (e.g. desludging equipment, treatment plants) contributed by development partners. Political leadership and administrative capacities to envision or structure public-private partnerships for improved onsite sanitation services were absent.

As a result, private sector interest or capacities in these services remained undeveloped. Even where private operators provided public toilets and emptying/transport services (e.g. Warangal) or where individual sweepers were contracted by the service authority for mechanised desludging (e.g. Bangladeshi cities), the emptying and disposal practices followed by these service providers were grossly unregulated.

Figure 5 Baseline factors affecting city-readiness for private sector engagement



Institutional capabilities for contract structuring, risk assessment and allocation and effective contract management and monitoring did not exist or were in the most nascent stages of development across all project cities. This early starting point for the sector was the overarching national context in Bangladesh and India around onsite sanitation despite its high prevalence in the region. The situation was further hampered by the slow progress in national onsite sanitation reforms and the absence of a clear policy and institutional framework, both necessary to drive sector prioritization, clarification of institutional roles and responsibilities, and mechanisms around service provision and regulation. In summary, the readiness of project cities to engage the private sector through well-structured SLAs was limited at project baseline (

Figure 5). Incentives to manage PPPs effectively to yield desired outcomes were equally limited if not absent.

Table 3: Baseline Onsite Sanitation Service Profile

	Bangladesh			India			
	Faridpur	Khulna	Jhenaidah	Kushtia	Wai	Sinnar	Warangal
Desludging services	Manual Mechanical	Manual Mechanical	Manual Mechanical	Manual Mechanical	Mechanical	Mechanical	Mechanical
Desludging equipment	Owned by city– 1 truck (2000 l)	Owned by city – 1 truck (5000 l) 6 bogeys (500 l)	Owned by city - 1 truck (2000 l) 1 truck (1000 l)	Owned by city 4 trucks (1000 l/2000 l)	Owned by city 1 truck (5000l)	Owned by the city - 1 Truck (3000 l)	Owned by city – None
		Owned by CBO - 3 trucks (1000 l)				3 Private Operators - 1 Truck each (5,000l)	Private ownership Operator 1 – 2 trucks (3000 l) Operator 2 – 2 trucks (4000 l/5000l)
Cost to desludge	Manual – No set tariff	Manual - variable	Manual - variable	Manual - variable			
	Mechanical No set tariff	▪ 5000l – 3915 BDT per trip ▪ Bogeys – 500 BDT for 2 trips ▪ 1000l – 1000 BDT per trip	▪ 1000l – 1150 BDT + 500/ 400/300 BDT for each subsequent trip ▪ 2000l - 1725 BDT + 700/600/500 BDT for each subsequent trip ▪ 500 BDT for pit latrines	▪ 1000l – 800BDT + 200BDT for subsequent trips ▪ 2000l – 1000 BDT + 300 BDT for subsequent trips ▪ 500 BDT for pit latrines	▪ No fixed tariff ▪ Reported cost for customer – 1000-1500 INR per trip ▪ Reported cost for city – 1200 INR per trip	▪ No fixed tariff ▪ SMC cost for consumer - INR 400 -800 per septic tank ▪ Private operator cost for consumer - INR 1,500-2,000 per septic tank	▪ No fixed tariff ▪ Reported cost for customer – 1000-1500 INR per trip ▪
Treatment facilities	None	None	None	Yes	None	None	None
Type of treatment	n/a	n/a	n/a	Co-composting facility	n/a	n/a	n/a

III. Review Findings

This section includes a discussion of: the rationale, enabling environment and readiness for private sector engagement across project cities; and progress and lessons across the key stages in the development of public-private partnerships through structured SLAs. Table 4 indicates the status of project cities in terms of value chain focus and SLA development stage at the time of the review.

Table 4: Summary of value chain focus and progress along key SLA stages

Value chain	City	Project identification	Project structuring	Procurement	Contract award & Management
Access	Warangal				
Emptying & Transport	Faridpur				
	Khulna				
	Jhenaidah				
	Wai				
	Sinnar				
Treatment & Reuse	Faridpur				
	Kushtia				
	Sinnar				

3.1 Rationale for Private Sector Engagement

Across project cities in South Asia, resource limitations within the public sector for improving their own services around onsite sanitation emerged as the overarching rationale for engaging private sector. This is followed by stated assumptions that private sector can do a better job in improving service dimensions of access, quality, equity and efficiency and benefit society at all levels. Most project cities shared no evidence of having assessed their own actual or projected costs for delivering onsite sanitation services. Accordingly, it was not possible to ascertain whether PPPs were a relatively better or more affordable approach to service delivery. The assumptions around improved economic benefits, service levels and environmental outcomes from private participation were therefore untested and anecdotal.

The rationale for private participation was also guided by the idea that that demand for onsite sanitation services presented potentially commercially viable business models which could be of interest to the private sector. It was believed that onsite sanitation value chain components such as provision of public toilets, emptying and transport services could be attractive to the private sector owing to potential commercial viability. The rationale for private sector engagement was perceived to be weaker in treatment services, unless viability could be realised through end-use (sale of sludge based or co-compost products) or through bundling of services (bundling of emptying and transport and treatment services or bundling of treatment services across sectors such as municipal solid waste). Across all project cities, this understanding of business viability and potential advantages guided the selection of projects for private sector engagement.

The two Indian cities expected private sector to play a prominent role in financing capital investments necessary for service provision. In Wai, this meant private sector investment in suction trucks for

carrying out emptying and transport services. In Warangal, private financing was tapped for the construction of public toilets. In contrast, given the absence of private providers for emptying or treatment services in Bangladesh, service authorities in this country (Faridpur, Jhenaidah and Kushtia) recognised the need to mitigate entry barriers for private sector and therefore, there appeared to be less of an expectation from private sector in terms of capital investments for emptying or treatment. The emphasis was instead on achieving improved service outcomes by more effectively deploying existing capital infrastructure which are owned by service authorities.

Effectiveness of private sector engagement requires certain preconditions within the enabling environment. Among them are fundamentals including, the presence of appropriate policy and regulatory frameworks, effective monitoring and enforcement of those frameworks that incentivize city authorities to ensure service delivery, institutional capabilities to structure and manage partnerships and strong forward and backward linkages along the sanitation value chain. Baseline assessments of readiness for SLAs/PPPs (see chapter 2) suggest that a number of these preconditions needed to be developed in all project cities. Some were still not developed or in place at the end of the project term (e.g. licensing framework for end–use products, institutional mechanisms for regulations and enforcement).

In summary, cities have been able to envision and craft a role for private sector in the provision of onsite sanitation services. The shortcomings discussed above, however, raise important questions around the maturity of the rationale and the readiness of cities to execute partnerships with the private sector to achieve conceptualized advantages.

3.2 Enabling environment for onsite sanitation and private sector engagement

The enabling environment for private sector engagement in onsite sanitation services was reviewed primarily along the dimensions of *public sector commitment* and *institutional capabilities* to develop and manage the partnership between the public and private sector.

Public sector commitment is usually evidenced through presence of appropriate policy frameworks and public investments aimed at mitigating operational barriers for the private sector, favourable investment climate and well-defined legal and regulatory frameworks to manage the boundaries of interaction between the public and private sector. Examples from Faridpur, Jhenaidah, Wai and Warangal suggested that a positive political environment, with support from high profile political and administrative leadership at the city level by the Mayor, Commissioner, CEO was an important enabling factor in raising the profile of onsite sanitation and in legitimising private sector engagement.

These city examples also suggested that progressive city authorities can help move the onsite sanitation agenda forward and engage private interest even in the absence of relevant national policies and support. The importance of political champions was also evidenced in the city example of Khulna, where progress had been slow owing to an unfavourable political context and cautious political leadership during the project period. Table 5 identifies certain institutional actions and features that characterized the enabling environment across cities for private sector engagement in onsite sanitation services.

Institutional capabilities are another critical feature of the enabling environment and can usually be evidenced in the extent to which both public and private sector can understand and respond to their respective roles in the partnership. Considering the gaps in this area at baseline, a range of project

activities were directed towards building institutional capacities on onsite sanitation services which were heretofore missing in project cities. While reviewing the effectiveness of this technical assistance was outside the scope of this review, it is important to note that grantee efforts across all cities were duly recognized by stakeholders who were consulted as part of this review.

Examples can be seen across the cities and an indicative list is provided in Table 5. There have also been noteworthy contributions from the projects towards the wider enabling environment. Along with sector stakeholders, project partners in Bangladesh supported development of the country's first Institutional and Regulatory Framework for FSM[4]. Similarly, India published its first National Policy on Fecal Sludge and Septage Management in February 2017. These policy frameworks are expected to drive sector prioritization and clarification of institutional roles, responsibilities and mechanisms for service provision and regulation in both countries.

Much remained to be done, around developing national licensing frameworks for sludge-based end products, building of public sector capacities for contractual risk assessments and effective contract management. However, inasmuch as the portfolio aimed to advance institutional capacities and overall enabling environment for onsite sanitation, the review finds positive contributions.

[4] The IRF was approved by the Ministry of Local Government, Rural Development and Cooperatives, Government of Bangladesh in 2015 and formally launched in November 2017

Table 5: Contributing Factors to Enabling Environment

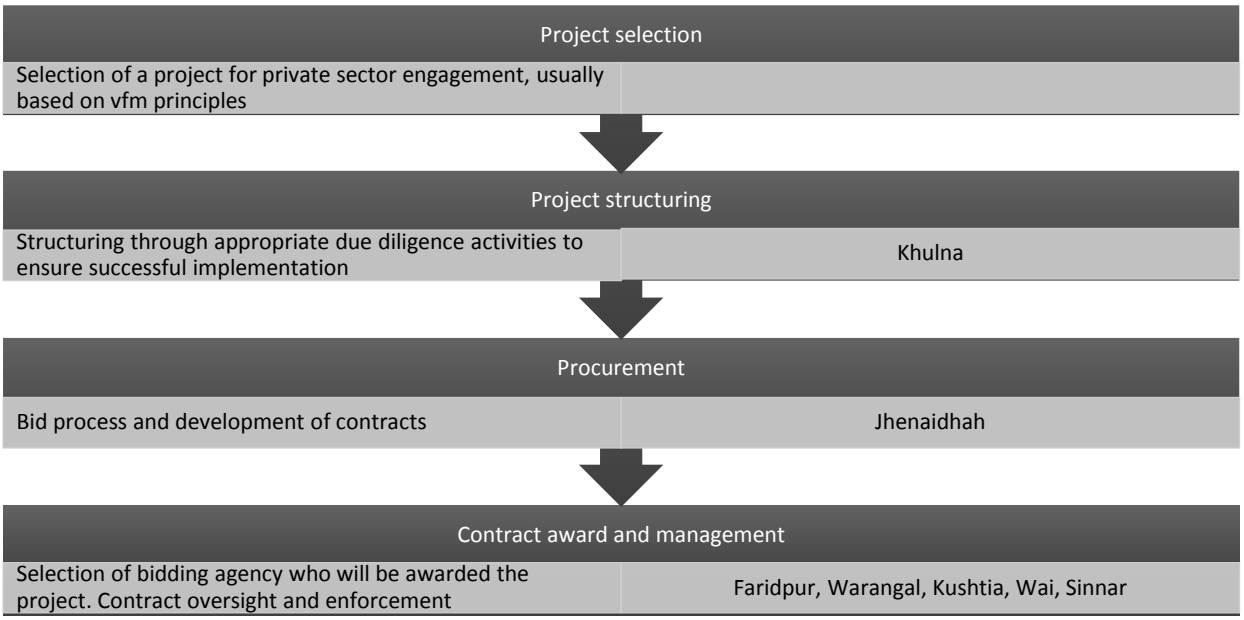
City	Access/Containment	Emptying and Transport	Treatment and Reuse/Disposal
Faridpur		✓ Strength of political/administrative support × Demand-side barriers and enforcement ✓ Procurement process (time taken, transparency) ✓ Concessions (willingness to lease city-owned trucks) × Availability of private sector with relevant capacities	✓ Strength of political/administrative support ✓ Sanction of public land for treatment plant ✓ Procurement process (time taken/transparency) ✓ Concessions to support viability (lease waivers) ✓ Willingness to lease city/development partner funded treatment facilities × Licensing processes for end-use products × Support infrastructure (water/soil testing labs) × Environmental monitoring
Khulna		× Strength of political/administrative support × Demand-side barriers and enforcement × Procurement processes (time taken) ✓ Procurement processes (transparency) ✓ Sanction of public land for treatment plant × Availability of private sector with relevant capacities	× Distance to FSTP & Support for STSs × Willingness to assume FSTP operations till private sector engagement ✓ Concessions (willingness to lease city-owned trucks) × End-use potential
Jhenaidah		✓ Strength of political/administrative support ✓ Sanction of public land for treatment plant – Demand-side barriers and enforcement ✓ Procurement processes (time taken, transparency) × Availability of private sector with relevant capacities	✓ Concessions (willingness to lease city-owned trucks) ✓ Willingness to assume FSTP operations till private sector engagement × End-use potential
Kushtia			✓ Strength of political/administrative support ✓ Availability of co-composting plant ✓ Concessions to support viability × Licensing processes for end-use products × Support infrastructure (water/soil testing labs) × Environmental monitoring × Market linkages for end-use product
Wai		✓ Strength of political/administrative support ✓ Sanction of public land for treatment plant × Procurement processes (time taken) ✓ Procurement processes (transparency)	
Warangal	✓ Strength of political/admin support – Procurement processes/Unclear – Longer concession periods to allow for cost recovery in BOTs ✓ Sanction of public land for construction		

3.3 SLA Design and Implementation

3.3.1 SLA Development stages

This section is organised around key project stages in development of any public-private partnership and related SLAs. Figure 6 denotes the stage in private sector engagement in each of the project cities in South Asia at the time of review.

Figure 6 Progress of Project Cities across SLA Development Stages



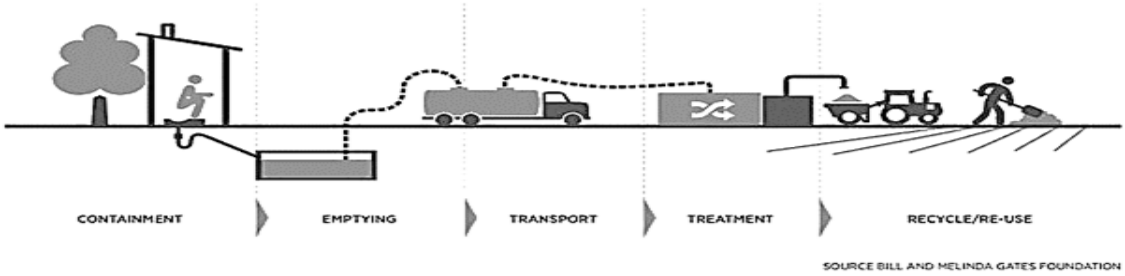
Source: PPP Development Stages - PPIAF, World Bank Group: Framework PPP Programs; PPP Knowledge Lab

Project identification

Figure 7 presents identified areas of private sector intervention across the sanitation value in each of the South Asia cities. Baseline sector assessments undertaken by the cities helped identify the sanitation value chain components where service gaps were acute and could benefit from private sector engagement within the particular city context. In terms of project identification for private sector engagement, gaps were observed in emptying/transport and treatment services in Faridpur, Khulna and Jhenaidah. In Kushtia, the service authority felt able to improve its existing service levels in emptying and transport and required support in reviving its existing treatment plant.

