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A PRELIMINARY REVIEW OF TRENDS IN SMALL-SCALE PUBLIC-PRIVATE PARTNERSHIP PROJECTS

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Abbreviations and Acronyms

BEE	Bureau of Energy Efficiency
BOO	Build Operate Own
BOOT	Build Own Operate Transfer
BOT	Build Operate Transfer
DBFOT	Design Build Finance Operate Transfer
DevCo	Development and Cooperation – EuropeAid
DFID	Department for International Development
DRDA	District Rural Development Agency
EoI	Expression of Interest
ESCO	Energy Savings Company
FCI	Food Corporation of India
GoK	Government of Kenya
GP	Gram Panchayat
GPOBA	Global Partnership on Output-Based Aid
HM Treasury	Her Majesty's Treasury
IBAM	Brazilian Institute of Municipal Administration
ICMBio	Chico Mendes Institute for Biodiversity Conservation
ICT	Information and Communications Technology
IDB	Inter-American Development Bank
IFC	International Finance Corporation
IIPDF	India Infrastructure Project Development Facility
JV	Joint venture
KU	Kenya University
MCC	Millennium Challenge Corporation
MIF	Multilateral Investment Fund
MoH	Ministry of Health
MoRD	Ministry of Rural Development
MP	Madhya Pradesh
MPWLC	Madhya Pradesh Warehousing and Logistics Corporation
O&M	Operations and maintenance
OUIDF	Odisha Urban Infrastructure Development Fund
PPI&SS	Private Participation in Infrastructure & Social Sectors
PDF	Project Development Fund
PfCS	Partnerships for Church of England Schools
PFI	Private Finance Initiative
PPA	Power Purchase Agreement
PPI	Private Participation in Infrastructure
PPP	Public-Private Partnerships

PURA	Provision of Urban Amenities in Rural Areas
RFP	Request for Proposal
RFQ	Request for Qualification
RoI	Return on investment
SANParks	South Africa National Parks
SIF	Social Innovation Fund
SPV	Special Purpose Vehicle
UK	United Kingdom
USAID	United States Agency for International Development
VfM	Value for Money
VGF	Viability Gap Funding
WBG	World Bank Group

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Executive Summary

Introduction

Governments have focused on large national level public-private partnership (PPP) projects in key economic sectors like transport over the last two decades. However, in recent years, governments in developing countries have increasingly been looking at leveraging private financing and efficiencies through PPP in non-transport social infrastructure sectors. While water and small energy projects have been around for some time, sub-national governments at provincial and local levels have turned to PPP projects, which are relatively smaller in size, for the provision of other essential services like solid waste management, energy-efficient street-lighting, primary healthcare and diagnostic services, municipal parking, development and maintenance of municipal parks, accommodation to students, and grain storage. These services, if delivered well, can have a transformative effect on the lives of citizens. While the benefits of private participation in the delivery of these services are undeniable, few projects have been undertaken relative to the substantial requirement. In addition, relatively little is known about the ones that have been, or are in the process of being, developed or implemented.

Objective

The objective of this paper is to understand what small-scale PPP projects look like; to examine at a preliminary level if there are overarching problems and constraints in undertaking these projects; and to use the preliminary observations and findings to inform further work in this area.

Scope and methodology

This paper looks specifically at 10 projects of value at or below $50 million in the South Asia, Middle East and Africa regions across a few identified parameters, summarizes the findings, and identifies overarching concerns—including issues and constraints related to policy and institutions, financing, and capacity, which might act as impediments to quick scaling up or replication of these projects as well as project-specific issues that could offer important lessons for future structuring of similar projects. However, this review is only preliminary and does not seek to examine detailed technical aspects of these projects or their contract documents in-depth. The paper also looks at some of the related initiatives in small-scale PPP projects in some additional key countries that were recommended during discussions by practitioners working on such projects within PPP units in client countries, and WBG and IFC staff involved in providing financing or transaction advisory services to such projects.

Key issues

Lack of strategy and standardized documents

A key observation from the review is that small-scale projects are associated with sectors that are relatively new or less analyzed sectors in the PPP space. While there is substantial experience in private provisioning in more traditional sectors, there is little information and/or standardized practices available in these sectors. This has made replication difficult even within those countries where small-scale projects are being implemented. Sector strategy either does not exist, as in the case of small-scale municipal projects in solid waste, parking, or accommodation; or the strategy is adopted from large projects, as in the case of small road and bridge projects. There are few standard contracts in these sectors, an exception being the grain storage sector in India where a standard contract is currently being reviewed for approval by the Planning Commission and some amount of upstream work has been undertaken as well during the last few years. The lack of standard documentation has frequently meant reinventing the wheel for each

new small-scale project, requiring time, funding, and effort for the public as well as the private entities involved, which is disproportionately high in comparison to the capital investment involved.

Cumbersome institutional structures

The second major issue observed is related to the institutional structure for processing these projects from conception through development, appraisal, approval, and procurement stages. In most of the projects examined, there are no separate institutional structures or differentiation in hierarchical levels of government used for approvals—in practice there are, in fact, additional levels of approvals added due to the subnational nature of these projects. Where the institutional structure does discriminate based on size or other attributes, either the cap used for defining small projects is too low as in the case of tourism projects in South Africa or as in the case of the national government in India, which does discriminate between projects based on total value, the policy is not fully relevant to projects at subnational levels where such discrimination is less frequently seen.

Financing constraints

A third major issue is that, while there is a large market for commercial financing of small PPP projects below $50 million in some sectors, there are key structuring and credit enhancement requirements, as well as related sector policy and institutional deficiencies that may deter banks from financing these projects on a larger scale. For example, energy efficient street-lighting and other projects have few commercial banks that carry specific lending products and thus little financing is forthcoming. Therefore, the scale of such projects has perforce remained small as these are currently fully equity financed. While there are scattered efforts to enable credit enhancement of PPP projects through guarantees and other instruments, these are either not well developed enough, not widely available, or not accessible to specific sectors or specifically to small projects per se due to associated rules and guidance that are customized for larger projects. In addition, banks often have smaller limits on debt or also require collateral from smaller investors to the tune of almost 100-150% of the debt, creating an impediment to the development of the market for project finance for small-scale PPP projects in developing countries.

Low capacity in local institutions in the public and private sectors

There is a need for capacity building in almost all the entities involved in small PPP transactions in order to enable them to carry out their specific roles in PPP development, financing, and implementation. This includes PPP development, procurement and contract management training to local bodies engaged in doing PPP; communication strategies in local bodies with a viable pipeline to enhance the understanding of PPP in small local level investors; and in local banks. Capacity building—which is in the nature of "just-in-time" training designed based on project pipeline requirements and keeping in mind the roles of different entities in these project—is not always available, leading to situations where routine project related activities take a longer time to accomplish.

Recommendations

The conclusions derived from specific experience in the projects examined in conjunction with their associated environments point to two potential levels of further work for the client countries and multi-lateral development institutions like the World Bank:

- Immediate work focused specifically on small-scale projects that will get quick wins
- Slower but more embedded work focused on the larger environment for small PPPs

The latter can be undertaken as part of the general work on strengthening the environment for PPPs over the medium and longer term.

Some specific areas where there could be more immediate results with relatively lower levels of investment are discussed below.