Both Warangal and Wai had gaps across the value chain - Warangal decided to focus on public sanitation as the city did not have a treatment plant. Private operators were already providing emptying/transport services, albeit without SLAs and active regulation. Wai did not have a treatment plant and therefore identified emptying and transport services for private participation. Containment problems persisted across all cities but there was due recognition that tackling this challenge would be difficult for the private sector.

Figure 7 Projects identified for PPPs/SLAs



Faridpur		×	×
Khulna		×	×
Jhenaidah		×	×
Kushtia			×
Wai		×	
Warangal	×		

Project Structuring

City examples suggest that a range of partnership approaches were explored by city partners in structuring projects for private sector engagement. These include approaches to link up different components of the sanitation value chain, formalising existing structures for service provision in the absence of an established private sector, variable concession approaches for the same value chain component and emptying based on a schedule or by demand. Khulna and Jhenaidah opted to bundle emptying, transport and treatment services on the basis of perceived benefits such as the opportunity to cross-subsidize across services, potential cost savings from an integrated solution and ease in contract management. In contrast, Faridpur and Wai structured emptying and transport to be a standalone service as city partners believed both value chain components (emptying/transport and treatment) would require different service approaches and provider capabilities.

Market soundings undertaken in this phase by city partners in Wai suggested challenges in identifying private actors with experience or interest in bundled contracting (emptying/transport and treatment). Bangladesh city partners experienced challenges in identifying private actors with relevant experience or interest in emptying and transport services. Faridpur city partners sidestepped this challenge by mobilising individual manual sweepers who were already informally occupied in this service into associations and could be formally engaged in service provision (Kuthibari Cleaners' Labour Cooperative Society and Bandhob Polly Cleaners' Labour Cooperative Society). In Khulna, capacities of existing private providers (women's community-based organisation Community Development Corporation (CDC)) were built to enable them to operate at scale.

There was broader recognition among service authorities (Faridpur, Khulna, Jhenaidah) that private markets, capacities and ecosystems were undeveloped in Bangladesh and accordingly, that private providers were likely to require some concessions from the public sector to meet demand and achieve long-term viability. With cost of desludging trucks being a recognised entry barrier for private providers in emptying and transport, service authorities in these three cities were willing to establish reasonable lease contracts with the provider, including cost recovery provisions only to extent of depreciation, and allow waiver of security deposit requirements on vehicles. While the risks underpinning such concessions merit consideration, the underlying public sector intent warrants recognition. Thus, Faridpur, Khulna and Jhenaidah have structured projects to be executed through O&M contracts on lease

basis, which will involve service provision through operation, maintenance and repair of assets owned by the service authority (desludging trucks, treatment plant) on a lease basis, at an agreed upon lease price.

In contrast, Wai's project structuring required the private sector to invest in assets needed for service provision. In this instance, it was likely that a captive market - guaranteed through scheduled desludging - could help buffer against capital investment risks to the private provider. Similarly, in Warangal, private providers were expected to finance the construction or rehabilitation of public toilets; in turn, they were rewarded with longer concession periods to enable cost recovery.

City partners undertook a range of contextual studies to inform project structuring. In Bangladesh, these studies did not include assessments of potential demand, service costs, potential risks or feasibility of plausible service delivery models. Cost information can help ascertain key risks from a financial perspective and whether potential bidders offer good value for money. It is particularly useful in contexts with no prior tariff structure for services (such as Faridpur) or context where tariff structure was not rigorously constructed (Khulna and Jhenaidah). Demand estimation is also a useful exercise in contexts where unsafe and difficult to access containment limits demand for formal desludging services (all project cities), and where there are no concrete strategies to increase demand at rates that make business sense to the private sector. To some extent, these demand estimation exercises also need to be informed by a baseline understanding of actual quantity, quality, design and capacity of septic tanks or pit latrines, as these aspects carry implications on the level of effort required for emptying and transport, costs and revenue potential of this service. These elements – demand, service costs, tariff – carry implications on the project's financial feasibility and business viability and in turn, sustainability of the partnership. These were inadequately addressed in the Bangladesh cities.

City partners in Wai and Warangal reported having undertaken demand estimations and feasibility studies, although the scope and quality of these studies were not reviewed. Wai reported having undertaken a baseline mapping of onsite facilities, both to understand containment challenges and to support investment planning around the sanitation value chain.

Procurement Processes

City examples suggest that city partners adapted their procurement process based on early market soundings. This gave them some idea about private sector interest and availability. Processes are summarized in **Error! Reference source not found.**. Faridpur and Kushtia opted for direct award in p rocuring private operators for emptying and transport services and treatment services, respectively. Faridpur was unable to identify private providers for emptying and transport services. The project team therefore decided to formalise existing manual sweepers into an association and registered society in order to engage them in onsite sanitation services. The procurement process then involved orienting both parties on the SLA objectives and imperatives; SLA features were developed in a consultative process, with due regard for the interests and concerns of both parties. Kushtia, likewise, appears to have developed the contract in a consultative manner but this process was not facilitated under this city partnership.

Jhenaidah, Wai and Faridpur (treatment services) chose an open tender route for procurement. In Bangladesh, the procurement process is governed by the Public Procurement Act 2006 and Public Procurement Rules 2008, which involve transparent and competitive selection processes based on pre-defined technical and financial criteria, to achieve a quality and cost based selection. In Wai, the procurement process is in line with the transparency initiatives of the GoM which stipulates any

procurement over and above INR 3 lakhs to be routed through the state government's e-Tendering system. Warangal also reported having procured its private operators for public toilets construction and maintenance through a tender process, but further details could not be ascertained.

Procurement timelines varied across cities, the most notable reason for delay being political and administrative approval processes. In Khulna, there were inordinate delays in securing General Council approvals necessary for formally issuing procurement notifications owing to the political context discussed earlier. In Faridpur, procurement for treatment services was delayed because of delayed plant construction due to political issues and monsoons. In Wai, procurement was delayed at the stage of work order issuance (although the contract itself had been sanctioned) owing to political instabilities within the local government.

Selection criteria was comparable across cities - due consideration was given to technical criteria but given that organised private sector involvement in onsite sanitation services has been limited in both countries, city partners had to make do with fulfilment of minimum technical criteria. Financial proposals received a higher consideration, but that was unsurprising as governments tried to ensure private sector involvement was gained at the lowest cost and to the maximum benefit of the public.

There were also interesting variations in private sector capacities. Some bidders (Wai, Warangal) required minimal support in bid preparation; others (Faridpur, Jhenaidah) required extensive technical handholding from the grantee in preparing proposals. In Jhenaidah, the selected bidder did not conduct any independent demand assessments or feasibility studies and were guided mainly by contextual assessments undertaken by the grantee, who also closely worked with the bidder to develop their proposals. There are inherent problems with this approach (e.g. private operator may not be well-equipped to understand or assess all risks and ensure successful risk transfer). Developing private sector capacities at all levels seems necessary, however, in contexts characterized by insufficient competition, weak private sector capacities, and underdeveloped markets - all of which were evident in Jhenaidah at the time of engagement.

Table 6: Overview of Procurement Process

City	Value chain focus	Procurement mode	Procurement Notification	Bids received	Bid evaluation criteria	Selected bidder profile	Contract award timelines
Faridpur	Emptying & Transport	Direct award	n/a	n/a	Selection criteria - Experience in emptying/transport Prior informal engagement with service authority	▪ Individual manual sweepers were organised into a formal association	12/2015 01/2017
Faridpur	Treatment	Open tender	ToR published in national and local dailies	4 bids	▪ FSM plant operations experience ▪ Valid licenses and registrations ▪ Investment plans for plant operations ▪ Linkages with farmers' groups ▪ Other experience in promoting agricultural products/services	▪ Local NGO ▪ No prior FSM experience ▪ Applied for licenses ▪ Willing to invest in plant operations ▪ Strong linkages with farmers groups	12/2016
Khulna	Emptying & Transport and Treatment	Plans for Open tender	Likely in National and local dailies	n/a	Quality and Cost Based Selection ▪ Experience in sanitation ▪ Willingness to support demand generation ▪ Willingness to procure equipment if needed ▪ Lease commitments to city govt. (highest quote)	n/a	
Jhenaidah	Emptying & Transport and Treatment	Open tender	RfP published in national and local dailies	3 bids	Quality and Cost Based Selection ▪ Experience in sanitation ▪ Willingness to support demand generation ▪ Lease commitments to city govt. (highest quote)	▪ Local NGO ▪ No prior FSM experience, but experience in handwashing programmes ▪ Strong outreach capabilities ▪ High lease commitments	11/2017
Kushtia	Treatment	Direct award	n/a	n/a	▪ Technical and cost criteria	▪ Limited company	04/2016

					▪ Prior experience in composting ▪ Valid licenses and registrations	▪ Prior experience in composting ▪ Hold valid licenses for composting, applied for co-composting license	
Wai	Emptying & Transport	Open tender	▪ RfP published in National and local dailies ▪ GoM'S tender website https://www.mahatenders.gov.in		▪ Experience in emptying/transport ▪ Average annual turnover of INR 20 lakhs in last three years, ▪ At least 1 technical person on payroll ▪ Financial bid (least quote)	▪ Private Limited company ▪ Met minimum technical criteria ▪ Lowest cost bidder	09/2017
Warangal	Public Toilets	Tender (Open/Invited?)	Not known	Phase I- 7 bids Phase II- 11 bids	▪ Concession period (least quote) ▪ Developed at least 5 public toilets or undertaken O&M of 5 public toilets in 3 years ▪ Average annual turnover of INR 5 lakhs in 3 yrs. ▪ Registered company as per Indian Companies Act 1956 or an NGO or proprietorship	8 operators NGO/Private	07/2015 - Phase I 04/2016 - Phase II

Table 7: Overview of SLAs across South Asian cities

Service authority	Service description	Contract type	Duration	Asset Ownership	Operator remuneration	Payment from operator to service authority
Faridpur Paurashava	▪ Operation of desludging vehicles for on-demand emptying of household and institutional toilets and disposal at treatment site	Lease	2 years	Public	Tariff	Fixed lease fees
Faridpur Paurashava	▪ Operation of treatment plant and sale of compost	Concession (O&M)	2 years	Public	Sale of sludge-based compost	No payment
Khulna City Corporation	▪ Operation of desludging vehicles towards on-demand emptying of household and institutional toilets and disposal at treatment site ▪ Operation of treatment plant	Lease	tbd	Public	Tariff from emptying	Fixed lease fees
Jhenaidah Paurashava	▪ Operation of desludging vehicles towards on-demand emptying of household and institutional toilets and disposal at treatment site ▪ Operation of treatment plant	Lease	tbd	Public	Tariff from emptying	Fixed lease fees
Kushtia Paurashava	▪ Operation of treatment plant (co-composting) and sale of compost	Concession	2 years	Public	Sale of sludge-based compost	Fixed lease fees
Wai Municipal Council	▪ Operation of desludging vehicles for scheduled emptying of household and institutional toilets and disposal at treatment site	Service contract		Private	Fixed payment by service authority based on achievement against emptying service targets	No payment
Warangal City Corporation	▪ Construction and operation of public toilets	DFBOT	6-30 years	Public	Tariff	No payment

In all instances, draft contract was revised based on negotiations with selected bidder, with the final SLA incorporating mutually agreed upon terms and conditions. Table 7 presents an overview of SLAs developed across project cities.

Contract Management

After a contract is awarded, cities generally have formal responsibility for contract management. This entails monitoring performance, ensuring provider compliance with contractual terms and conditions, dispute resolution as well as broadly ensuring that service providers are operating in public interest, as defined in their contracts.

Table 8 summarizes key monitoring activities undertaken by project cities. Faridpur and Wai had established well-developed monitoring plans. These included mechanisms to reduce information costs for cities, to reduce transaction costs for cities and providers, and improve transparency associated with monitoring and enforcement for both providers and the city. Among these mechanisms were GPS vehicle trackers, online applications, invoice-based monitoring, and self-reporting by providers, all of which were intended potential to curb provider malpractice and negligence and improve provider accountability. In Warangal, the SLA for public toilets identified the service levels to be monitored and the corresponding penalties for performance gaps. While SLAs in each of these cities alluded to a direct role for city officials in monitoring, city officials who were consulted indicated that active on-the ground monitoring may not have been executed as designed. Capacities, prioritization, resource limitations, and weak incentives or political will may all factor into weak monitoring and enforcement of well-designed SLA contracts.

Table 8: Monitoring mechanisms across cities

City	Responsible agency	Monitoring mechanisms
Faridpur (E&T)	Multi-Stakeholder Steering Committee[5]	▪ Online demand management system and service desk set up to handle customer requests for emptying and customer complaints. The city administration has dedicated resources[6] to support these services. The online system is also embedded in the service authority's website to allow customers to submit online applications. ▪ Self-reporting by provider, in accordance with monitoring plan, which identifies service levels to be measured, the means of verification and monitoring frequency
Faridpur (Treatment)	MSSC, with technical support from grantee	▪ Self-reporting by provider, in accordance with monitoring plan, which identifies service levels to be measured, the means of verification and monitoring frequency
Warangal (PT)	City administration, with support from grantee	▪ Monthly reports from concessionaire (on construction, condition of project assets, compliance to O&M and safety requirements) ▪ GWMC inspections ▪ GWMC verification of provider reporting on user fee collections ▪ User feedback systems

[5] The MSSC was set up by the city at the beginning of the project to assume overall project ownership, including responsibilities of project coordination, contract management, performance monitoring and dispute resolution. It is chaired by the service authority but has representation from a range of stakeholders, such as sweeper group associations, treatment plant operator, local media and community-based organisations

[6] one service desk operator, computer and internet access

City	Responsible agency	Monitoring mechanisms
Wai/Sinnar	City administration, with support from grantee	▪ Service receipts (verified both from points of emptying/discharge) ▪ GPS tracker of vehicles ▪ Self-reporting by service provider ▪ WMC inspections (monitoring frequency and aspects that will be monitored not determined)
Jhenaidah	City administration, with support from grantee	▪ GPS tracker of vehicles ▪ Online demand management system to handle customer requests for emptying and record customer complaints ▪ Monitoring plan yet to be developed

In the cities of Faridpur and Wai, there is greater emphasises on self-reporting by the provider. But it is not clear what types of resources are being committed to verify these reports in order to ascertain provider compliance around contractual obligations and invoke penalty clauses for non-compliance. Treatment service contracts in Jhenaidah, Faridpur and Kushtia did not include systematic mechanisms for monitoring water or soil quality in treatment areas.

Across project cities, there was limited articulation of resources needed for adequate contract management and monitoring and the cost effectiveness of monitoring strategies that were pursued. There was also limited articulation of the capacities of city administration to undertake contract management and monitoring.