- **Upstream institutional structures and processes**: This includes examining current procedures and processes, identifying gaps, and streamlining the different phases in the implementation of small-scale projects from conception through development, appraisal, approval, and procurement. It entails examining a separate framework including simpler institutional structures for processing projects as well as the creation of standard procurement and contract documents and templates to reduce the time and costs involved.

- **Sector policy and regulation:** This consists of country-level work exploring identified emerging sectors with regard to the current status of sector regulations, appropriateness or adequacy of the regulations for small-scale projects, identification of gaps, outlining/drafting modifications or new regulations, sector guidance and tariff policy,.

- **Support for financing of PPP:** This includes an examination of available government support mechanisms for small-scale PPP projects, designing modifications to available mechanisms and instruments, and exploring and outlining possible new mechanisms and instruments customized to small projects and to sectors where such projects are more common. Focused work on the creation of funding and credit enhancement facilities customized to small-scale urban and rural projects can help expand the pipeline in a very short space of time.

- **Focused capacity building**: Focused capacity building at subnational levels with all entities involved in the PPP process, with particular focus on project development, implementation and contract management skills of subnational staff, small project appraisal skills of local commercial bankers and targeted workshops/communication campaigns focused on increasing knowledge of PPP among potential private investors would help enhance the quality of projects entering the pipeline and improve project processes.

Reforms to financial regulations and the strengthening of capital markets are among the longer term measures that need to be undertaken as a part of general strengthening of infrastructure finance; these exercises need to retain a deliberate focus on the small-scale project segment. In addition, the institutional and financial strengthening of subnational bodies—already a part of the work of several World Bank Group units—could be taken up with special focus on those countries and entities that present scope for PPP implementation.

1. Introduction

1.1 **While global attention has been on large nationally important transport PPP projects, subnational governments at the provincial and local levels have increasingly turned to PPPs for the provision of essential services.** These include PPP projects in sectors like solid waste management, community/public toilets, water supply, energy-efficient street-lighting, primary health care, municipal parking, municipal parks and empty spaces, accommodation to students, and grain storage. These services, if delivered well, can have a transformative effect on the lives of citizens. Potable water, sanitation, and waste disposal projects improve local health conditions, increase life expectancy and quality of life, and reduce the duration of sickness and recovery. Rural farm-to-market roads, bridges, warehouses, cold storage, silos, and pedestrian overbridges can transform villages and towns once cut-off from mainstream economic infrastructure. These projects can also have direct implications for the local economy in terms of improving competitiveness by reducing health costs and raising labor productivity, among other things.

1.2 **The positive impacts of small projects in various sectors could be substantial given the large numbers of people affected by the lack of access to basic infrastructure and services.** In 2012, about 2.5 billion people globally did not have access to sanitation.[1] Lack of sanitary landfills and unscientific design of landfills are considered to be responsible for leachate contamination of water sources of towns and cities[2] having major impacts on the health of the population. In terms of post-harvest food grain losses, the estimated losses across countries are between 10–30% of total production. A 2007 study estimated up to $4 billion in post-harvest losses in Sub-Saharan Africa alone; this is equivalent to the annual calorific requirements of 48 million people.[3] Small PPPs are more attractive and available for small investors, in particular local companies, providing new opportunities for local jobs and investment. Small PPPs are more available for local financiers, in particular banks, giving rise to opportunities for the local financial sector with no foreign exchange risk with foreign debt for the project. In addition, small PPPs, being local in nature, are also closer to the end users, and therefore may be better designed to deliver on their needs,

1.3 **These projects may, however, present some intricate and difficult challenges unique to them as compared to larger projects of a similar nature.** While the benefits of these projects are undeniable, few have been undertaken relative to the substantial requirement. The reasons for these being less common could include issues relating to government processes and procedures, impediments in sector policy and regulation, high transaction costs, lack of public and private sector capacity, or constraints in financing due to the risk profile of projects as well as the credit profile of the subnational entities sponsoring these projects. Small-scale PPP projects may show variations based on a host of variables and, therefore, may not be fully amenable to standardization in costs or structure beyond a certain point. On preliminary examination, though, there seem to be common constraints in structuring such projects that would need to be looked at more closely with the objective of finding ways to support their growth and sustainability.

1.4 **The Investment Climate Unit of the World Bank Group (WBG) has undertaken a quick overview of global experiences in small-scale PPP projects in order to identify broad patterns that can help inform the direction of further work in the area.** The PPI database and some larger databases from countries with substantive PPP programs have been examined broadly for trends

[1] World Health Organization. *Millennium Development Goal Fact Sheet 7*. http://www.un.org/millenniumgoals/pdf/Goal_7_fs.pdf
[2] World Health Organization.
[3] Morgan, Nancy; Larson, Gunnar. 2011. *Missing Food: The Case of Postharvest Grain Losses in Sub-Saharan Africa*. Agricultural and Rural Development Joint Note No. 56. Washington, DC: World Bank. http://documents.worldbank.org/curated/en/2011/05/15283304/missing-food-case-postharvest-grain-losses-sub-saharan-africa

associated with small-scale PPP projects. Ten projects have been examined in some more detail in terms of project characteristics and issues of interest. In addition, the preliminary review has been informed by discussions with practitioners familiar with small projects inside and outside the WBG.

2. Scope and Methodology

2.1 **The scope of this review is limited and relies on a high level non-statistical methodology.** The review is based on desk research and consultations with practitioners in client countries and staff involved in the provision of financing or transaction advisory services to small-scale PPP projects. The review does not rely on the selection of a scientific sample, given the low level of information available on small projects in non-traditional sectors as well as the limited objective of the review, which is to come to preliminary conclusions on small-scale projects solely with the purpose of informing further detailed work in this area

2.2 **Small projects are not easy to define.** Usually a rigid cap or ceiling for what can be considered a small-scale PPP may not be practical. In addition, several small projects when bundled together could be perceived as a large project and no longer fit into a definition based on size/value, but the larger project could still continue to retain several of the characteristics of its constituent projects. In addition, the definition of "small" is relative and could differ depending on the size of country, density of population and other factors. However, given the need to have a structure and better focus for the review, a limited sub-set of PPP projects was considered. Based on discussions with several practitioners familiar with the PPP landscape, only projects $50 million or below in terms of total project value have been included. The examination of the PPI and other databases has relied on this definition of size.

2.3 **Water and energy sector projects are not the focus of this review.** The existing literature on small-scale PPP projects was examined in some depth with the finding that studies on projects in the water and energy sectors abound over the last two decades However, there have been relatively fewer studies in other sectors associated with small-scale projects. Given this position, the review excluded energy and water projects, with the exception of solar PPP projects that are just beginning to take root and have some interesting lessons to offer, and energy efficient street lighting projects that do not strictly fall into the energy sector.

2.4 **Small projects from traditional sectors have not been included in the review.** It was observed in the preliminary literature search and the analysis of project databases that several conventional projects appeared to be relatively small in small states, including island states, due to their small populations and geographic size. However, these projects differ from most small projects in non-traditional sectors elsewhere in terms of project profiles and characteristics and, as such, have not been included in this review.

2.5 **Ten projects have been selected and examined for the purpose of this review**. The tenprojects were selected from the landscape of small projects that remained globally after application of the exclusions described above. These projects have been selected based on the ease of availability of information rather than through the use of any scientific methodology. The number of non-water, non-energy small projects was found to be larger and growing quite rapidly in the South Asia region, specifically India; therefore, we have a selection of six projects from India. In addition, there is one project each from Kenya, Lesotho, South Africa, and West Bank and Gaza

2.6 **Information on a few areas of focus has been collected from each project and a limited number of countries.** While not all the information on every project was convenient to find or forthcoming,

the following key questions formed the basis of information collection and are broadly covered in the rest of this paper:

Global trends in project size

- PPI aggregate database: Which countries, regions, and sectors are good examples for small projects?
- What do country level databases say on project size and sectors?

Institutional and policy frameworks

- Are small projects defined in countries in any way?
- Are there separate institutional and policy frameworks for small projects? What are the processes for approvals and procurement? Have simplified and "fast-track" approaches been adopted? Are standard documents available?
- Has bundling of projects been used as an option? How are multi-jurisdictional issues being treated in bundled projects?

Financing and structuring issues

- What kind of PPP modes are being used for small PPPs (BOT, BOO, management/ performance contracts)?
- What is the profile of the investors who have been participating in the bids (local versus foreign; small versus large)?
- What are the major issues in financing? Has there been an attempt to use wholesale platforms to take groups of similar projects to market? Are there any regulatory impediments in financing these projects?
- Have these projects often needed to be supported by government? How well have instruments of support been defined? Are there mechanisms in the country for pooling the risk of sub-national projects, or are credit enhancement techniques available?

Capacity: public and private

- What are the specific capacity issues—for public as well as private entities—that would need to be taken care of in order to have more and better structured projects?

3. Review of Global Trends

PPI Database

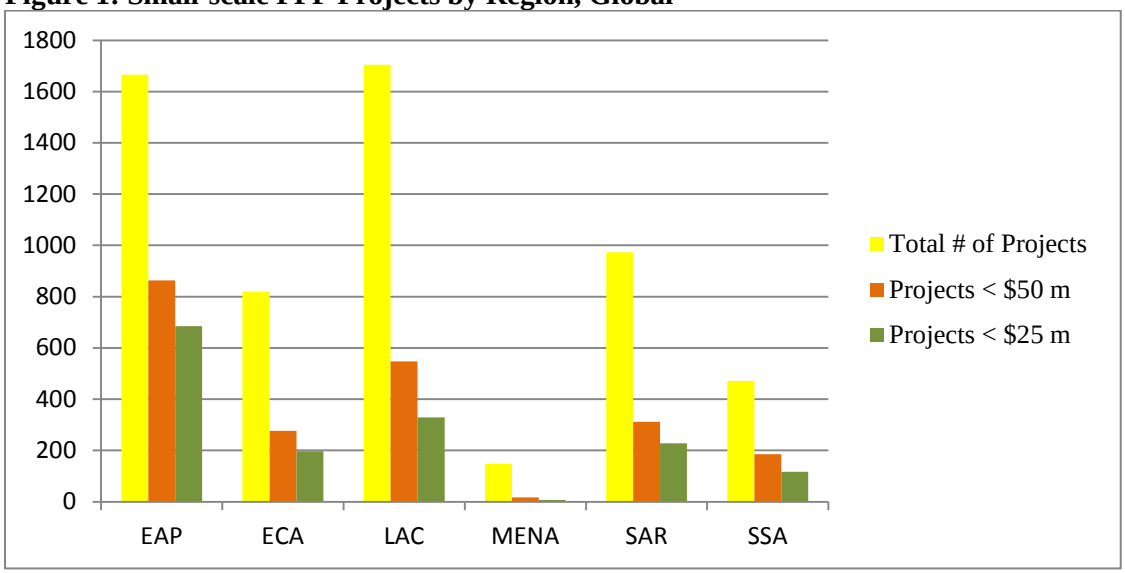
3.1 An examination of the PPI database of the World Bank Group and the PPP databases of some key countries reveals that while there is a preponderance of larger PPPs, several small-scale PPPs have also been undertaken, especially at sub-national levels of government and by autonomous bodies affiliated to governments.

3.2 The PPI database focuses only on four key sectors. Therefore, a large proportion of small-scale projects are from the water and sanitation sectors that are outside the area of our concern. Approximately 40% of all projects are of values less than $50 million, and approximately 25% of all projects are less than $25 million (**1).** The PPI database misses out on projects in other emerging sectors at the sub-national level. While non-traditional sectors are captured to an extent in country and sub-national databases, few of these databases are readily available in the public domain.

Country PPP Databases

3.3 Country-level databases are more helpful as they include all sectors. However, some of these databases, such as India's, are also a reflection of the institutional structure for approval of projects—which may mean that many small-scale PPP projects get excluded from these databases. The PPP databases of India, the UK, Australia, British Columbia, and others were examined where available and the following points give a brief summary of the trends.

Figure 1: Small-scale PPP Projects by Region, Global



Source: PPI Database, World Bank

3.4 India has fewer small-scale projects at the national level given that national projects are mostly concentrated in national highways, major sea ports and airports and the energy sector. Some of the few national level small-scale projects in India are in the tourism, housing, and office space sectors. However, an examination of the Viability Gap Funding (VGF) database (see **Figure 2)** shows a larger number of small state and local level projects. A large number of small projects under the VGF[4] relate to state highways and other smaller road projects, with 23 out of 178 projects being school and silo projects, developed and procured by sub-national agencies within the last couple of years. An examination of state and local body databases reveals that there are several small PPP projects, with the key sectors being solid waste, hospital diagnostics, rooftop solar, information and communications technology (ICT), small bridges, roads, tourism, and school education. Andhra Pradesh, a key PPP state in India has several such projects (**Figure 3**) with sectors as wide ranging as tourism (food courts, beach resorts, budget hotels, and water and sports facilities), urban amenities (shopping complexes, pay and use toilets, health care centers, service centers, multi-level parking, and abattoirs, i.e., slaughterhouses), and ICT projects. While state governments and municipalities in India have used a wide variety of PPP-like modalities to provide services in the past, in recent years there has been a more organized attempt to scale up these experiences and provide central government support to them.

[4] The Scheme for Support to PPPs in Infrastructure also called the VGF Scheme was established in 2005 and has supported several projects, especially at sub-national levels. There are no total project cost caps or thresholds for VGF support in India, unlike in Indonesia where projects below $100 million are viewed to be not viable for support given high transaction costs.