3.3.2 SLA Design Features

Elements of SLAs can be tailored to achieve different outcomes. SLAs can also feature design elements that address different categories of risks either inherent in the services being procured or that are particularly relevant in the operating context. Some outcomes and risks and the corresponding design features are summarized in Table 9 and described further in this section.

Table 9: Overview of SLA outcomes, risks and corresponding SLA design features

Outcome and risk categories		Positive design features
Planned outcomes	Service outcomes – access, quality, equity	▪ Definition of service levels and service targets ▪ Payments linked to performance ▪ Use of incentives and penalties
	Environmental outcomes	Use of incentives and penalties
	Worker safety and protection	Use of incentives and penalties
	Business viability	Revenue models comprising of tariffs, user charges, payments from city government
Risk management	Demand and Tariff risk	▪ Phased enforcement around containment ▪ Public awareness creation
	Performance risk	▪ Definition of service levels and service targets ▪ Payments linked to performance ▪ Use of incentives and penalties
	Environmental risk	▪ Provider compliance with prescribed guidelines and regulations ▪ Technology-based monitoring mechanisms ▪ Use of incentives and penalties
	Payment risk	Use of escrow accounts
	Regulatory risk	Partnership support in applying for regulatory approvals

	Asset condition risk	▪ Provider compliance with prescribed O&M guidelines ▪ Service authority to meet high value O&M costs on lease contracts

Table 9 provides a snapshot of key features of SLAs that are currently in place (Faridpur, Wai, Warangal). Variations in design elements are evident in that table in terms of service focus, type of agreement, revenue models and contractual obligations. It is evident from these features that the SLAs are designed to improve service outcomes on access and quality (Faridpur, Wai, Warangal), equity (Faridpur emptying and transport, potentially Jhenaidah and Khulna), environmental outcomes (all cities) as well as incorporating considerations on worker safety and protection (Faridpur emptying and transport, Wai).

Linking performance to payments

Service level agreements or performance-based contracting approaches are usually designed to link provider performance to at least a part of their payments. One way to link performance to payment is through incentives or penalties which are invoked based on provider performance against specific service levels. To this end, all SLAs contained penalties linked to non-performance – in service quality (Faridpur, Wai and Warangal), areas of worker safety [7] and of areas of environmental safety transport/disposal (Wai and Faridpur emptying and transport). In Wai, the primary service level that the provider was required to meet was the total number of customers (households/institutions) served. Provider failure to meet related targets would trigger payment reductions from the service authority.

Faridpur SLA incentivised providers to exceed certain service targets in terms of number of customers served. This has positive implications for access and environmental outcomes. Providers were offered incentives to serve households in underdeveloped areas, a feature designed to promote service equity. In Faridpur, rampant illegal dumping practices at baseline prompted city partners to include an incentive clause within the treatment services SLA, wherein emptying and transport service operators received a small incentive (paid by the service authority and channelled through the treatment plant operator) for every trip of sludge delivered at the treatment plant.

Risk management

Both public and private partners face multiple categories of risk associated with contract design, bidding, implementation and management. In the reviewed portfolio, these included, demand risk (all cities), tariff risk (Faridpur emptying/transport), performance risk (all cities), environment risk (all cities), asset condition risk (Faridpur emptying/transport), payment risk (Wai) and regulatory risk (Faridpur treatment). Performance risk was addressed through use of penalties but the effectiveness in managing it depended on the robustness of the monitoring and enforcement system in place and the resources allocated for this purpose.

In Faridpur (and potentially Jhenaidah), demand and tariff risks which were borne by the emptying service providers were noteworthy particularly because the assumptions were untested (see sections 3.3.1). In such instances where tariff structures are not set up based on a precise framework, it is important to build appropriate compensation mechanisms into the contract such that this risk is not entirely borne by the private operator. The downside impact and materiality of tariff risk became evident in Faridpur during implementation. The service authority unilaterally lowered the tariffs from contractually agreed upon rates with potentially material impact on operator profits.

[7] All emptying and transport contracts obligate providers to address worker safety by adhering to OSHA guidelines

Towards demand risk, city administration in Jhenaidah was willing to pursue strategies such as phased enforcement on containment, and considered targeting institutional/commercial/ high rise buildings first to help ensure the private operator could meet their demand targets. Effective follow-through on such strategies is important to ensure that the partnership is balanced and can be successful. In contrast, Faridpur was hoping to manage this risk mainly through awareness creation activities rather than an enforcement route for fear of endangering favourable public opinion.

In Wai, demand risk is borne by the service provider as payments to the provider are based on customers served. To ensure cost recovery, the provider must meet emptying targets. Several demand-side considerations carried implications for the providers' ability to meet targets (e.g. design, size and inaccessibility of septic tanks; periodicity of cleaning and extent of solidification of fecal matter; willingness and availability of households/property owners to empty septic tanks as per schedule). Neither party seemed to be concerned about the materiality of this risk.[8] City officials believed households/properties would avail of the service because there is no associated fee. IEC activities undertaken by the provider were also expected to stimulate demand. These demand-side considerations were expected to have a bearing on the level of effort required from the service provider, which in turn would carry implications on their financial assumptions. Related concerns were already emerging in the partnership - the provider had already observed that level of effort in serving apartment complexes with multiple households[9] would be higher than anticipated and significantly increase service costs. The provider had flagged this issue to the WMC for negotiation and was hopeful of a mutually agreeable resolution.

Environmental risk is present across all stages of the sanitation value chain. In Warangal, where the service focus was access to public sanitation, the SLA addressed it by requiring service providers to construct septic tanks as per national guidelines (CPHEEO, and National Building Code/BIS) and undertaking emptying as needed. The risk was manifest in the form of environmentally unsafe transport and disposal (also referred to as illegal dumping) practices at the emptying and transport stage. In Faridpur and Wai (and potentially Jhenaidah), it was addressed by obligating providers to dispose the sludge at pre-determined locations or treatment plants (where they exist), and by putting in place checks and balances at the demand and treatment points and verifiable through the online demand management system, GPS trackers and logbooks maintained at the treatment site. This was also addressed by invoking penalties as discussed above. At the treatment stage, risk is manifest by way of environmentally unsafe treatment and disposal of treated materials (liquid and solid). In Faridpur (and Kushtia), where a treatment SLA was recently put in place, the contract sought to address it by obligating the treatment operator to test treated liquids for environmental safety compliance before discharge. However, this was not adequately covered in the monitoring framework nor were there explicit penalty clauses linked to it. In the absence of any in-house testing infrastructure to facilitate on-going testing, the risk remained unmanaged. City partners were aware of the gap and were working towards finding a solution.

Regulatory risk is worth noting as well. In Faridpur and Kushtia, the treatment operator required appropriate licenses to sell sludge-based products but timelines for securing these were unclear. The operator and the grantee were lobbying with appropriate local and national government departments for this purpose. But, the outcomes - in terms of securing necessary product approvals and the continued risk appetite of the private operator in case of regulatory delays - remained to be seen.

[8] Wai is levying a sanitation tax on property owners which will meet some of its sanitation related expenses

[9] Containment in these complexes are usually designed for larger capacity

Payment risk to the provider was present in the case of Wai. There, payments to the provider were to be made by the service authority in equal monthly instalments over the service period of 3 years. The SLA addressed this risk in terms of payment delays or non-payment by obligating the city to set up an escrow account, which would be funded for up to three payment periods. This account was set up at the time of review.

Asset condition risk is important particularly where provider is leasing out equipment from the city for service provision (Faridpur, potentially Jhenaidah and Khulna). In Faridpur, the contract sought to manage this risk in a couple of ways – it obligated provider to follow O&M guidelines and obligated service authority to cover O&M costs above a certain threshold. Nevertheless, as asset performance is critical to service provision, it is useful to obtain clarity around asset condition, its maintenance requirements, and average costs prior to contract award and implementation. This due diligence does not seem to have been conducted adequately in Faridpur and its implications became evident during implementation.

Equity considerations

The BMGF/DFID investments sought to benefit the poor. SLAs were expected to have a pro-poor orientation and advance specific aims to achieve service inclusiveness. To accomplish this, the target at-risk populations needed to be identified, the barriers and disincentives to serving them needed to be understood, and SLA design elements needed to be tailored to properly compensate and even specifically incentivize providers to reach those segments.

The review found mixed evidence around this. Faridpur (and potentially Jhenaidah and Khulna) had explicit provisions for the poor, primarily through lower tariff structures for households residing in underdeveloped areas. The city also incentivised providers to serve these areas. The review could not find articulation of how these underdeveloped areas were demarcated for purposes of onsite sanitation services. In Jhenaidah and Khulna, identification of urban poor households was done simply based on containment type (septic tanks vs. pit latrines; households with pit latrines were identified as poor and usually received lower tariffs or even tariff waivers. Jhenaidah had an explicit, lower tariff structure for low income households (identified on the basis of containment type).[10] The SLA design anticipates private operators will adhere to this tariff structure. To what extent targeting of poor in this manner and use of such fiscal instruments resulted in inclusive outcomes will be important to understand and monitor in implementation.

The service providers in both Faridpur and Jhenaidah were social organisations and therefore had a pro-poor orientation and no issues with operating under a variable tariff structure or serving needier households. In contrast, both in Wai and Warangal, the SLAs did not include provisions for the poor. The service provider in both cities were pure private players with a strong profitability orientation. They were therefore unwilling to include low income communities within their contractual service areas, citing financial viability as a challenge. The SLAs were also not structured to adequately compensate and

[10] Khulna does not have a stated tariff structure for the poor, but existing service providers, including the government, CDC and manual emptiers recognize that affordability is a key barrier for this population segment. Providers often waive or subsidize service provision for these income groups. Discussions with city officials suggest that private operators will also be required to take these aspects into consideration. But there is limited articulation at this point on how this will be negotiated into an SLA

incentivize providers to serve these communities. In both these instances, the city will continue to address sanitation needs of the city's poor.

3.3.3 SLA Implementation

Faridpur (emptying and transport) and Warangal (public toilets) were two cities with strong implementation experience at the time of the review. Their implementation experiences are highlighted here because they provide good examples of some of the risks and challenges that must be addressed and are relevant to all projects being implemented.

Faridpur City Partnership

This partnership supported private sector engagement through structured SLAs for improved outcomes in the value chain stages of emptying and transport and treatment and end-use. The review observed positive stakeholder experiences and evidence along key performance and operational dimensions of both emptying and transport and treatment SLAs.

Table 10: SLA Components in Faridpur

SLA feature	Description	
Value chain focus	Emptying and Transport	Treatment
Public authority	Faridpur Paurashava	Faridpur Paurashava
Private provider	▪ Kuthibari Cleaners' Labour Cooperative Society Ltd. ▪ Bandhab Palli Cleaners' Labour Cooperative Society Ltd.	Society Development Committee
Type of SLA	Lease agreement	O&M contract
Service definition	▪ Empty sludge from on-site facilities ▪ Safe transport and disposal at sites (dumping stations/treatment facility) identified in the SLA	▪ Receive sludge from emptying operators ▪ Operate plant to process sludge to required standards prior to disposal ▪ Produce and sell compost meeting required standards
Service area	Within the predefined service area, provider to cover households (in developed/underdeveloped areas) and institutions (profit/not for profit)	Treatment and Compost Facility constructed by the municipality
SLA duration	2 years	1 year

Service outcomes

Access, Quality, Efficiency

It is evident that the partnership was contributing to service access, but analysis of service data is essential to quantify if there were access improvements from baseline. Containment problems from baseline still persisted and was frequently raised for deliberation by the contract management committee established by the city government. There was reported intent to address it, but no notable actions by way of enforcement or technical improvements. Awareness creation appeared to be the preferred approach in the near term. Setting aside its implications on environment, this dimension of access and demand carries implications on provider performance as well, with service providers noting inability to meet service targets which qualify them for the performance incentive.

Service quality was maintained during SLA implementation, primarily evidenced in the absence of notable complaints from service recipients. Service authority reported efficiency benefits as they were no longer engaged in routine sanitation activities. But this observation was more anecdotal in nature than based on a comparative assessment of cost efficiencies.

Equity and Inclusion

With the SLA explicitly targeting underdeveloped areas, the project was likely making contributions to urban poor but analysis of corresponding data is important to assess the extent of these contributions and the SLA design elements that might be leading to those outcomes. The two emptying/transport service providers, noting that their members belong to similar localities, expressed no reservations in extending services to underdeveloped areas at subsidized rates. That said, challenges in providing mechanised services in certain underdeveloped, low income areas were also reported. These mainly involved access (hard-to-reach areas), availability of electricity at required capacities to operate desludging equipment and hard-to-desludge pits. In these instances, where manual emptying was unavoidable, attempts were made to dispose sludge in a safe manner, with due regard for health and environmental considerations. Gulpers were also experimented in these locations but there was room for improvement in terms of performance. Discussions with the Community Improvement Federation, a social welfare organisation in Faridpur with slum improvement goals, confirmed these service challenges within their neighbourhoods. Other challenges reported in these service areas included inadequate sanitary latrines and prevalence of illegal latrine connections to drains or rivers.

Therefore, ensuring equitable outcomes becomes a particularly critical role for the government; companies must be properly compensated and monitored to ensure those communities receive the same service level as other households the city receive, and that relevant workers likewise have and ensure a safe environment.

Environmental outcomes

The review also observed positive implications on environment from the standpoint of illegal dumping. This practice was noted to have declined significantly, with no reported incidences in the past six months. This outcome was attributed more to the awareness generation activities undertaken in the city and resultant community vigilance around illegal dumping. In any event, the emptying and transport service providers have reportedly sensitized their workers around environmental hazards of illegal dumping, cautioned them against the practice for fear of citizen complaints and contract termination and oriented them to only dispose at the treatment plant. Clearly, some contributions on this front from the provider end was likely as well. However, it must be noted that these emptying providers have neither availed of nor were they aware of the incentives available to them under the treatment SLA for disposal of emptied sludge at the treatment location. Consultations with city officials and treatment plant operator suggested that this incentive was yet to be operationalised; and there was limited clarity around who will be required to fund it. In any event, the reported reductions in illegal dumping and improved community monitoring around it calls into question the continued value of this incentive. On the treatment side, construction of the treatment plant was an important step towards realising positive environment outcomes.

Worker Safety

One SLA feature which appeared ideal in design but somewhat idealistic in practice, were the obligations around worker safety and protective gear. The review team chanced upon a sludge disposal trip by the emptying group at the treatment plant and observed workers handling sludge without any protective gear. This practice was condoned by the wider emptying services provider group members who found

safety gear to be cumbersome, particularly during summer. Awareness of the health implications of this practice did exist but risk perception was low, influencing observed behaviors. One approach to tackle this challenge may be to enforce contractor to provide appropriate and adequate safety gear and to consultatively engage workers both to sensitize them about the risks and to identify enforceable practices.

Performance monitoring

While city efforts around developing and operationalising a credible monitoring plan was laudable, on the ground monitoring from city officials, including from the conservancy department, was limited and attributed to resource limitations. The monitoring plan instead emphasised self-reporting by the provider. The online system and service desk, which were designed to gather key service data (e.g. number of trips needed for each service, tariff estimations, dumping at disposal sites) offered some checks and balances on service provision. In addition to improving the potential to curb provider malpractice, the online system was reported to have other unintended positive consequences – it helped infuse transparency into service operations and helped combat corruption efforts by some city officials who wish to avail sanitation services at earlier low rates.

But, performance monitoring can benefit from on the ground monitoring, including random audits and spot visits to broadly ensure provider compliance around contractual obligations. At the time of the review, the service desk operator employed by the city could process service requests and updating the database accordingly. But, analysis of this data was beyond the capacities of the service authority and was under the purview of the grantee.

Business models and Financial viability

The implementation also presented a case for potential viability of emptying and transport businesses - the Kuthibari Society became profitable very quickly, saving almost BDT 170,000 in implementing this SLA and the Bandhob Polly Society which was established much later has saved up to BDT 3150, although the contributing factors for this business growth needed closer review. Service providers, who used to be manual emptiers prior to formalising as an association, had positive reflections on this shift to mechanized emptying and perceived strong benefits both for the emptiers as well as for customers. Providers had also benefited in other tangible ways, such as acquiring improved business management skills and improved social status.

Other obligations and issues

For the treatment plant operator, who had not been operational for long, the main preoccupations were to secure licenses and strengthen market linkages necessary for business expansion. Also in the radar were issues relating to environmental and compost testing and the lack of necessary infrastructure within the plant to undertake this. They were looking to external support, including the partnership, to facilitate this. They have employed plant manager, plant operator and operating guard to support plant operations, who received technical training from grantee for day to day operations. They anticipated need for another year of technical assistance from grantee on aspects including compost production and testing and strengthening plant operations.

On asset performance, one of the service providers engaged for emptying was facing a number of vehicle maintenance issues and therefore unable to perform on par with their counterpart. This challenge was well-recognised by key constituencies and efforts were undertaken to lever additional resources including from urban infrastructure funds at the national government for purchase of additional vehicles. One provider group had some major vehicle expenses (repair of hydraulic pump and replacement of

tyres), both of which were approved and paid by the service authority. But there are also other reported instances where maintenance expenses were potentially contested. Barring these challenges with vehicle maintenance, both provider groups noted their satisfaction with overall contract management until recently.

That said, there were emerging signs of tensions in this partnership between the service authority and the two provider groups in emptying services. The city administration had revised contractually agreed-upon tariffs in a unilateral fashion. There were a number of reported reasons for this decision, foremost among them being complaints received from various administrative quarters that the tariff is very high. Even if the reasons for tariff revision turn out to be valid, that the municipality chose not to honour the dispute resolution mechanism set in the SLA, opting instead to exercise its sovereign authority raises pertinent questions around public sector commitment to decisions and the potential political risks it poses for private partnerships.

From the provider side, both providers appeared blindsided by this revision and worried about the negative implications on their business viability. While they did want to honour their contract and even go in for further renewal, they were uncertain about their continued ability to do so if tariffs were not restored to previous levels. They also felt they may lack the voice and agency to raise this issue at the highest political and administrative levels and find a favourable resolution. At the time of the review, the matter was expected to be brought to the attention of the contract management committee for resolution.

Consultations indicated that both emptying contracts would be reviewed at the time of contract renewal, when aspects such as service performance and group management process would determine which provider will be continued. With the experience gained in managing PPPs and administrative capacities that were built around contract structuring and managing, the service authority felt able to review the contract and facilitate any renewals.

Warangal City Partnership

This partnership supported private sector engagement in the construction and rehabilitation of public toilets for improved public sanitation access and elimination of open defecation practices in the city.

Table 11: SLA Components in Warangal

SLA feature	Description
Value chain Focus	Public Sanitation/Public Toilets (PTs)
Public authority	Warangal Municipal Corporation
Private operator	Various
Type of SLA	Concession Agreement
Service Definition	▪ Construct and commission of PTs on DFBOT basis in conformity with specifications and standards provided by the authority ▪ Install bore well at the PTs ▪ Operate and maintain PTs in confirmation with service level standards set by the authority ▪ IEC and social marketing ▪ Provide facilities on pay and Use basis
Service Area	Locations in the city identified and approved by the GWMC (Not specified in the concession agreement but indicated by grantee)
Concession Period	Ranging from 6 years to 30 years (Not specified in the concession agreement but indicated by grantee)

Stakeholder consultations suggested that the implementation of the SLAs for Pay and Use PTs under DFBOT in phase I and phase II commenced soon after the contracts were awarded in July 2015 and April 2016 respectively. However, the details with regard to the exact number of PTs constructed/ operational/under progress and the timelines under this SLA were unclear. Based on anecdotal references from grantees and in absence of perfect data and information around the location of toilets (prior to or during field visits in early November 2017), the review team conducted field visits to certain PTs across the city. This rapid field based assessment of PTs was guided by data collection framework (Annexure 2), using visual verifications and consultations with PT caretakers, users, local citizens.

Table 12: Pay and Use Public Toilets Visited as part of Filed Based Assessment

S. No.	PT Location	PT Operator	PT status/ Condition
1.	Outside Government Maternity Hospital	Sanitation and Environmental Development Society	Operational/ Good condition
2.	Outside Police Headquarters	Ujjwal Sanitation Social Service Organisation	Operational/ Good condition
3.	Weddapally cross road	Ujjwal Sanitation Social Service Organisation	Operational/ Good condition
4.	Outside District Court	Sulabh International	Operational/ Good condition
5.	Inside District Court	Not Known	Under construction
6.	Old vegetable Market near Govt. Maternity Hospital	Safai Karma Chary Warangal	Shut down, Dysfunctional
7.	Inside Bus stand, Hanamkonda	Nirmal Foundation	Operational/ poor condition
8.	Inside Warangal Fort	Archaeological Society of India, GoI	Operational / good condition
9.	100 feet labour adda	n/a	Could not locate

Table 12 suggests that most the Pay and Use toilets visited were operational and in a physically good condition with timings from 5 a.m. to 9.30 p.m. These PTs had sufficient electricity, water availability and were cleaned 6-7 times a day. Each of these toilets had a care taker and reported an average footfall of 200-400 people on a daily basis. Though the care taker reported collecting fees from all users, there were no maintained records on the daily number of users. Most of these toilets had consumer feedback machines but none were operational. The toilets had facilities both for men and women with separated entrances. The PTs had provision for dustbins and sanitary disposal.

The two outliers were the Pay and Use PTs at the bus stand (S. No.7) and the old vegetable market (S.No.6). The PT at the bus stand was functional but in a poor condition with bad odour, insufficient lighting, leaking water fixtures, dysfunctional toilet faucets and doors with broken locks. There were no customer feedback systems. Though a care taker was present and user fees were collected, there was no evidence of regular cleaning undertaken. The PT at the old vegetable market was locked out and was reported to be dysfunctional for over a year and a half. The locals and vegetable vendors cited reasons of internal conflict within the operator group for shutting down of operations. There was no mention of oversight or action from GWMC.

Outside of this SLA, city partners have supported other measures to improve access to public sanitation in the city so as to eliminate open defecation. These efforts are identified in Table 13. City partners have also strengthened licensing mechanisms for emptying/transport operators. Annexure 3 summarises key license features.

Table 13: Other efforts by Warangal city partners on public sanitation l

Service type	Modality of Engagement	Location/ Term	Current status/ Condition (based on field visits/observations)
She Toilet	Sanction order (Dec 2016) by GWMC to Indus Towers Pvt. Ltd. for installation of telecom tower cum construction and O&M of She Toilet (exclusively for women and girls)	At 4 locations, identified by Indus Towers Ltd./approved by GWMC ▪ 3-month	▪ One She Toilet constructed in GWMC's office premises ▪ Scheduled for inauguration for operations in November 2017 ▪ Good condition from outside
E (Electronic) –Toilet	Expression of Interest (April 2015) by Eram Scientific Solutions Pvt. Ltd. GWMC purchased services for installation and O&M	Exact number and locations is unclear.	Two locations (outside Warangal Fort and inside District Collector's Office) visited indicate toilets were installed but dysfunctional for over a year.
Improvements and O&M of existing Pay and Use PTs	Direct nomination based contracts	Not known	n/a
O&M of Govt Building Toilets	Not known	Not known	n/a
Public access to toilets at Fuel Stations	Notification from the District Collector's Office (supported by GWMC) bearing license implications for fuel station operator	All fuel station in GWMC jurisdiction	One of the fuel stations (located next to the District Court) visited had newly painted signboards directed toward a PT but the toilet was dysfunctional

IV. Overall Assessment

The primary purpose of this review was to understand: to what extent each city project has contributed to the improvement of sanitation outcomes through the development and implementation of SLAs; and what challenges and good practices emerged from cities during the private sector engagement process which can inform cities' future investments in sanitation services. While all the project cities in South Asia made substantive progress towards engaging private sector in onsite sanitation services, actual progress in terms of engagement through structured SLAs has been variable. Two cities had SLAs in place by end 2016 (Faridpur, Warangal) and two other cities had SLAs awarded in September 2017 (Wai) and November 2017 (Jhenaidah), rendering it difficult to assess actual contributions to outcomes across all cities from an effectiveness, sustainability and relevance standpoint. Given the diversity of progress, the review simply sought to understand to what extent SLA activities are aligned with the achievement of desired service and environmental outcomes and what key lessons could inform future programming. Below, the portfolio is summarized with respect to performance factors including:

- Improvements to service levels
- Inclusiveness of poor
- Environmental improvements
- Sustainability
- Scale and replication
- Overall contributions and relevance

Improvements to service levels

Overall, there is limited data on actual improvements to date on service access and quality. Absence of strong baseline service information (all cities) or implementation experience (all cities except Faridpur and Warangal) further render it difficult to quantify service improvements. Based on reported information on user demand for containment (Warangal) and emptying (Faridpur) services and the reported increases in private operator revenues (Faridpur), service access can be noted to be improving across these two cities. The potential for service improvements is also present in the cities of Khulna and Jhenaidah which are at different stages of securing private sector engagement in emptying and treatment services. Wai is likely to have a higher potential for service level and environmental improvements as it is pursuing a scheduled desludging approach which will require users to avail emptying services as opposed to other cities where service uptake is on demand. That said, there is mixed results around service level improvements in the cities with implementation experience - examples include observations around service quality in Warangal public toilets and effectiveness of incentives to increase access/demand in Faridpur. Online demand management systems (Faridpur, Jhenaidah, Khulna), service desk support (Faridpur, potentially in Wai and Jhenaidah) and emptying protocols (Wai, Faridpur) are all indicative of customer responsiveness and service quality orientation.

City experiences also raise important questions on the effectiveness of incentives and penalties proposed in the SLA designs and whether SLAs will be implemented to ensure adherence to service levels agreed to. These related to - is the service/behaviour feasible to execute as designed; is the service/behavior readily monitorable; is the authority resourced to monitor effectively; is the authority politically incentivized to enforce? In Faridpur, this was observed in: non-operationalisation of incentives to the emptying operator for disposal at treatment sites; inability of emptying operator to increase demand despite incentives for the same; and failure to levy penalties on emptying operators linked to non-use of protective gear. In Warangal, there was no data on actual penalties levied on PT operators although field

visits found some deficiencies in PT quality and the functioning of feedback systems. The reasons for these issues with incentives and penalties were varied, including, robustness of monitoring and enforcement mechanisms, appropriateness of incentives structuring and process failures.

Other implementation experiences (e.g. tariff revisions in Faridpur) and to what extent they find a fair and balanced resolution also carry important implications on overall effectiveness and sustainability of these partnerships. Implementation experiences suggest that challenges will likely arise (e.g. tariff revisions in Faridpur). Preparedness for the same by way of designing quality monitoring and feedback loops and fostering consultative engagement are necessary to help parties identify challenges and find fair and balanced resolution in a timely manner. Partnerships' ability to achieve this will carry important implications on overall effectiveness and sustainability of these city projects.

Inclusiveness of poor

There was limited data on actual improvements to this population segment and the potential for tangible benefits also appeared uncertain at the time of review. The cities in Bangladesh demonstrated intent to address service needs of the poor explicitly through contract design (pro-poor tariff structures in Faridpur, Jhenaidah and potentially Khulna), but there was need for improved articulation and assessment of service dimensions for the poor. Among Indian cities, Warangal contract design did not explicitly target the poor. Interventions to serve the poor with community toilets were not bundled with the PT contract awards. The assumption appeared to be that the poor are likely to benefit from PT improvements which target all in the city. In Wai, the service area outlined for the private operator excluded low income neighbourhoods. In these two cities, private operators were neither keen nor incentivized to serve low income neighbourhoods. Therefore, the service authorities retain responsibility for direct service provision to those population segments.

Environmental improvements

From an environment standpoint, having treatment plants (Faridpur, Khulna, Jhenaidah, Kushtia and ongoing plans for Wai and Warangal) and awareness generation efforts in all cities are likely to yield some environmental improvements as this can encourage environmentally safe disposal and help curb illegal dumping practices. Service authorities prefer that private sector assume the responsibility for environmental monitoring, both in terms of activities to be undertaken as well as investments to be made. But, there is currently insufficient data around actual improvements realised at the point of treatment as environmental monitoring (water/soil quality) is not undertaken or regulated in a systematic manner. Lastly, containment issues are yet to be addressed across cities so actual improvements from an environment standpoint, particularly in contexts of on-demand emptying, may not be significant.

Sustainability

Sustainability can be evidenced in the extent to which service authorities are willing to prioritize and internalize onsite sanitation services within their overall service delivery mandate. It can also be evidenced in the extent to which institutional actions and capabilities necessary to achieve desired sector outcomes are mainstreamed. These actions must be bolstered by systematic allocation and utilisation of appropriate resources for this purpose. Sustainability also hinges on the extent to which capital investments needed for service provision can be met through public or private finances and desired level of cost recovery can be achieved through secured revenue streams.

The enabling environment for private sector engagement in onsite sanitation is still evolving across all partnership cities. None of the project cities meet all requisite city-readiness indicators for engaging private sector in service provision. Nevertheless, several elements in the enabling environment bode well

for sustainability: there was broader recognition among city partners of the need for sustainability; preliminary actions were discussed and in some cases already implemented toward this end. For example, two cities achieved allocation of dedicated funding for onsite sanitation within annual budgets (Khulna, Jhenaidah). Jhenaidah and Wai successfully levied sanitation tax. In Faridpur, efforts were taking to mobilise funds from national government for service improvements in onsite sanitation. Other markers for sustainability across most cities included strengthened institutional understanding of service imperatives in onsite sanitation, improving capacities of public and private sector and institutional capabilities to engage private sector in service provision.

As the SLA approaches are in their early stages across cities, review of sustainability can be challenging as it requires making several assumptions about cities' future engagement and performance. There are important early lessons that could be learned from implementation experiences that are farther ahead (Faridpur, Warangal). Across partnership cities, important risks to sustainability included – poor containment practices and lack of appropriate solutions to tackle them; uncertainty around the commercial viability of end-use products, further hampered by an absence of necessary licensing regulations; high dependence on grant funds for service infrastructure (emptying trucks (Bangladesh cities), treatment facilities (all cities) and potentially for environment monitoring and compost testing facilities); and utilisation of sanitation budgets towards routine service activities with no observed shifts in purpose to date from former status quo. Longer-term sustainability will require better articulation of purpose and utilisation of funds for improvements in onsite sanitation.