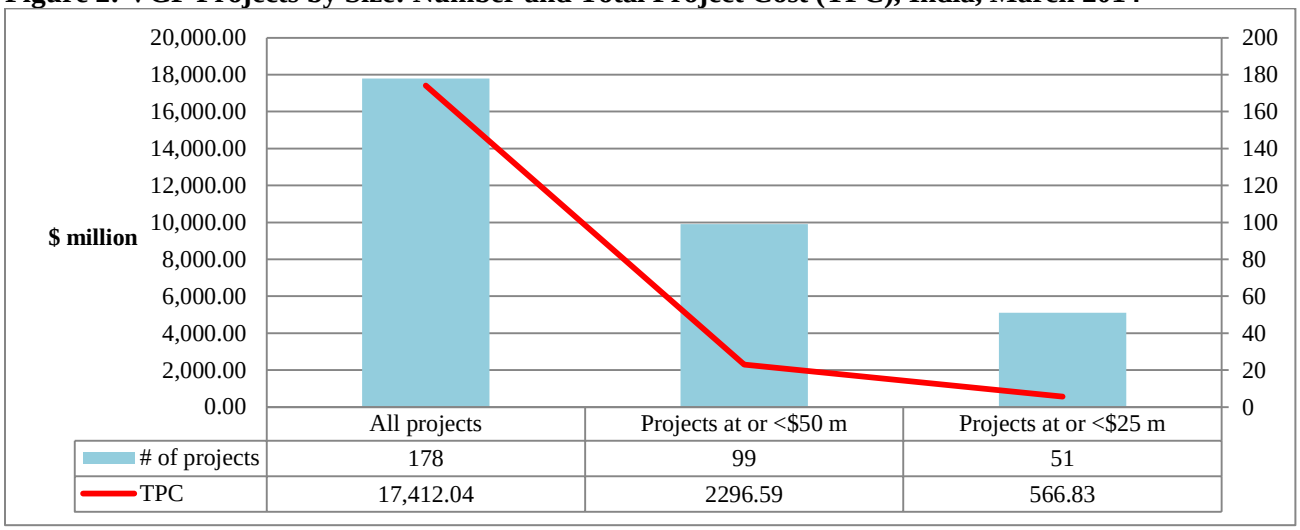
3.5 The UK PFI database shows several projects below £30 million and £15 million **(Figure 4)** in sectors such as education, waste management, street lighting and so on, including a large number of local body projects.

3.6 11 out of 58 projects in Kenya's pipeline of projects for which total project cost data is available and that have received first stage approval[5] of the PPP Committee are $50 million or below in total project cost. These projects are in a surprising variety of sectors: health (oxygen plant, ICT services at the Kenyatta National Hospital, and a 300-bed private wing at Kenyatta National Hospital); university students' accommodation at Kenyatta and Moi Universities; parking (multi-level car parking in Mombasa); small transport (ferry services, ferry terminal, and O&M of road); and airport services (food court, in-flight catering kitchen). Only one of these projects is now in procurement. This particular project is dealt with in more detail in the next section and in the annex.

3.7 South Africa has small hospital and tourism PPP projects along with other very small municipal PPPs that lapsed some years ago. Several landfill, wastewater reuse, solid waste management, resort development, composting, fresh produce market, mixed-use property development, electricity distribution management, housing and shopping mall development PPP assessments are currently being conducted for municipalities all over the country. These have not reached closure yet.

3.8 The Australia PPP database[6] shows that 30% of all projects are $50 million or lower in total project cost (**Figure 5**), with the sectors being quite diverse: construction and maintenance of government buildings, water and waste water, industrial recycling, prisons, hospitals, and student accommodation among others.

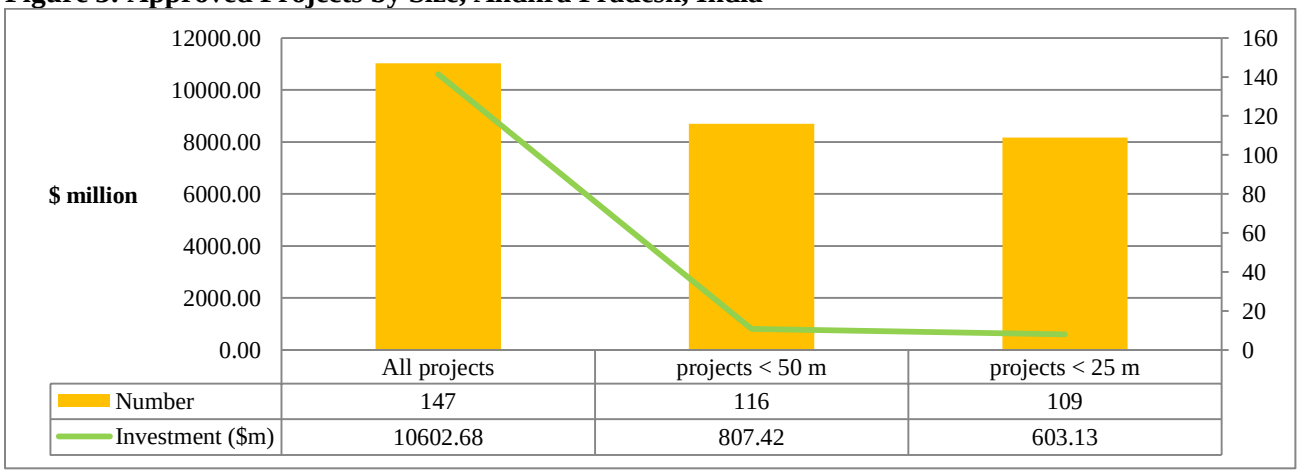
Figure 2: VGF Projects by Size: Number and Total Project Cost (TPC), India, March 2014



Source: Department of Economic Affairs, Government of India

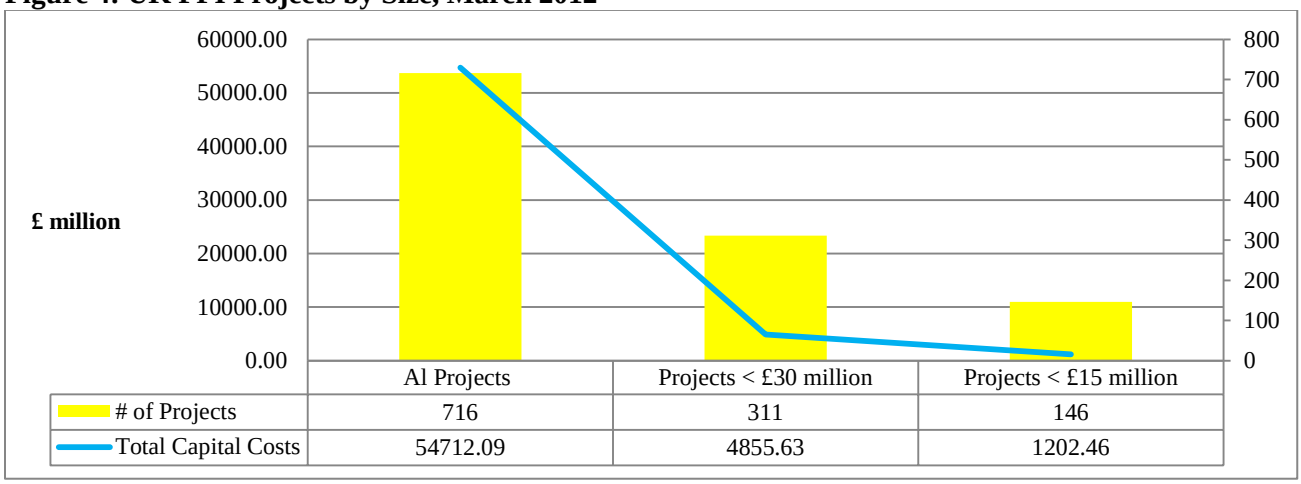
[5] There are three stages of approval followed in Kenya, the first approval being at concept stage.
[6] All PPPs are by definition sub-national entities.