Sustainability is a complex issue. A periodic, close review of institutional change and sector ownership among key change agents is needed. A closer look at balance among partner roles in the SLA design, negotiation, implementation, and management process may portend the sustainability of the agreement.

Scale and replication

Across all cities, public investments required for scale and replication are limited by available resources and competing priorities, while private investments hinge on the business viability of service models. To this end, the Wai example levers private investments for private assets (emptying trucks), which Warangal presents an example of levering private assets for developing public infrastructure and services. In these cities, the risk appetite of private sector to undertake capital investments is higher as demand for services and corresponding revenue streams are reasonably guaranteed, allowing for potentially profitable operations. In other city examples, critical elements of service provision, mainly infrastructure (emptying trucks (Faridpur/Khulna/Jhenaidah), treatment plant construction (all cities) are undertaken with external grant support. All cities have leveraged private investments for project operations and maintenance expenses. In Wai, as the sanitation tax levied on households will only partially cover emptying and treatment costs, public investments will be leveraged to enable the city's approach to scheduled emptying. While there are limited actual examples of replication within and across cities, project components are believed to hold potential for replication and scale and proving business model viability is likely to help accelerate this process.

Overall contributions and relevance

All partnership projects have made appreciable contributions, particularly in raising political attention to onsite sanitation, in crafting a rationale for private engagement in related services and in consolidating public sector commitment into concrete institutional actions that allow testing of private engagement models in onsite sanitation services. Partnership contributions to institutional capabilities across various administrative levels and to private sector capacities are also well-recognised. Along with other sector stakeholders, project partners have also contributed to the development of national policy and regulatory

frameworks on FSM (IRF in Bangladesh and National Policy on Fecal Sludge and Septage Management in India) which are important markers of progress towards driving policy attention and prioritization around onsite sanitation in these countries. It can also have positive impacts on clarifying institutional roles and responsibilities for service provision and in strengthening service delivery mechanisms, including through private engagement.

The rationale for private engagement was derived from a broader assessment of context at baseline, which suggested an inappropriate balance between targeted service outcomes and the public resources necessary for realising improvements. To that extent, it has been relevant and finds resonance among key stakeholders consulted during this review. But, there is mixed evidence around the maturity of this rationale across the city contexts, the institutional readiness for and success in mainstreaming it through structured PPP approaches. Longer term relevance will depend on effectiveness of existing approaches and to what extent business viability can be established. The relevance of private sector engagement at city-scale will also need to consider alignment of objectives between public and private entities, particularly for achieving inclusiveness and environment protection that are least likely to be addressed by private providers otherwise.

V. Key implications and Lessons

- ***Engage private sector*** *in areas where they are already active formal or informally and where market and revenue potential can be reasonably ascertained*
- ***Build institutional readiness*** *by clarifying related legal and regulatory frameworks and institutional arrangements, embracing flexible procurement processes and de-risking through appropriate concessions and guaranteed funding streams*
- ***Support private operator in service components*** *that impact business viability such as in demand generation and enabling access to critical and support infrastructure*
- ***Pay attention to critical regulatory mechanisms*** *around containment, manual emptying, and product licensing*
- *Public sector must* ***play active role in monitoring*** *provider performance and enforcing their obligations around service levels*.

Given that most of the city partnerships are in their early stages of engaging private sector in onsite sanitation service delivery, more time is needed to draw out full lessons from these approaches and to understand their effectiveness in improving sanitation outcomes. However, there are emerging lessons from existing partnerships that can inform service authorities who look to private sector as an additional source of funding or for innovations, service improvements and operational efficiency in providing onsite sanitation services.

City experiences suggest that private sector can be attracted to deliver onsite sanitation services at scale under PPPs, but whether private sector can yield better value for money in comparison to public provision of these services or can supplement public investments for infrastructure development and service improvements in this sector remains to be proven. Private sector can be engaged more readily in areas where they are already active in the sector whether in a formal or informal manner and where market and revenue potential can be reasonably ascertained. In other areas, encouraging private sector participation will require sustained advocacy, innovative business models which involve usage of public assets and leveraging of public or grant funds and other concessions relative to the economic viability of projects.

Considering that onsite sanitation services are in nascent stages of development and engagement models are fairly innovative in nature, emphasis must be placed on enhancing institutional readiness by clarifying related legal and regulatory frameworks and institutional arrangements, embracing flexible procurement processes and de-risking through appropriate concessions and guaranteed funding streams. Institutional readiness is also characterized by strong public and private sector capacities to structure and execute balanced PPPs. Where service authorities have limited experience in PPPs, it is important to build their expertise to assess technical and financial feasibility of onsite sanitation projects, to understand PPP arrangements and own obligations in terms of contract management. Creating an

ambient environment for private sector participation will also require support to the private operator in service components that impact business viability such as in demand generation and enabling access to critical and support infrastructure. Facilitating candid dialogue between the public and private sector at all stages of contract design and implementation can help build partnerships that are based on mutual trust and shared risk and are therefore sustainable and possibly generate value for money over the longer-term.

In the South Asia regional context, select regulatory mechanisms are critical to support the viability of PPPs and require immediate public sector attention. These include regulations around containment (both countries) and manual emptying (Bangladesh), which are critical to consolidating demand and achievement of service standards under cities' progression to improved emptying services. Also important are regulations around product licensing which is essential for developing markets for FS-based products and securing private sector interest in this service component. The national momentum generated by the recently published FSM policy and regulatory frameworks in both countries present a strong opportunity for advocacy around these issues.

As service accountability vests with the public sector, their responsibility needs to continue even after contract award. This requires active engagement in monitoring provider performance and enforcing their obligations around service levels. To this end, city projects have made considerable technology investments towards demand management and service monitoring. These are positive actions that can help regulate provider performance, identify service inequities and improve transparency and accountability in the management of onsite sanitation as a public service. Effective adoption of these technologies by service authorities such that data generated by these systems is integrated into routine decision-making is a prerequisite to realising their wider benefits in service provision and regulation. Given that sanitation services carry implications on environment and public health which are of a public good nature, it is important that the public sector (service authority, relevant departments), assume ownership of environmental monitoring and related enforcement.

Existing city partnerships are yet to demonstrate conditions under which private sector participation bring direct benefits to the poor. The evidence so far, particularly in PPPs involving pure private actors, highlights need for public-private partnerships operating at city-scale to be designed to explicitly ensure equity. Marginalized citizen groups can otherwise be left behind in the process. Contract designs and resources for monitoring, enforcement, and incentives may need to be considered differently to ensure that providers reach these more marginalized market segments. Community organizations can be engaged or may need to mobilize themselves in order to secure fair treatment. A key lesson emerging from these cities is that affordability is an important dimension of sanitation access which subsidies or lower tariffs can help moderate to some extent, But, it seems necessary to gain a nuanced understanding of onsite sanitation services to the poor to enable them to take advantage of improved services and to ensure full participation. This may involve expanding understanding around demand-side aspects such as awareness, ease of accessing containment or supply-side aspects such as appropriateness of service equipment. To this end, a more active role from the public sector is desirable, both to understand the service challenges facing the poor and to evolve alternative public policy solutions where private engagement does not seem feasible.

There is limited evidence from this portfolio indicating how private sector participation under PPPs can lead to sustainable services at scale. There are some positive institutional actions on this front. Sustainability is a complex issue. It would be informative to follow this portfolio of projects to conduct periodic reviews of institutional change, sector ownership among key change agents, the performance

and effectiveness of incentives and enforcement mechanisms within PPPs, and the extent to which contractual arrangements with the private sector are actually monitored, enforced, and managed in a fair and balanced manner.

Annexure 1: Indicative Areas of Technical Assistance to City Partners

City	Technical assistance
Faridpur	▪ Training pit emptiers to perform emptying/transport tasks as per SLA ▪ Training municipal cadre to oversee implementation of emptying/transport ▪ Enabling exposure visits to municipal cadre and private actors ▪ Training private sector capacities on business planning ▪ Training municipal cadre and private operators in treatment plant operations and maintenance in accordance with SLA guidelines ▪ Supported to MSSC in the entire SLA development process ▪ Research study to assess national markets for organic fertilisers and enable market linkages ▪ Development of online demand management systems
Khulna	▪ Service providers such as CDC and manual emptier groups have been trained on areas including occupational safety and business management principles ▪ Technical support extended to municipal cadre in the entire SLA development process ▪ Development of online demand management systems
Jhenaidah	▪ Newly contracted private operator received extensive technical assistance in developing their business proposals, which enabled their willingness and readiness for market entry despite their lack of onsite sanitation experience ▪ Technical support extended to municipal cadre in the entire SLA development process ▪ Development of online demand management systems
Kushtia	▪ Support to private operator by way of simple testing of compost quality to more in-depth research and development around use of these products in agriculture and aquaculture and their impacts on nutrient value and soil quality
Wai	▪ Support to formulation of various regulations and guidelines in FSM ▪ Increasing awareness and knowledge around onsite sanitation and support in shaping the vision for city-wide services. Particularly, the experimental nature of scheduled emptying has warranted technical assistance to Wai city in various areas ▪ Development of mobile application called SaniTAB which captures a city-level data base of toilets and septic tanks, for implementation and monitoring purposes ▪ Training of local contractors for proper construction of septic tanks
Warangal	▪ Support to formulation of various regulations and guidelines in onsite sanitation

Annexure 2: Framework for rapid field assessment of Public Toilets in Warangal

S.No.	Line of Enquiry	Observation/ Remark
1.	Is the toilet being used as a toilet?	Yes/No
2.	If no, what is it being used as?	visual verification or ask caretaker
3.	How long has the toilet not been in use?	ask caretaker
4.	Time during which toilet complex is open	visual verification of signboard/ask caretaker
5.	Does the toilet cater to both gents and ladies? Is there a separate entrance for both?	Visual verification
6.	On an average number of persons using the toilet complex per day	ask caretaker
7.	Are there any records maintained to indicate daily usage?	Yes/No
8.	Water availability status	visually verify and ask caretaker about general availability: Yes/No
9.	Does the toilet complex have electricity?	Yes/NO
10.	Is there a caretaker for the toilet complex?	Yes/No
11.	Number of times toilet is cleaned daily	Take copy of cleaning schedule
12.	Is there a complaint redressal mechanism available and prominently displayed (telephone numbers, who to contact etc.)?	Yes/No
13.	Overall quality of toilet	Note if doors/latches are broken/work, odour, water leaks, provision of bins/sanitary disposal in women's toilets, overall maintenance

Annexure 3: License features for Emptying and Transport Services

Licence Features	Description
Title of license	License for collection, transportation and disposal of septage
Name of Licensee	Mr. Vijay Singh son of Mr. Satveer Singh
Scope of license	▪ Authorization to undertake desludging of septic tanks and pits from individual households/ commercial entities/ institutions and transport for disposal to designated site by GWMC. Undertaking operations without license punishable by law.
Period of licence	October 2016-October 2021 (5 years)
Standards and obligations for licensee	▪ Operations – Attend to request received from citizen to desludge within 24 hours – Operation times 7a.m to 7 pm only – Vehicle to have valid permit from transport department to operate in Warangal, valid PUC certificate, valid fitness certificate, fitted with GPS, leak proof, odor proof, spill proof vehicle – vehicle to be painted yellow and marked "SEPTIC TANK WASTE" in red – display socially relevant message on truck as per GWMC request – Operator, driver and workers adequately trained – Follow standards and procedures for desludging and pumping – Cleaning of trucks at designated areas only – After desludging, cleaning area at point of desludging – In case of accidental spillage, immediate action to contain and minimize environmental impact, clean up and inform Health Officer, GWMC ▪ Payments – Not charge any amount from household/ property/ institution in excess of prescribed fee as and when notified by Commissioner, GWMC (Amount not mentioned) ▪ Safety – Handle waste without adverse effect on human health and environment – Workers equipped with uniforms, safety gadgets
Penalties	▪ Change in personnel, equipment or working conditions considered breach of license (penalty not indicated) ▪ Penalty on licensee for non-compliance to terms and conditions or violations of regulations (penalty not indicated)
Monitoring	▪ Monthly consolidated report, accident report, manifest for transportation of septage (movement document) to be submitted by licensee to Health Officer, GWMC ▪ Mobile app to be given to licensee by GWMC to enter details on manifest transport of septage ▪ GWMC to monitor septage vehicles through fitted GPS
Termination of license	▪ License can be revoked for non-compliance or violation of regulations ▪ License is non-transferable ▪ Prior permission from authority to stop activity

Annexure 4: City Briefs

<table>
<tr><th colspan="4">FARIDPUR</th></tr>
<tr><td>Project name</td><td colspan="3">Public-Private Partnerships for Sustainable Sludge Management Services in Faridpur, Bangladesh</td></tr>
<tr><td>Grantee</td><td colspan="3">Practical Action</td></tr>
<tr><td colspan="4">CITY CONTEXT</td></tr>
<tr><td>City population</td><td colspan="3">0.13 million</td></tr>
<tr><td>Country HDI</td><td colspan="3">0.579 (139)</td></tr>
<tr><td>Access to sanitation services</td><td colspan="3">94% coverage of onsite sanitation</td></tr>
<tr><td>Key issues in FSM at project design</td><td colspan="3">• Poor sanitation technologies/practices/service quality
• Weak policy/regulatory frameworks and institutional capacities</td></tr>
<tr><td>Institutional arrangements</td><td colspan="3">• Service authority – Faridpur Paurashava
• Service provider – Paurashava</td></tr>
<tr><td colspan="4">PROJECT DESIGN</td></tr>
<tr><td>Implementing partners</td><td colspan="3">Faridpur Paurashava</td></tr>
<tr><td>Project cost</td><td colspan="3">USD 1,188,470</td></tr>
<tr><td>Start date-end date</td><td colspan="3">November 2014 – November 2017</td></tr>
<tr><td>Project components</td><td colspan="3">• Training/capacity building (public/private sector)
• Technical assistance (feasibility studies, technology tools, SLA)
• Policy advocacy & Demand-side awareness generation</td></tr>
<tr><td>PPP objective</td><td colspan="3">• To improve service quality in FSM value chain components of emptying/transport and treatment/reuse</td></tr>
<tr><td colspan="4">PROJECT IMPLEMENTATION</td></tr>
<tr><td>Key activities implemented</td><td colspan="3">• Capacity building activities targeting: pit emptiers to perform emptying/transport as per SLA; municipal officials to oversee private operator performance; improved business planning skills of private operators; municipal officials to undertake treatment plant O&M & implementing smart subsidy targeting emptiers
• Support development of bid process documents for PPPs in empting/transport and treatment/reuse; feasibility studies to structure PPPs; research studies to assess national markets for organic fertilisers and enable market linkages; policy studies to national regulations on FSM and to improve containment standards and inspection protocols for septic tanks</td></tr>
<tr><td>Progress in PPP/SLA design and procurement to date</td><td colspan="3">PPPs under implementation – value chain areas of emptying/transport and treatment/reuse</td></tr>
<tr><td>Contract design</td><td colspan="3"><table><tr><th></th><th>Emptying/transport</th><th>Treatment/Reuse</th></tr><tr><td>Services</td><td>▪ Emptying of sludge from on-site facilities
▪ Safe transport and disposal at sites (dumping stations/treatment facility) identified in the SLA</td><td>▪ Receiving sludge from emptying/ transport operators
▪ Operations of plant to process sludge to required standards prior to disposal
▪ Production and sale of compost that meets required standards</td></tr><tr><td>Nature of</td><td>Lease agreement</td><td>O&M contract</td></tr></table></td></tr>
</table>