Figure 3: Approved Projects by Size, Andhra Pradesh, India



Source: Ministry of Finance, Government of Andhra Pradesh

Figure 4: UK PFI Projects by Size, March 2012



Source: HM Treasury PFI Database

Figure 5: PPP Projects in Australia by Size

Source: PPP Database, Australia

3.9 **To get a better sense of how small projects are being structured, what institutional and policy issues characterize these small projects, and the constraints in financing and capacity, ten small-scale projects were examined**. Of these, three projects are from Africa (Kenya, Lesotho, and South Africa); one is from the Middle East and North Africa region (West Bank and Gaza), and six are from India, which seems to have a high prevalence of small-scale projects. Key information on these projects has been captured in the Annex. Some broad features seen in these projects are summarized in Table 1 below. Similar to PPPs in general, there are essentially three overlapping types of small PPP projects:

- Projects based on availability payments that require more credit enhancement mechanisms to overcome the poor creditworthiness of local governments and the lack of capacity in local banks to assess such projects;
- Projects based on revenues from user charges, property development, etc., which require complex structuring;
- Projects based on donor support (in particular funding towards capital contributions, and upstream and mid-stream preparatory work) that overlap with the first two categories of projects.

The next few sections contain a more detailed analysis of the institutional and policy issues, and financing and capacity constraints observed in the projects examined.

Table 1: Basic Characteristics of Small Projects in Various Sectors

Project	Sector	PPP Type	Value	User Charges/ Government Support	Financing	Local/ Foreign Investor	Distinct Approval Process
Kenyatta University Students Hostel	Accommodation	DBFOT	Estimated at $50 million	User charges, 80% occupancy guarantee by authority	Debt and equity	Local	No
Palestine Solid Waste Project	Solid Waste Management	Operation and maintenance contract	-	Local body payment supported by GPOBA	Debt and equity	Foreign	No
PURA	Rural Integrated Infrastructure	BOT/ BOO combination based on activity	$25 million	User charges on certain services, government subsidy of up to 30%	Debt and equity	Local	Yes
Gandhinagar Rooftop Solar	Non-conventional Energy	BOO	$9 million	Private Distribution Company buys entire power; government provides part of rooftop space	Debt and equity	Local	No
Street Lighting Bhubaneswar	Urban Amenities	Performance based O&M contract	$4.8 million	Local body pays fee from energy savings	Equity	Local	No
Punjab Grain Silo	Agricultural Storage	BOO	$7 million	Fixed charges paid on guaranteed storage	Debt and equity	Local	No

Project	Sector	PPP Type	Value	User Charges/ Government Support	Financing	Local/ Foreign Investor	Distinct Approval Process
Berhampur Solid Waste	Solid Waste Management	BOT	$10.3 million	Output based payment by local body, grant and loan from OUIDF	Debt and equity	Local	No
Upgrading Radiology Services	Health	BOOT	$7 million	Government pays for referral patients, user charges for private non-referral patients	Debt and equity	Local	No
Lesotho Health Care Waste Management	Health/ Environment	Management contract	-	Government pays; lump sum fixed by bid	Debt and equity	Local and foreign	No
Cape Nature (De Hoop) Tourism Project, South Africa	Tourism	Concession	$4 million	Concessionaire pays lump sum to government, variable fee on top if demand exceeds a pre-agreed level	Equity	Local	No

4 Institutional and Policy Issues

Definition of Small Projects

4.1 **Small projects have not been specifically defined in countries in terms of value, technical complexity, or population served, or by other characteristics.** However, institutional frameworks and processes in countries do help to define the thinking on what a small project is in several countries. For example, in India the approval process may vary based on the project sponsor; i.e., whether it is a national or subnational entity, what the project size is, or whether it is a special project under separate guidelines. South Africa has a distinct framework for municipal projects, many of which are likely to be smaller in size. In Indonesia, the government has a threshold of $100 million for projects to enter the zone of consideration for viability gap funding support from the Ministry of Finance;[7] anything below this level is not considered feasible for VGF given the high transaction costs. However, the general approval process for all PPP projects remains the same and is not distinguished based on project value, sector, or other characteristics in Indonesia. These differences in institutional structure for different categories of projects could help define small projects to an extent; i.e., small projects are more likely to be subnational projects and in non-traditional sectors. In the UK, HM Treasury guidance suggests careful scrutiny over value for money for smaller projects with the suggested threshold being £20 million.

Institutional Structures and Processes

4.2 **While there may not be much available in terms of separate institutional or policy frameworks for small-scale projects in general, for subnational projects there appears to be a different**

[7] Ministerial Decree No. 223/2012 (PMK 223/2012) on Viability Gap Fund, Government of Indonesia.

structure in countries with strong subnational entities. In India, a strong federal structure means that there is a clear bifurcation between national level, and state and local level projects with a completely distinct approval process for these. In addition, national level small projects have a fast track process for approvals at lower levels of government based on project size. Smaller projects are approved by the Standing Finance Committee (SFC)Expenditure Finance Committee (EFC) or by circulation in an inter-ministerial committee. Subnational projects do not need the approval of the Public-Private Partnerships Appraisal Committee (PPPAC), which is constituted at the national level. Each state in India has its own institutional framework with projects up to a certain fixed size being approved by a committee usually headed by the Chief Secretary of the state. In addition, India has a special framework for the processing and approval of rural multi-sectoral PPP projects where the Gram Panchayat[8] is the contracting agency. Apart from distinct guidance for structuring these projects, there is also a completely separate inter-ministerial committee constituted within the Ministry of Rural Development that appraises and approves these projects without recourse to the PPPAC, with the relevant state governments and local bodies also involved in the process.

4.3 **In South Africa all approval processes are undertaken at the municipal level for tourism projects with an estimated capital value of up to R10 million[9] while the normal PPP processes apply to projects greater than R10 million.** Since these guidelines were adopted in 2005, the cap has been found to be too low, especially considering that only one project has been approved using the small cap process. In addition, guidelines have been developed for South African National Parks (SANParks) for the development of Community-Public Partnership arrangements to allow communities adjacent to the National Parks to contract for economic developmental activities within or adjacent to the parks. Normal open tender procurement processes as provided under National Treasury Regulation 16 need not be followed for these small projects.

4.4 **However, several countries have the same approval process for all PPP projects irrespective of size or type of project.** In Indonesia, several small water projects are being undertaken by municipal bodies. While these are outside the scope of this review, one of the major lessons in Indonesia is the long processing time for even small projects, given that all PPP projects have to go through an elaborate approval process regardless of size. While projects below $100 million are considered unviable for processing under VGF due to high transaction costs, no alternate arrangement seems to have been made for the appraisal and approval process of these projects. Kenya is another country where all projects are subject to a uniform approval process. Currently, the Government of Kenya is considering placing a threshold for entry of projects into the three-stage approval process.

4.5 **Small projects face lengthy procurement processes, complex legal and technical documentation and due diligence requirements similar to those for large projects in most jurisdictions.** HM Treasury carried out an assessment of small capital value projects under £20 million in 2003 using a sample of 35 projects. While the performance of the small projects was found to be as good and in many cases better than large projects, average procurement time was around 2–2.5 years, which was similar to that of large projects. Moreover, small projects had transaction and bid costs that were similar to those of large projects for bidders as well as the authority due to the same complicated legal and technical documentation and due diligence as required for large projects.[10]

4.6 **Increasingly, countries appear to be realizing the need to build new models and structures for small PPPs where smaller investors or community groups are likely to have a greater stake.**

[8] Elected body at village level.
[9] Approximately $1 million.
[10] HM Treasury. 2003. *PFI: Meeting the Investment Challenge*. London, United Kingdom: HM Treasury. http://webarchive.nationalarchives.gov.uk/20130129110402/http://www.hm-treasury.gov.uk/media/F/7/PFI_604a.pdf

Similar to the South African model for SANParks, Brazil has recently initiated work on environmental PPPs. The Multilateral Investment Fund (MIF), the Chico Mendes Institute for Biodiversity Conservation (ICMBio), and the Brazilian Institute of Municipal Administration (IBAM) have collaborated to build innovative PPP models for the protection of environmental assets in federally owned Conservation Units. However, so far PPP models in Brazil, as in other countries, have catered mostly to large projects with models that facilitate the participation of larger firms in financing and operations.[11]

Standardized Documents

4.7 **Separate standardized documents for processing small projects are not common.** Smaller PPPs are more frequently found in the solid waste, street lighting, small energy, water, storage, and multiple other sectors as seen in the earlier section on global trends. The general trend has been to use the documents developed for the first project as standard documents for subsequent projects.

4.8 **Standardized documents seem to be prevalent in countries like India, in sectors where geographic and specific local factors influence contract structure to a lesser extent**. India has a few examples of standardized contract documents for small projects. The Planning Commission of India is working on finalizing the standardized contractual document for grain silos. Ten grain silo complexes have recently been bid out by the Madhya Pradesh Warehousing and Logistics Corporation (MPWLC). Similarly, the Food Corporation of India (FCI) has created a standard contract based on which it is carrying out the procurement of grain silo complexes under the DBFOT model at 36 locations in several states across India. The PURA PPPs in India also have their own standard concession contract in three parts and the standard state support agreement, which are being replicated in all projects with some modifications. The PURA standard concession document has a distinctive feature given the low level of capacity in the contracting agency, the Gram Panchayat. The concession contract is divided into three parts with the first part dealing with the specific project features and the other parts being generic legal clauses and schedules. Part II of the Concession Agreement is negotiated by the Ministry of Rural Development (MoRD) given the low level of legal capacity of Gram Panchayats, while the Gram Panchayat is involved in discussions on specific project features, performance indicators and targets that are included in Part I of the Concession Agreement. The existence of the standard contract has enabled the government to invite bids in groups of several projects under Phases I and II of PURA.

4.9 **South Africa has detailed guidelines for processing municipal projects.** These guidelines, however, are uniform to all projects and do not discriminate between large and small projects, although municipal projects, except in metro areas, tend to be smaller in size. South Africa's municipal guidance has not reduced complexities associated with the approval process as these projects still need to comply with National Treasury Regulation 16.

Bundling and Multi-jurisdictional Issues

4.10 **An area highlighted by practitioners was the bundling of smaller projects into larger ones in order to improve scale and viability, make these more attractive to larger players in infrastructure and to enable better financing options.** For example, states in India are looking at bundling smaller solid waste, street lighting and health diagnostic projects in order to improve scale and viability. Among the nine projects examined as part of this review, there is bundling in five projects: the Gujarat rooftop solar projects, the PURA projects, the Lesotho Health Care Waste Management project, the Palestine Solid Waste Management project and the Andhra Pradesh Health

[11] Multilateral Investment Fund.

Diagnostics project. In all of the aforementioned projects except the Palestine Solid Waste Management project, bundling was not associated with multiple jurisdictions. In the case of the Palestine Solid Waste Management a Joint Services Council was formed, which became the public authority that signed the agreement with the private party. In a recent solid waste project jointly undertaken by the cities of Bhubaneswar and Cuttack in the state of Odisha in India, the two local bodies went ahead with a single aggregated bid process. While one bidder was selected, separate contracts were signed with each municipal body.

4.11 **An example of aggressive bundling is the program designed by the Pennsylvania Department of Transportation aggregating the construction and maintenance of a few hundred of small bridges into a single PPP project under its old bridges rehabilitation program.** The average cost of the individual bridges is as low as approximately $2 million, which would not make for a viable single P3 project. In this case too, multiple jurisdictions were not involved.

4.12 **The Tamil Nadu Road Development Company in India is also engaged in bundling of road maintenance projects to improve scale and attractiveness of relatively smaller roads to the private sector.** These are projects where the government has already completed construction but is looking for a partner for operation and maintenance of the project.

4.13 **In the United Kingdom, Partnerships for Church of England Schools (PfCS) was created to bundle several small schools with a new built capital cost of around £2 million into "geographically coherent" groups in order to facilitate the procurement of the private partner**. At around the same time, the United Kingdom had also created the concept of "batched acute hospitals" where major acute hospital projects were bundled together for the purpose of procurement but with separate contracts being signed, given different risk allocation needs.[12]

4.14 **The Philippines PPP for School Infrastructure Program (PSIP) involved the bundling of a few thousands of sub-projects consisting of the construction of classrooms and toilets, and supply of furniture and fixtures at various school sites into PPP packages** for being bid out on Build Lease Transfer (BLT) basis.

4.15 **Bundling across jurisdictions may result in problematic jurisdictional issues and may require a high level of harmonization and standardization.** Several states in India have failed to achieve success in structuring single multijurisdictional projects due to a failure to satisfactorily sort out tariff and risk issues.

4.16 **Bundling for procurement with separate contracts could streamline procurement and reduce costs for the bidder as well as the authority.** According to a case cited in the UK, bid costs as a proportion of capital value of a project could be as much as 33% lower for a £50 million project as compared to a £20 million project.[13] On the public sector side, aggregating projects for project development and procurement results in decreasing costs given that the same standard procedure is followed and the same draft documentation is used for all projects in aggregate, rather than repeating the process for each project separately. It also lowers the time taken to procure projects.

[12] HM Treasury, *supra* at note 13.
[13] *Id.*

5 Financing and Government Support

PPP Type

5.1 **In general, there is no specific PPP type that characterizes all small projects.** Small projects were found to be on the entire spectrum of PPP modes, ranging from management contracts all the way to concessions, with BOT and BOO PPP projects being common. The payment mechanisms are what distinguish many of the smaller projects from the larger ones. The payment mechanism usually depends upon the sector characteristics. In sectors like solid waste management and rural multi-sectoral infrastructure (e.g., PURA), projects are mostly net cost projects, with the government paying the private party to provide the services to the public. In PURA projects, for example, the standard contract allows for the levy of tariff for the services; however not all project contracts have followed this levy. In solid waste management projects, some local bodies levy trash collection or other charges on the population of the city that are, however, rarely cost covering. In solar rooftop energy projects and silo storage projects in India, the government buys the service or product fully. In accommodation projects for students, there is some amount of government subsidy but a larger proportion is acquired through rental income paid by the users.