FARIDPUR			
	contract		
	Duration	2 years	1 year, renewed as of December 2017 for 3 years
	Remuneration mechanism	▪ Provider will collect tariff from households/institutions based on a predefined tariff structure ▪ Provider pays a pre-agreed monthly lease amount to municipality ▪ One-time refundable security deposit on municipal vehicles	▪ Revenues expected from compost once the operator ▪ No payments to be made to municipality
	Responsibilities towards assets development, maintenance and rehabilitation	• Shared between private operator and service authority	• Shared between private operator and service authority
	Special conditions /obligations of note	▪ Adherence to tariff ▪ Safe transport and disposal at the predefined location ▪ Adherence to vehicle operations and maintenance as per prescribed guidelines ▪ Adherence to staff/environment safety guidelines and service delivery protocols in SLA ▪ Maintenance expenses (below BDT 5000) Performance reporting on all above in given format	• Adherence to treatment and disposal standards specified in SLA • Adherence to plant operations and maintenance guidelines • Adherence to national policies and regulations in undertaking compost marketing and sale • Maintenance of infrastructure • Business performance reporting
Procurement modality, processes and outcome	Process governed by the Public Procurement Act 2006 and Public Procurement Rules 2008, which involve transparent and competitive selection processes based on pre-defined technical and financial criteria, to achieve a quality and cost based selection		
Implementation, monitoring and results	As of November 2017, service operations were underway in both value chain components and both private and public sector were fulfilling their obligations as outlined in the SLAs. Service quality is reported as upheld, with no notable complaints from service recipients. The city government perceives efficiency benefits as they are no longer engaged in routine FSM activities.		
ASSESSMENT			
Sustainability	Both PPPs were structured to offer sustainable FSM services. Strong political buy-in is a marker of sustainability. Nevertheless, this will also depend on to what extent partnership is managed and regulatory approvals for end-use products are put in place		
Equity	Although the SLA explicitly targeting underdeveloped areas, contributions and outcomes are hard to assess in the absence of data		
Overall lessons on PSP for onsite sanitation services in the city	• City partnership project illustrates how private sector can be mobilized for engagement in FSM service provision and partnerships structured even in contexts where there is an absence of formal private service providers • The project also illustrates the types of institutional capacities that need to be built and project structuring activities that are imperative in contexts where there is limited experience in PSPs in FSM service provision • While there is emerging evidence on improved service access, quality and efficiency and potential for business viability in emptying operations, the underlying business models require further testing to validate these aspects		

<table>
<tr><th colspan="2">KHULNA</th></tr>
<tr><td>Project name</td><td>Demonstration of pro-poor market based solutions for faecal sludge management in urban centers of Southern Bangladesh (Khulna, Jhenaidah, Kushtia)</td></tr>
<tr><td>Grantee</td><td>SNV USA</td></tr>
<tr><th colspan="2">CITY CONTEXT</th></tr>
<tr><td>City population</td><td>1.50 million</td></tr>
<tr><td>Country HDI</td><td>0.579 (139)</td></tr>
<tr><td>Access to sanitation services</td><td>99%</td></tr>
<tr><td>Key issues in FSM at project design</td><td>• Poor sanitation technologies/practices/service quality
• Weak policy/regulatory frameworks and institutional capacities</td></tr>
<tr><td>Institutional arrangements</td><td>• Service authority – Khulna City Corporation (KCC)
• Service provider – KCC, Community Development Committee (NGO)</td></tr>
<tr><th colspan="2">PROJECT DESIGN</th></tr>
<tr><td>Implementing partners</td><td>KCC</td></tr>
<tr><td>Project cost</td><td>USD 4.98 million</td></tr>
<tr><td>Start date-end date</td><td>January 2014 - December 2017</td></tr>
<tr><td>Project components</td><td>• Awareness and demand creation
• Development and testing of business models in emptying/transport and treatment/reuse
• Knowledge sharing and policy advocacy</td></tr>
<tr><td>PPP objective</td><td>• To improve service quality in FSM value chain components of emptying/transport and treatment/reuse</td></tr>
<tr><th colspan="2">PROJECT IMPLEMENTATION</th></tr>
<tr><td>Key activities implemented</td><td>• Capacity building activities targeting: pit emptiers to perform emptying/transport as per SLA; municipal officials to oversee private operator performance; improved business planning skills of private operators; municipal officials to undertake treatment plant O&M
• Support development of bid process documents for bundled PPPs in empting/transport and treatment/reuse; feasibility studies to structure PPPs; policy studies to national regulations on FSM and to improve containment standards and inspection protocols for septic tanks</td></tr>
<tr><td>Progress in PPP/SLA design and procurement to date</td><td>As of December 2017, the General Council of KCC had approved the engagement of private sector in FSM in Khulna. It is expected that public release of tender documents to garner private sector interest will take place in the coming months</td></tr>
<tr><td>Contract design</td><td>
<table>
<tr><th>Feature</th><th>Contract Specifics</th></tr>
<tr><td>Services</td><td></td></tr>
<tr><td>Nature of contract</td><td></td></tr>
<tr><td>Duration</td><td></td></tr>
<tr><td>Remuneration mechanism</td><td></td></tr>
<tr><td>Responsibilities towards assets development, maintenance and rehabilitation</td><td></td></tr>
<tr><td>Special conditions /obligations of note</td><td></td></tr>
</table>
</td></tr>
</table>

KHULNA	
Procurement modality (if applicable), processes and outcome	Process will be governed by the Public Procurement Act 2006 and Public Procurement Rules 2008, which involve transparent and competitive selection processes based on pre-defined technical and financial criteria, to achieve a quality and cost based selection
Implementation, monitoring and results	Project has not yet moved to procurement stage so there are no results to report
ASSESSMENT	
Sustainability	• Positive actions include allocation of dedicated funding for FSM in annual budgets but utilisation has been poor • The project has also build several institutional capacities essential for effective FSM operations and engagement of private sector in the same
Equity	The SLA will reportedly include service provisions for the city's poor
Overall lessons on PSP for onsite sanitation services in the city	• The project underscores the significance of an enabling policy environment to realise progress in engaging private sector in public service provision • This city example also illustrates the political and operational complexities in structuring private partnerships in FSM services in larger cities in terms of area and population

JHENAIDAH	
Project name	Demonstration of pro-poor market based solutions for faecal sludge management in urban centers of Southern Bangladesh (Khulna, Jhenaidah, Kushtia)
Grantee	SNV USA
CITY CONTEXT	
City population	157,822
Country HDI	0.579 (139)
Access to sanitation services	98%
Key issues in FSM at time of project design	• Poor sanitation technologies/practices/service quality • Weak policy/regulatory frameworks and institutional capacities
Institutional arrangements	• Service authority – Jhenaidah Paurashava • Service provider – Jhenaidah Paurashava
PROJECT DESIGN	
Implementing partners	Jhenaidah Paurashava
Project cost	USD 4.98 million
Start date-end date	January 2014 - December 2017
Project components	• Awareness and demand creation • Development and testing of business models in emptying/transport and treatment/reuse • Knowledge sharing and policy advocacy
PPP objective	• To improve service quality in FSM value chain components of emptying/transport and treatment/reuse
PROJECT IMPLEMENTATION	
Key activities implemented	• Capacity building activities targeting: pit emptiers to perform emptying/transport as per SLA; municipal officials to oversee private operator performance; improved

<table>
<tr><th colspan="2">JHENAIDAH</th></tr>
<tr><td></td><td>business planning skills of private operators; municipal officials to undertake treatment plant O&M
• Support development of bid process documents for bundled PPPs in empting/transport and treatment/reuse; feasibility studies to structure PPPs; policy studies to national regulations on FSM and to improve containment standards and inspection protocols for septic tanks</td></tr>
<tr><td>Progress in PPP/SLA design and procurement to date</td><td>In November 2017, the city government entered into a PPP for delivery of bundled FSM services in the value chain components of emptying/transport and treatment/reuse. Contract negotiations between both parties were ongoing at the time of review and therefore the contract could not be reviewed</td></tr>
<tr><td>Contract design</td><td><table>
<tr><th colspan="2">Feature</th></tr>
<tr><td>Services</td><td></td></tr>
<tr><td>Nature of contract</td><td></td></tr>
<tr><td>Duration</td><td></td></tr>
<tr><td>Remuneration mechanism</td><td></td></tr>
<tr><td>Responsibilities towards assets development, maintenance and rehabilitation</td><td></td></tr>
<tr><td>Special conditions /obligations of note</td><td></td></tr>
</table></td></tr>
<tr><td>Procurement modality (if applicable), processes and outcome</td><td>Process was governed by the Public Procurement Act 2006 and Public Procurement Rules 2008, which involve transparent and competitive selection processes based on pre-defined technical and financial criteria, to achieve a quality and cost based selection</td></tr>
<tr><td>Implementation, monitoring and results</td><td>Project is in the contract signing stage so there are no results to report</td></tr>
<tr><th colspan="2">ASSESSMENT</th></tr>
<tr><td>Sustainability</td><td>• Positive actions include allocation of dedicated funding for FSM in annual budgets
• The project has also build several institutional capacities essential for effective FSM operations and engagement of private sector in the same
• Strong public sector buy-in/political will, both to advance progress in FSM services as well as to engage private sector – all of which are positive markers of longer term sustainability</td></tr>
<tr><td>Equity</td><td>The SLA will reportedly include service provisions for the city's poor. Close monitoring of service equity and progress and challenges in catering to the urban poor is desirable</td></tr>
<tr><td>Leveraging of investments</td><td>The city government has introduced an FSM tax which is being charged to households and will reportedly be utilised for sector development</td></tr>
<tr><td>Overall lessons on PSP for onsite sanitation services in the city</td><td>• The project underscores the significance of an enabling policy environment to realise progress in engaging private sector in public service provision
• With city on the verge of signing the SLA, key areas of focus going forward would also be institutionalising environmental monitoring and operationalising contract management and monitoring
• Service improvements will depend on the extent to which city is able to address containment issues
• Viability of treatment operations will depend on the operator being able to secure appropriate licensing frameworks for end-use products</td></tr>
</table>

<table>
<tr><th colspan="2">KUSHTIA</th></tr>
<tr><td>Project name</td><td>Demonstration of pro-poor market based solutions for faecal sludge management in urban centers of Southern Bangladesh (Khulna, Jhenaidah, Kushtia)</td></tr>
<tr><td>Grantee</td><td>SNV USA</td></tr>
<tr><td colspan="2">CITY CONTEXT</td></tr>
<tr><td>City population</td><td>240,000</td></tr>
<tr><td>Country HDI</td><td>0.579 (139)</td></tr>
<tr><td>Access to sanitation services</td><td>99%</td></tr>
<tr><td>Key issues in FSM at time of project design</td><td>• Poor sanitation technologies/practices/service quality
• Weak policy/regulatory frameworks and institutional capacities</td></tr>
<tr><td>Institutional arrangements</td><td>• Service authority – Kushtia Paurashava
• Service provider – Kushtia Paurashava</td></tr>
<tr><td colspan="2">PROJECT DESIGN</td></tr>
<tr><td>Implementing partners</td><td>Kushtia Pourashava</td></tr>
<tr><td>Project cost</td><td>USD 4.98 million</td></tr>
<tr><td>Start date-end date</td><td>January 2014 - December 2017</td></tr>
<tr><td>Project components</td><td>• Technical assistance for treatment operations</td></tr>
<tr><td>PPP objective</td><td>• To improve O&M and viability of FSTP operations</td></tr>
<tr><td colspan="2">PROJECT IMPLEMENTATION</td></tr>
<tr><td>Key activities implemented</td><td>• Technical assistance for treatment operations</td></tr>
<tr><td>Progress in PPP/SLA design and procurement to date</td><td>PPP development not supported by this project but support being extended both to the service authority and private operator in improving plant operations and overall viability. Contract awarded to private operator with relevant technical experience in managing waste operations.</td></tr>
<tr><td>Contract design</td><td>
<table>
<tr><th colspan="3">Feature</th></tr>
<tr><td>Services</td><td></td><td></td></tr>
<tr><td>Nature of contract</td><td></td><td></td></tr>
<tr><td>Duration</td><td></td><td></td></tr>
<tr><td>Remuneration mechanism</td><td>•</td><td>•</td></tr>
<tr><td>Responsibilities towards assets development, maintenance and rehabilitation</td><td>•</td><td>•</td></tr>
<tr><td>Special conditions /obligations of note</td><td></td><td>•</td></tr>
</table>
</td></tr>
<tr><td>Procurement modality (if applicable),</td><td>Direct award to private operator with strong experience in SWM treatment plant operations. Award was based on appropriate technical and cost criteria.</td></tr>
</table>

KUSHTIA	
processes and outcome	
Implementation, monitoring and results	PPP under first year of implementation. Contract management processes for Kushtia were not reviewed as the grantee did not facilitate this process
ASSESSMENT	
Sustainability	Broad recognition among partners of the need for sustainability. an important risk that emerges in this context is regulatory risk as licencing frameworks for production and sale of sludge based fertilisers is currently absent in Bangladesh. Any adverse regulatory measures or delays is likely to have an impact on the success of the partnership
Equity	Not applicable
Leveraging of investments	Private sector investment in plant O&M. Annual lease amount for use of facility being paid to service authority
Overall lessons on PSP for onsite sanitation services in the city	• Need to strengthen licensing/regulatory mechanisms for end-use products Key challenges faced by the private operator during its one year of operations include an absence of a national licensing framework for fecal sludge-based fertilisers and limited acceptance of sludge-based products in local markets. Responsibility for securing appropriate licenses is assigned to the operator, but service authority is supporting this process • Strong need to strengthen necessary support infrastructure and institutional processes for undertaking quality testing of treated water, soil and compost

WAI	
Project name	Service Level Agreements for Private Sector Engagement in Urban Sanitation Services
Grantee	**CEPT University**
CITY CONTEXT	
City population	36,000
Country HDI	0.624 (131)
Access to sanitation services	• Access to sanitation-68%, Sewerage-0%, Septic tanks-86%, Improved pit latrines-10%, unimproved pit latrines-4%, open defecation-2%. • Mechanical desludging services offered by Wai Municipal Council (WMC) • No treatment facility
Key issues in FSM at time of project design	• Septic tanks vary in size and dimension. Households have limited knowledge about septic tank functioning. • No periodic cleaning of septic tanks. On an average toilet pits/septic tanks are cleaned once in eight to ten years. Less than 7% of the sludge volume generated by households is safely emptied. • Effluent from pits/septic tanks is discharged into nearby open or closed drains along the road which flows into water bodies without any treatment. Fecal part remains in the pits/septic tanks without being flushed for several years and solidifies over time. • Such poor FSM practices pose a major challenge to the environment and to public health
Institutional arrangements	• **National Institutions:** Ministry of Housing and Urban Affairs, Govt. of India • **State Institutions:** City Development Department, Govt. of Maharashtra • **Service Authority:** Wai Municipal Council (WMC)