Investor Profiles

5.2 Investors in all the projects examined except the Palestine Solid Waste Management project were local investors, mostly small to medium sized, with a relatively lower level of previous experience in PPPs. In addition, the net worth of some of these investors was relatively low, thus limiting their ability to simultaneously take on several projects in an area. However, where governments have bid out projects simultaneously giving the option to bidders to bid for multiple projects, as in the case of silo projects in the Indian state of Madhya Pradesh, which structured and bid out 10 silo projects simultaneously, and the case of the Food Corporation of India (FCI), which is bidding out silo projects at 36 locations, several large firms with higher financial capacity as well as greater experience in the sector and in implementing PPP projects have entered the market. In the case of the MP silos project, Adani Enterprise, a part of the Adani group of companies with investments in various infrastructure sectors as well as storage and logistics, has been the winning bidder in 7 out of 10 projects that were bid out. The observations are similar in the case of multiple PURA projects being bid out by the Government of India. Governments are trying to bundle other projects such as street-lighting projects across different cities in order to attract bigger and more substantial investors as well as to attract debt financing from financiers. It is observed from examining the evaluation criteria for firms in the case of the MP silos project that the authority has adopted a balanced approach in procurement with sector expertise as well as PPP expertise being considered for selection of firms. In the case of the West Bank and Gaza Solid Waste Management Project, a foreign firm with expertise in the area of waste management has been selected; there were no domestic firms that had any substantial experience in this area.

Financing Constraints

5.3 **Smaller projects appear to have a host of financing and structuring issues.** The public entity in almost all the projects examined had to play a proactive role in facilitating financing. The projects also needed substantial government support in order to become bankable.

5.4 **Local bodies undertaking small-scale PPP projects are frequently characterized by inadequate fiscal resources**. Most projects out of the sample of ten small-scale PPP projects examined were net cost projects for government; i.e., the government needs to pay a substantial proportion of the costs through availability or output based payments. In some of the cases examined, the local body did not

have the financial capacity to make the payments on its own and needed help from sources external to its routine budget, such as from the GPOBA and VGF.

5.5 **Issues of credit-worthiness also plague local bodies. The lack of credit-worthiness of the local body affects the availability of finance for PPP projects sponsored by it.** The guarantee of a local body or even termination payment provisions in contracts where the local body is the contracting authority does not amount to much if its fiscal position is doubtful. In the late 1990s the Government of India had, with assistance from a USAID project, worked on an exercise of developing a credit rating methodology for municipal bodies, and an initiative for rating these institutions was undertaken by the Ministry of Urban Development. The exercise helped several local bodies adopt better financial management systems and to issue bonds for infrastructure.

5.6 **There is a shortage/ non-existence of financing from local debt markets for small-scale projects.** While bond financing is somewhat forthcoming in recent times for some of the larger PPP projects of national importance, commercial bank financing is frequently the only source of financing for small-scale projects. In addition, there is no true project finance in countries, with the investors having to produce collateral that may be equal to or higher than the debt issued.

5.7 **Bankers do not understand small-scale projects due to a lack of experience with similar projects, and a lack of frameworks or standard documents that are well known to them**. With each small project coming with its own distinct and different contract and risk characteristics, and with there being a lack of sufficient numbers of projects, bankers are also averse to building appraisal and due diligence skills for such projects. Often, bankers may not have a lending product for a sector or particular type of small-scale project. For example, in the case of small-scale energy efficiency projects in India such as street-lighting projects, only one financier with the required lending product exists; this entity has equity participation by IFC.[14] The Government of India is now trying to create a project financing market for such projects through the use of a Bureau of Energy Efficiency (BEE) partial risk guarantee instrument, which takes the first loss in the case of default.

5.8 **Single and group borrower limits have created constraints in financing projects, large and small alike, but often smaller projects are affected more as the investors are small or medium net worth firms with smaller borrowing limits.** In most cases, private developers need to approach a number of banks in order to get financing even for a small project. In some cases, this has led to full equity financing for projects, such as in the case of the Bhubaneswar street lighting project and small water projects in Indonesia.

5.9 **While lease financing can help in bringing finance and implementation together by leveraging the different capacities and skills available in the market, there could be impediments to the use of such platforms in some countries.** Lease financing is widely used in Mexico and other countries in the Latin America region. Lease financing can enable the long-term financing and implementation of several smaller projects more easily and at lower cost than traditional commercial bank lending. Countries like India face regulatory constraints in the use of lease financing and rely mostly on a trust fund structure. Practitioners have cited the existence of a large untapped potential market for lease financing in India that can be encouraged by easing some of the associated regulatory constraints.

5.10 **The costs involved in retaining transaction advisors to assist in the preparation of projects at subnational levels are relatively high and sometimes unaffordable.** This is especially so in the

[14] Tata Cleantech Capital Limited (TCCL) is a JV of the Tata Capital Limited and the IFC. It provides financing products for energy efficiency projects in India.

case of municipal entities since these are already constrained financially in most cases. In the projects examined where IFC acted as transaction advisor, it was observed that several projects obtained initial project development funding from DevCo or from bilateral or other funding agencies. India has the India Infrastructure Project Development Facility (IIPDF) implemented by the Department of Economic Affairs in the Government of India, which is a fund designed to help in financing transaction advisory costs and can be utilized by national as well as subnational levels of government. Similar is the case with Pakistan where the Project Development Facility (PDF) and VGF can be used by projects irrespective of the total value of the project. South Africa has a PDF to assist in project development and that has been usable by municipalities since 2006 to defray the costs of project development and feasibility studies. Prior to the PDF in South Africa a similar function to assist municipalities was being performed by the Municipal Infrastructure Investment Unit (MIIU).

5.11 **While it is essential to make project development funding accessible, it is important to note that often small projects also have proportionately higher development and procurement costs that may reduce value for money of these projects.** In the United Kingdom, £20 million have been identified as the floor below which authorities intending to bid out projects are required to ensure that the VfM exercise considers appropriately the proportionately higher costs of development and procurement of these projects in terms of time as well as money.

5.12 **Small projects are likely to show a proportionately larger viability gap due to the higher costs of technical and financial documentation needed as well as the higher risk profile of projects.** As observed in earlier paragraphs, the cost of bidding and preparation of technical, legal, and financial documentation for small projects is often cumbersome and time consuming leading to proportionately higher costs for small projects, further leading to a larger viability gap in proportion to the total capital cost of the project. The nature of services related to most small projects is such that it is not feasible for governments, politically as well as from the point of view of affordability, to increase tariffs sufficiently to cover the viability gap. In addition, investors also add a premium for their higher risk perception.

5.13 **Government support mechanisms exist in several countries for providing viability gap and other forms of support, but these are not specifically designed to cater to small projects.** In Indonesia, for example, the VGF has a threshold of $100 million for any project to be considered for assistance. In India, while the VGF caters to projects irrespective of size, it has a cap of 20%, which is often not sufficient for smaller projects in some sectors such as solid waste and water. Urban Infrastructure Development Funds are an increasingly common phenomenon in countries with some of these providing various instruments of support including credit enhancement as well as senior and subordinate debt at lower than commercial rates of interest. Among the projects examined, the Berhampur Solid Waste Management Project is financed partly by a loan from the Orissa Urban Infrastructure Development Fund (OUIDF). GPOBA has partially financed the Palestine Solid Waste Management Project.