<table>
<tr><th colspan="2">WAI</th></tr>
<tr><td></td><td>• Service Provider(s): WMC provides mechanical services for desludging of septic tanks. WMC has engaged private service provider for operation and maintenance of community toilets and public toilets.</td></tr>
<tr><td colspan="2">PROJECT DESIGN</td></tr>
<tr><td>Implementing partners</td><td>Wai Municipal Council (WMC)</td></tr>
<tr><td>Project cost</td><td>US$0.95 million</td></tr>
<tr><td>Start date-end date</td><td>2014-2017</td></tr>
<tr><td>Project components</td><td>• PPP contract(s) to provide city-wide IFSM services including safe collection and treatment of fecal sludge, safe reuse or disposal of treated waste
• Moving toward ODF city and increasing share of households using “own toilets”
• Capacity building of Urban Local Bodies to engage private sector in urban sanitation services</td></tr>
<tr><td>PPP objective</td><td>Engaging private sector in scheduled emptying and transportation services for improving access and quality of septic tank cleaning</td></tr>
<tr><td colspan="2">PROJECT IMPLEMENTATION</td></tr>
<tr><td>Key activities implemented</td><td>• Engaged private sector in emptying and transport service provision through a SLA for scheduled emptying of septic tanks connected to households, commercial properties and institutions over a 3-year period targeting 33% of the septic tanks annually.
• Some of the other activities implemented by the city with support from the grantee include, preparation of a sanitation plan, resolution for implementing FSM plans, resolution for implementing “own toilet scheme” and aligning with national and state schemes; activities undertaken towards becoming ODF- toilet subsidy scheme awareness and inviting applications for new toilets, OD spot monitoring, capacity building and enabling, and ICT application based monitoring; setting up of FSTP; and creation of a city level database of existing toilets and septic tanks.</td></tr>
<tr><td>Progress in PPP/SLA design and procurement to date</td><td>SLA in emptying and transport (scheduled emptying of septic tanks) service provision has been designed, procured and contracted to private sector operator, Sumeet Facilities Pvt. Ltd.</td></tr>
<tr><td>Contract design</td><td>
<table>
<tr><th>Feature</th><th>Scheduled emptying and transport of septic tanks</th></tr>
<tr><td>Services</td><td>• Scheduled emptying of 6,000 septic tanks over three years, 2,000 (33% of total) septic tanks annually, including emergency emptying
• Safe transport and disposal at designated site
• IEC activities
• Establishment of control centre</td></tr>
<tr><td>Nature of contract</td><td>Service contract</td></tr>
<tr><td>Duration</td><td>3 years</td></tr>
<tr><td>Remuneration mechanism</td><td>• Provider will not collect charges /fees from the households/ properties/institutions
• Provider will be paid by the WMC based on the actual % of septic tanks emptied
• Total cost of contract to be divided into 36 equal monthly instalments
• Escrow account in a nationalized bank with deposit equal to at least 3 months of payment</td></tr>
<tr><td>Responsibilities towards assets development,</td><td>n/a</td></tr>
</table>
</td></tr>
</table>

<table>
<tr><th colspan="3">WAI</th></tr>
<tr><td></td><td>maintenance and rehabilitation</td><td></td></tr>
<tr><td></td><td>Special conditions /obligations of note</td><td>• Contractor to submit (in consultation with WMC) approach and tentative work plan for scheduled emptying for 3 years and indicate tentative no. of trucks and its sizes (complying to statutory requirements) to be used
• Contractor to undertake IEC activities to spread awareness about scheduled emptying
• Contractor to undertake preliminary visits to households/properties at beginning of every quarter, non-disclosure of contact information shared by households/property owners
• Contractor will adhere to service standards: use of safety gear, regular and adequate emptying without spillage and damage to septic tanks, emergency emptying, safe transport of fecal sludge without spillage, discharge of fecal sludge only at FSTP
• Contract will provide and operate GPS fitted suction emptier trucks, provide for safety equipment and other material required to ensure adequate emptying
• Contractor will provide staff -at least 1 driver, 1 cleaner per truck, and at least 1 supervisor for supervising operations, handling complains and liaison with WMC. Contractor will be responsible for all activities and liabilities of staff including obliging to statutory requirement wrt. Welfare of workers
Contractor will establish a control centre to serve as central point of coordination with WMC, and as site for registration of complaints by citizens. Contractor will develop SMS based alert system for Households/ property owner scheduled for emptying. Provide contact no. for SMS or call based registration of complains</td></tr>
<tr><td>Procurement modality (if applicable), processes and outcome</td><td colspan="2">• Procurement process involved an open tender bidding by private service providers
• Tender document specified: desired service levels or performance requirements, contractual period, payment terms and mechanisms, allocation of roles, responsibilities and risks between the state and non-state entities, dispute resolution mechanisms
• The minimum qualifying criteria (Technical and financial) for the bidder was established
• WMC published the tender the State Government's tender information system website (https://www.mahatenders.gov.in), followed by sale of document and a pre-bid meeting conducted for potential bidders to provide clarifications on the tender
• Technical and financial bids were received from five private sector players
• Two-step review of bids submitted, wherein, they first opened the technical bids. Only for bidders who qualified the technical criteria, the financial bids were opened and reviewed.
• Technical bids submitted by each of the five private sector players were comparable and each private sector player sufficiently met the minimum qualifying criteria. The final criterion for selecting a private contractor was on the basis of the lowest financial bid quoted. Sumeet Facilities Pvt. Ltd., Pune was the lowest cost bidder, thus, was selected as the service provider.</td></tr>
<tr><td>Implementation, monitoring and results</td><td colspan="2">• Wai is yet to witness a full-fledged implementation of the emptying and transport SLA. Though the contract was awarded to the service provider by the WMC in</td></tr>
</table>

WAI	
	September 2017, the release of the work order was withheld due to local elections and delays in commissioning of the FSSTP by Tide Technocrats Pvt. Ltd. • At present IEC, awareness and door to door survey of households/properties falling in the first zone for scheduled emptying in underway. It is expected that the actual emptying and transport operations in Wai will commence by May 2018. The FSSTP is undergoing a trail run and is also expected to be ready for operations by May, 2018.
ASSESSMENT	
Sustainability	• The effectiveness of implementing scheduled desludging for improved public health and environmental outcomes will have to be closely monitored through the project period and beyond. One key indicator of success will be the results from the repeat testing of the quality of waste water and effluent discharged from pits/ septic tanks into drains which flow into land or water bodies • Durability of service provision and commitment to uphold service levels will bear closer review in the future, particularly with regard to city's current approach of heavy subsidization of costs for service provision
Equity	Though the SLA design indicates a city-wide service for households/ commercial properties/ institutions, there is no explicit mention of slum households or slum rehabilitation apartments. Also, CTs and PTs are well beyond the scope of the SLA.
Overall lessons on PSP for onsite sanitation services in the city	• With regard to equity considerations, it is worth noting that city-wide systems for FSSM (like the current emptying and transport SLAs in Wai) can be improved meaningfully but that does not necessarily mean they will be inclusive of the poor if not designed explicitly for that goal. • In assessing the feasibility to replicate and scale-up similar interventions in other cities, due consideration must be given to the fact that, Wai (3.6 sq.km area and a population of about 36,000) is a smaller city, making regulation and enforcement relatively less challenging compared to larger urban agglomerations.

SINNAR	
Project name	Service Level Agreements for Private Sector Engagement in Urban Sanitation Services
Grantee	**CEPT University**
CITY CONTEXT	
City population	65, 299
Country HDI	0.624 (131)
Access to sanitation services	• Access to sanitation-63%, Sewerage-0%, Septic tanks-74%, Improved pit latrines-14%, unimproved pit latrines-12%, open defecation-13%. • Mechanical desludging services offered by Sinnar Municipal Council (SMC) • Mechanical desludging services also offered by private service providers to a limited extent within city limits but primarily outside city • No treatment facility
Key issues in FSM at time of project design	• Size of these pits/ septic tanks varies in length, breadth and depth. Lack of knowledge among households with regard to functioning of septic tanks as an on-site treatment facility has resulted into over-sized septic tanks without manhole covers. • There is no periodic cleaning of the pits/septic tanks. On an average, pits/septic tanks are cleaned once in more than eight to ten years. The untreated septage is

<table>
<tr><th colspan="2">SINNAR</th></tr>
<tr><td></td><td>dumped off at the solid waste dump site. The infrequent cleaning causes the septage in the pit/septic tank to solidify.
• All effluent flows into open/ closed drains along the road. In some areas, due to absence of drains for conveyance, effluent flows into soak pits, open areas or depressions along roads. Fecal matter from filled up pits/septic tanks flows along with the effluent into the drains or into the open. The city of Sinnar slopes towards River Saraswati and all untreated wastewater drains into the river.</td></tr>
<tr><td>Institutional arrangements</td><td>• National Institutions: Ministry of Housing and Urban Affairs, Govt. of India
• State Institutions: City Development Department, Govt. of Maharashtra
• Service Authority: Sinnar Municipal Council (SMC)
• Service Provider(s): SMC provides mechanical services for desludging of septic tanks. SMC has engaged private service provider for operation and maintenance of community toilets and public toilets. Three private service providers mainly operating outside city limits also provide to a limited extent mechanical desludging services within the city limits.</td></tr>
<tr><td colspan="2">PROJECT DESIGN</td></tr>
<tr><td>Implementing partners</td><td>Sinnar Municipal Council (WMC)</td></tr>
<tr><td>Project cost</td><td>US$0.95 million</td></tr>
<tr><td>Start date-end date</td><td>2014-2017</td></tr>
<tr><td>Project components</td><td>• PPP contract(s) to provide city-wide IFSM services including safe collection and treatment of fecal sludge, safe reuse or disposal of treated waste
• Moving toward ODF city and increasing share of households using “own toilets”
• Capacity building of Urban Local Bodies to engage private sector in urban sanitation services</td></tr>
<tr><td>PPP objective</td><td>• Engaging private sector in scheduled emptying and transportation services for improving access and quality of septic tank cleaning
• Engaging private sector for setting up and operating a FSSTP on a DBO basis</td></tr>
<tr><td colspan="2">PROJECT IMPLEMENTATION</td></tr>
<tr><td>Key activities implemented</td><td>• Engaged private sector in emptying and transport service provision through a SLA for scheduled emptying of septic tanks connected to households, commercial properties and institutions over a 3-year period targeting 33% of the septic tanks annually.
• Engaged private sector is designing, building, commissioning, operating and maintaining a FSSTP over a 3-year period.
• Some of the other activities implemented by the city with support from the grantee include, preparation of a sanitation plan, resolution for implementing FSM plans, resolution for implementing “own toilet scheme” and aligning with national and state schemes; activities undertaken towards becoming ODF- toilet subsidy scheme awareness and inviting applications for new toilets, OD spot monitoring, capacity building and enabling, and ICT application based monitoring; setting up of FSTP; and creation of a city level database of existing toilets and septic tanks.</td></tr>
<tr><td>Progress in PPP/SLA design and procurement to date</td><td>• SLA in emptying and transport (scheduled emptying of septic tanks) service provision has been designed, procured and contracted to private sector operator, Sumeet Facilities Pvt. Ltd.
• SLA designing, building, commissioning, operating and maintaining FSSTP has been designed, procures and contracted to private sector operator, Panse Consultants Pvt. Ltd.</td></tr>
<tr><td>Contract design</td><td>
<table>
<tr><th>Feature</th><th colspan="2">Scheduled emptying and transport of septic tanks</th></tr>
<tr><td>Services</td><td>• Scheduled emptying of 12,000 septic tanks over</td><td>• Part A: Design, Construction,</td></tr>
</table>
</td></tr>
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		three years, 4,000 (33% of total) septic tanks annually, including emergency emptying • Safe transport and disposal at designated site • IEC activities • Establishment of control centre	Commissioning of FSTP of 70,000 litres capacity • Part : Operation and Maintenance of FSTP
	Nature of contract	Service contract	Service contract
	Duration	3 years	• Part A: Design, Build and Commission (6 months) • Part B: Operation and Maintenance (3 years)
	Remuneration mechanism	• Provider will not collect charges /fees from the households/ properties/institutions • Provider will be paid by the WMC based on the actual % of septic tanks emptied • Total cost of contract to be divided into 36 equal monthly instalments • Escrow account in a nationalized bank with deposit equal to at least 3 months of payment	• Part A: 20% of price quoted for part A after completion of Design, Drawings and Approvals • Part A: 80% of price quoted for part A after completion of Construction and Commissioning • Part B: Price quoted for Part B to be divided into 36 equal monthly instalments • Price quoted for Part B: includes cost of O&M of FSSTP and allied works, and all other costs including labour, material and others as needed. No claims for additional payment will be entertained • Escrow account in a nationalized bank with deposit equal to at least 3 months of payment
	Responsibilities towards assets development, maintenance and rehabilitation	n/a	• Design and build appurtenant structure and undertake allied works • Approvals from government departments • Testing and trail run over a period of 1 month • Commissioning to the satisfaction of the Engineer-in-charge • Operation and Maintenance • Smooth transition of operation and maintenance of FSSTP to subsequent operator as designated by SMC • Smooth handing over of FSSTP to SMC after completion of O&M period

SINNAR			
			of three years
	Special conditions /obligations of note	• Contractor to submit (in consultation with WMC) approach and tentative work plan for scheduled emptying for 3 years and indicate tentative no. of trucks and its sizes (complying to statutory requirements) to be used • Contractor to undertake IEC activities to spread awareness about scheduled emptying • Contractor to undertake preliminary visits to households/properties at beginning of every quarter, non-disclosure of contact information shared by households/property owners • Contractor will adhere to service standards: use of safety gear, regular and adequate emptying without spillage and damage to septic tanks, emergency emptying, safe transport of fecal sludge without spillage, discharge of fecal sludge only at FSTP • Contract will provide and operate GPS fitted suction emptier trucks, provide for safety equipment and other material required to ensure adequate emptying • Contractor will provide staff -at least 1 driver, 1 cleaner per truck, and at least 1 supervisor for supervising operations, handling complains and liaison with WMC. Contractor will be responsible for all activities and liabilities of staff including obliging to statutory requirement wrt. Welfare of workers Contractor will establish a control centre to serve as central point of coordination with WMC, and as site for registration of complaints by citizens. Contractor will develop	• Contractor to submit Design-Build services progress reports to Engineer- In- Charge • Contractor to submit progress report on commissioning and trail run to Engineer-In-Charge • Contractor to submit monthly invoice and performance report • Contractor will prepare and submit monthly invoice, daily and monthly performance reports • Contractor must generate data using: • Contractor must maintain separate register/ computerized records • SMC reserves the right to conduct a technical audit of the FSSTP and to perform any analysis or inspection deemed necessary by the SMC. Contractor to provide required assistance for SMC to complete inspections. • If output standards of treated septage and effluent fail to meet prevalent discharge standards of GoM and as amended from time to time, 20% of the monthly running bill will be deducted • More than 5 instances of failure to achieve output standards, entire monthly running bill amount payable will be withheld

SINNAR	
	SMS based alert system for Households/ property owner scheduled for emptying. Provide contact no. for SMS or call based registration of complains
Procurement modality (if applicable), processes and outcome	• Procurement process for both SLA contracts- scheduled emptying and transport, and FFSTP, involved an open tender bidding by private service providers. • Tender documents were drafted and specified: desired service levels or performance requirements, contractual period, payment terms and mechanisms, allocation of roles, responsibilities and risks between the state and non-state entities, dispute resolution mechanisms • The minimum qualifying criteria (technical and financial) for the bidder was established • WMC published the tenders on the State Government's tender information system website (https://www.mahatenders.gov.in), followed by sale of document and a pre-bid meeting conducted for potential bidders to provide clarifications on the tender. • Technical and financial bids were received from private sector players, four for scheduled emptying and three for FSSTP • Followed a two-step review of bids submitted, wherein, they first opened the technical bids. Only for bidders who qualified the technical criteria, the financial bids were opened and reviewed. • With regard to FSSTP, technical bids submitted by each of the three private sector players were comparable and each private sector player sufficiently met the minimum qualifying criteria. However, a review of the financial bids submitted by the private sector players revealed significant differences in costs (Capital + O&M for three years) quoted. The final criterion for selecting a private contractor was on the basis of the lowest financial bid quoted. Panse Consultants Pvt. Ltd., Pune was the lowest cost bidder, thus, was selected as the service provider. • In the case of scheduled emptying and transport one of the four bidders failed to meet the technical and minimum qualifying criteria while bids of the other three private sector players were comparable and sufficiently met the minimum qualifying criteria. However, costs quoted for emptying and transport services were based on per septic tank and not a lump sum cost for total number of septic tanks to be emptied as required by the tender. The tender was thus, refloated with required clarification to private players. Revised bids were received from five private sector players. The final criterion for selecting a private contractor was on the basis of the lowest financial bid quoted. Sumeet Facilities Pvt. Ltd., Pune was the lowest cost bidder, thus, was selected as the service provider.
Implementation, monitoring and results	• Sinnar is awaiting a full-fledged implementation of the emptying and transport SLA. The contract was awarded in June 2017 and the work order was released in August 2017 approving commencement of operations by February 2018, delays with regard to the commissioning of FSSTP has further delayed the implementation of the emptying and Transport operations in Sinnar. The SMC has now communicated August 2018 as the new timeline by when the FSSTP will be operational and the emptying and transport operations can commence. • Given the experimental nature of the project and lack of sufficient prior knowledge about the proposed FSSTP technology at the state level, much time and effort was spent in explaining and justifying the project. Only after deliberations over 5-6 months, a technical sanction was granted to the FSSTP project followed by financial approval over a period of 4-5 days. Finally, the work order was released in March, 2018 and the actual work has commenced.

SINNAR	
ASSESSMENT	
Sustainability	• The effectiveness of implementing scheduled desludging for improved public health and environmental outcomes will have to be closely monitored through the project period and beyond. One key indicator of success will be the results from the repeat testing of the quality of waste water and effluent discharged from pits/ septic tanks into drains which flow into land or water bodies • Durability of service provision and commitment to uphold service levels with regard to scheduled desludging will bear closer review in the future, particularly with regard to city's current approach of heavy subsidization of costs for service provision • With regard to the FSSTP SLA in Sinnar, the review finds the SLA sufficiently well designed to ensure better and sustainable FSSM outcomes bearing positive implications on the environment. Given the experimental nature and limited technical knowhow about the proposed FSSTP technology among SMC officials, effective monitoring and timely technical third party audits will be crucial to the success of the FSSTP. • It is most pertinent to note the high level of initiative and commitment demonstrated by the city government and city officials in Sinnar to ensure finance for setting up and operating the FSSTP by accessing government funds under the finance commission. This in turn lends to the conduciveness of private sector participation and bodes well for sustainability of the public private partnership as well as toward overall efforts in improving FSSM outcomes
Equity	• With regard to emptying and transport services, though the SLA design indicates a city-wide service for households/ commercial properties/ institutions, there is no explicit mention of slum households or slum rehabilitation apartments. Also, CTs and PTs are well beyond the scope of the SLA. • With regard to FSSTP, the SLA is designed as a citywide service, adequately addressing equity issues by providing for treatment of sludge/septage from CTs and PTs which largely serve the poor households without access to individual toilets.
Overall lessons on PSP for onsite sanitation services in the city	• With regard to equity considerations, it is worth noting that city-wide systems for FSSM (like the current emptying and transport SLAs in Wai) can be improved meaningfully but that does not necessarily mean they will be inclusive of the poor if not designed explicitly for that goal. • In assessing the feasibility to replicate and scale-up similar interventions in other cities, due consideration must be given to the fact that, Sinnar (51 sq.km area and a population of about 65,299) is a smaller city, making regulation and enforcement relatively less challenging compared to larger urban agglomerations. • Government initiative and financing of capital investments for treatment facilities proved critical for promoting an enabling environment for private sector participation and for leveraging private sector expertise and technical knowhow.

WARANGAL	
Project name	Service Level Agreements for Private Sector Engagement in Urban Sanitation Services
Grantee	**Administrative Staff College of India (ASCI)**
CITY CONTEXT	

WARANGAL	
City population	0.8 million
Country HDI	0.624 (131)
Access to sanitation services	• Access to sanitation: 54%, Sewerage: 0%, Septic tanks: 46%, Other facility: 54%, Open defecation: 10% • Mechanical emptying of septic tanks by private service providers as a fee based service • No treatment facility
Key issues in FSM at time of project design	• Huge gaps in sanitation and wide variations in available data. • High prevalence of open defecation in the city linked to lack of individual toilets, community toilets particularly in slums, and public toilets for floating population. • Septage management nascent concept. No guidelines or facilities for septage disposal, and efforts to regulate and monitor septage-hauling providers are still in the earliest stages of implementation • No identified disposal sites, even monitored hauling companies continue to dispose sludge into fields and outfall drains in anticipation of an official treatment site being commissioned
Institutional arrangements	• **National Institutions:** Ministry of Housing and Urban Affairs, Govt. of India • **State Institutions:** Commissioner and Director of Municipal Administration, Govt. of Telangana • **Service Authority:** Greater Warangal Municipal Corporation (GWMC) • **Service Provider(s):** GWMC responsible for operation and maintenance of community and public toilets often engaging private service providers. Three private service providers offer emptying, transport and disposal as a fee based service.
PROJECT DESIGN	
Implementing partners	Greater Warangal Municipal Corporation (GWMC)
Project cost	US$ 1.29 million
Start date-end date	2014-2017
Project components	• Promoting innovative non-networked and FSM options across sanitation value chain in a PPP format that is equitable and sustainable • Enabling policy environment • SLA framework, systems, mechanisms for compliance and tracking progress on key indicators • Ensuring accountability and transparency • Capacitating and strengthening of municipal systems
PPP objective	• Improve access and quality of public sanitation/ public toilets • Licensing and monitoring of existing private service providers for emptying and transport
PROJECT IMPLEMENTATION	
Key activities implemented	• Engaged private sector through SLA for construction and O&M of pay and use PTs on a DFBOT basis • Empanelling existing private operators in emptying and transport services • Supported GWMC in approving and granting land for FSTP • Engaged the private sector in varying capacities to facilitate improved access and quality of pubic sanitation through She Toilets (exclusively for women and girls including third gender), E (Electronic) - Toilets, refurbishment and O&M of existing toilets, O&M of toilets in government buildings, and opening up of toilets at fuel stations for use by the public • Supported GWMC in developing and passing "Operative Guidelines on Septage Management (Collection, Transportation, Treatment and Disposal), 2016

<table>
<tr><th colspan="3">WARANGAL</th></tr>
<tr><td></td><td colspan="2">• Setting up of S-line (sanitation helpline)</td></tr>
<tr><td>Progress in PPP/SLA design and procurement to date</td><td colspan="2">• SLA for new pay and use public toilets on a DFBOT basis designed and awarded to private operators
• Licenses issued to the three existing private service providers for emptying and transport</td></tr>
<tr><td>Contract design</td><td>Feature</td><td>DBFOT for Public Toilets</td></tr>
<tr><td></td><td>Services</td><td>Public Toilets</td></tr>
<tr><td></td><td>Nature of contract</td><td>“Concession Agreement”</td></tr>
<tr><td></td><td>Duration</td><td>Ranging from 6 years to 30 years</td></tr>
<tr><td></td><td>Remuneration mechanism</td><td>• Advertisement rights to concessionaire to generate additional source of revenue
• Concessionaire can propose any additional sources of revenue subject to approval of authority
• Concession fee: Concessionaire to pay authority a concession fee of INR 1 per annum
• User fee
– Concessionaire to demand, collect and appropriate fee from users as the base fare
– Base fare for urinals INR 1 per usage
– Base fare for toilets INR 3 per usage
– Base fare for bathrooms INR 5 per usage
• Revision of user fees every 3 years. Base fees to be revised by 50% increase and rounded off to nearest INR</td></tr>
<tr><td></td><td>Responsibilities towards assets development, maintenance and rehabilitation</td><td>• Developing and operating obligations of concessionaire
– Investigate, study, design, engineer, procure, finance, construct, augment, rehabilitate, operate and maintain the project facilities
– Collect, and appropriate fee from users and refuse its usage from any person(s) who do not pay the fees
– Bear and pay all costs, expenses and charges in connection with or incidental to the performance of the obligations
– Not assign, transfer or sublet or create any lien or encumbrance
– Submit design cum detailed project implementation reports to the authority for its approval
– Incorporate the necessary suggestions/ amendments proposed by the Authority
– Procure all applicable permits that are required during project execution
– furnish the commitment / in-principle approval letters from the project sponsors and the senior lenders if any
• Maintenance obligations of concessionaire
– Evolve and update maintenance manual for regular and preventive maintenance of project assets
– Maintain and submit training manual
– Provide monthly MIS of income generation
– Operate for 18 hours a day 5 a.m. to 11 p.m.
– Comply with safety requirements
– Prompt repairs and periodic preventive maintenance</td></tr>
</table>

WARANGAL		
		– Maintain sufficient stock of consumables for smooth and efficient operations •
	Special conditions /obligations of note	• Safety requirement obligations of concessionaire – Conform to good industry practice for securing safety of users – Develop, implement and administer surveillance and safety provisions for user especially women • Concessionaire shall attend to user complaints promptly and reasonable action to be taken to redressal. Maintain register noting complaints and action taken. Submit monthly complaint file. • Concessionaire to maintain book of accounts recording all receipts, income, expenditure, payments, assets and liabilities. At close of accounting years, concessionaire shall furnish balance sheets, cash flow statements and profit and loss account, report by statutory auditors • Obligations of authority – Procure to Concessionaire the necessary access rights to the site in order to permit design, construction, rehabilitation, testing, commissioning and operation and maintenance of the project facilities Give comments/ observations (if any) to the drawings & designs, the project implementation approach, the methodology and the work plan of the project submitted by the concessionaire
Procurement modality (if applicable), processes and outcome		• Contracts were awarded in two phases. Phase I witnessed seven tender bids, out of which three were selected and awarded contracts for seven PTs. In this phase, projects were awarded for concession periods of 25-30 years. • In phase II, out of the total 11 bids received, 5 were selected and awarded contracts for 11 PTs. The selection criterion for awarding these contracts was based on the lowest concession period quoted by bidders. Phase I initiative led to competition in Phase II, with more private operators joining the bidding process in this stage. With bid parameter being concession period, this phase saw bidders offer lower concession periods. <u>Licensing of existing private service providers for emptying and transport</u> • Notice for empanelment was advertised in local newspapers. Following which applications were received, reviewed and licenses were granted
Implementation, monitoring and results		<u>Public Toilet SLA on DFBOT basis</u> • Implementation of the SLA for pay and use public toilets under DFBOT in phase I and phase II commenced soon after the contracts were awarded in July 2015 and April 2016 respectively • As such the outcomes of this implementation with regard to improved access to public sanitation and particularly the durability of the intervention could not be assessed in any systematic manner. This is exacerbated by data limitations. • The responsibility for contract management and performance monitoring of pay and use PTs under DFBOT vests with the GWMC with technical assistance from the grantee • No dedicated contract management unit or monitoring team embedded within the GWMC exclusively for implementation of this SLA • Inspections and verifications are to be carried out by the GWMC's engineer-in-charge and sanitary officials. No evidence was made available to indicate the actual implementation of regular monitoring program. Interviews similarly did not yield clarity on the extent to which this is operationalised and provider compliance to contractual obligations is ensured. • From an informal tour of the city, several public toilets appeared to be in various stages of disrepair. <u>Licensing of existing private service providers for emptying and transport</u> • Licenses issued to operate within the GWMC jurisdiction, and a mandatory GIS based truck tracking system is meant to reduce information asymmetries, reducing the cost of monitoring and enforcement.

WARANGAL	
	• Private operators indicated that the trucks are fitted with the GIS-based tracking systems but desludging and disposal will be closely monitored once the treatment plant is operational.
ASSESSMENT	
Sustainability	The PT DFBOT SLA has been under implementation for about two years, and it continues to evolve and develop. As such, the outcomes of this implementation with regard to improved access to public sanitation and particularly the durability of the intervention could not be assessed in any systematic manner. Aspects requiring closer review include the effectiveness and sustainability of service provision (as part of both DFBOT PTs and empanelment exercise), the competitiveness of the empanelment process for emptying and transport services, city's dependence on external assistance and commitment to upholding sanitation service levels.
Equity	• SLA for PTs addresses access to women and disabled through design specifications and service standards. However, the SLA fails to address inclusiveness from an income inequality standpoint and excludes the poor unable to pay user charges as private operators are unwilling to offer public sanitation services in close proximity of slum or low-income areas stating financial viability challenges. • At the time of the review, neither the project nor the city has made any investments in construction or management of community toilets. The grantee notes that the city has initiated 5 community toilets which are due for inauguration in March 2019. Details around this proposal were not available at the time of review and could not be explored.
Leveraging of investments	• The partnership was able to consolidate the existing public sector experience of engaging private sector in provision of public sanitation and the keen private sector interest in providing for Pay-and-Use PT services into a DFBOT model for PTs
Overall lessons on PSP for onsite sanitation services in the city	• The public sanitation interventions (through the PT SLA and otherwise) currently do not seem to target the urban poor, the population segment which is most likely affected by sanitation access and quality challenges. • Durability of programs, limited government ownership, specifically missing community toilets, incentives for private sector to reach low income houses with access and emptying services stand out as pending challenges. • The extent to which service quality can be upheld through consultative processes rather than enforcing service level obligations through contractually agreed-upon penalty and termination clauses remains to be seen.

IFMR LEAD is an India-based research organization which conducts high-quality, scalable research and evidence-based outreach to promote inclusive and sustainable development in India and other Low and Middle Income Countries.

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