5.14 **The Government of Korea has included clauses in its legislation to enable small and medium enterprises (SMEs) to participate in the PPP process.** The PPP Act of Korea promotes SME participation in projects at local government level through Article 11, which mandates the sponsoring authority to give proper consideration to small and medium enterprises during the process of selection, and also through Article 34, which mandates that SMEs with weak security capacities shall be given priority in the provision of credit guarantees from the Infrastructure Credit Guarantee Fund. Where projects are local government sponsored projects, the PPP Basic Plan Article 124 (3) allows the adoption of preferential measures in evaluating project plans with regard to the ratio of investment by business firms in the local area, the number of investors and the ratio of local small

and medium business firms participating in the project at the stage of construction. In addition, the government also has specific caps based on the type of facility for provision of subsidy to PPPs in the environmental sector, which are in **Table 2** below. Variations in subsidy amounts incorporated into the policy based on project subcategory help in creating the required support for such projects. While environment PPP projects are not specifically small PPPs, many of these tend to be below $50 million. Currently, there are 307 local projects with a total cost of $14 billion, suggesting an average cost of below $50 million.

Table 2: Caps in Subsidies for Environmental PPPs

Resource Recovery Facility	Subsidy rate (% of total project costs)
Incineration facility	30–50%
Incineration heat recovery facility	30–50%
RDF manufacturing facility	30–50%
Landfill gas utilization facility	Fixed amount
Organic waste resource bio-gasification facility	
Food waste bio-gasification facility	30%
Food waste leachate bio-gasification facility	30%
Food waste, live-stock excreta and other wastes bio-gasification facility	70%
Resource recovery facility center (including broadband facilities)	30%

Source: Korea Development Institute

5.15 **A specific constraint associated with several small projects is the high credit risk perception by commercial banks as well as investors and developers.** Revenue recoveries in small projects are associated with a high level of risk due to affordability as well as political economy issues. In most of the projects examined, the payment mechanism consists of availability payments or includes a minimum demand and price guarantee, which should normally take care of this risk perception; however, it is observed that availability based payment mechanisms that take care of the revenue risk do not adequately cover the credit risk (for banks) and payment risk (for the PPP SPV) due to the weak financial position of municipalities. For example, in South Africa, many municipalities spend 85-90% of their revenues on staff salaries. To give a live example of the problems associated with the risk perception of investors: the governments of the provinces of Sindh and Punjab in Pakistan floated tenders for silo projects a couple of years ago with some enthusiasm shown by the investors at pre-qualification stage. None of the pre-qualified bidders, however, submitted proposals. The reason cited for not doing so: the cost of the silo project was too high and the firms feared that the governments involved would not be able to pay the estimated availability payments. Such perceptions of high payment risk could affect the financial feasibility of the project as the case of the Pakistani silo projects shows. In some of the small projects examined, escrow mechanisms have been used to cover the credit and payment risks with at least 3-4 months' worth of reserves being maintained in the accounts, and automatic release followed at designated times; in addition comfort letters from the government have been utilized. However, there are costs to escrow mechanisms—especially opportunity cost issues to keeping money in advance in escrow accounts apart from the fact that the escrow arrangement itself might not be fulfilled in the case of a weak public entity.

5.16 **In order to increase the impact of development financing, several bilateral and multilateral entities seem to be increasingly inclined to invest in projects not singly but through funds that invest in individual projects.** For example, KfW invests in urban infrastructure funds among others, one example in our review of ten small-scale projects being the OUIDF. This holding fund model has been used in energy efficiency financing in Europe widely and holds the key to successfully scaling

up financing focused towards specific types of sustainable development.[15] Another interesting example of the wholesale approach is the Social Innovation Fund (SIF) on which the IDB is working. The concept involves the IDB, bilateral and/or multilateral organizations pooling together funding to invest in country specific SIFs that could further bring in financing from private sources for investing in social impact public private partnership projects through reimbursable and non-reimbursable financing instruments such as grants, loans, and guarantees.[16] While these examples are promising, the requirement for such funds is largely unfulfilled in the countries examined for the purpose of this review.

5.17 **Practitioners also highlighted the need for building specific structures for contract management as well as for management of fiscal commitments and contingent liabilities arising out of small projects.** Small projects on the face of it seem relatively less likely to cause large fiscal commitments and contingent liabilities to governments because of lower values; however, if seen in aggregate and given the higher risk profile of the public entity as well as the private partner, these projects could result in higher than obvious contingent liabilities; given this, the probability that they will fail could be higher than for the typical large transport and energy projects. There were frameworks for contract management embedded in the contracts of the projects examined; there were no frameworks for monitoring or managing the fiscal commitments and contingent liabilities.

6 Recommendations for Further Work

6.1 **Small PPPs are more common in non-traditional sectors.** These sectors, as found in the earlier sections, are characterized by the lack of creation and dissemination of new knowledge, simple institutional structures and procedures, and standardization. This has made replication of these projects slow and painful, and it has also increased the time and cost of processing and has resulted in the lack of proper sequencing of activities. Another area with some scope of improvement is that of specific sector strategies for small municipal projects. Rather than being tackled project-by-project wherever the need arises, it may make sense to prepare specific sector strategies where these do not exist, for sectors like solid waste, parking, or accommodation; in the case of small road and bridge projects, strategy customized to smaller projects to help build a small-scale project pipeline. There is little upstream work available in countries, and there are few standard contracts in these sectors except in India in the grain storage sector where upstream policy has evolved over time and a standard contract is currently being reviewed as well for approval by the Planning Commission. There is also some work done in the solid waste sector across many countries, although rapid scaling up of projects has not been seen due to a plethora of associated reasons. The successes in some of these sectors are probably good for emulation in sectors with scope for quick scaling up.

6.2 **The institutional structure for processing PPP projects from conception through development, appraisal, approval, and procurement stages is not suitable for small projects.** Small projects with much lower capital costs require the same amount of time and similar complicated processes as for larger projects. In fact, given that most of the small projects tend to be subnational projects; several layers of additional approvals pertaining to line Ministry, local body and provincial government are required. Where the institutional structure for processing and approvals does

[15] JESSICA and JEREMIE represent these models and are an initiative of the European Commission in partnership with the European Investment Bank and the Council of Europe Development Bank.

[16] Guaipatín, Carlos. 2013. *How to Promote High-Impact Innovations through Social Innovation Funds: A Call for Public-Private Partnerships.* Discussion Paper No. IDB-DP-319. Washington, DC: Inter-American Development Bank. http://publications.iadb.org/bitstream/handle/11319/6396/CTI%20DP%20How%20To%20Promote%20High-Impact%20Innovations%20through%20SIF.pdf

discriminate based on size or other attributes, as in the case of India or South Africa, it is still not fully customized to the needs of small projects.

6.3 **In terms of financing, there is a large market for commercial financing of small PPP projects below $50 million in some sectors, but most projects examined presented key structuring and credit enhancement requirements as well as related sector policy and institutional deficiencies that have the potential to deter financing of similar small projects on a larger scale.** Small projects in some sectors are currently fully equity-financed due to there being no suitable lending products or due to a lack of capacity and information in banks to carry out due diligence. Current credit enhancement instruments are scattered or inaccessible to all sectors.

6.4 **The capacity to carry out their specific roles in PPP development, financing, and implementation is sorely deficient in almost all the entities involved in small-scale PPP transactions.** There is a preponderance of "just-in-case" training, but more focused process and activity related "just-in-time" training is largely unavailable.

6.5 **There is a need for further work on two levels: immediate work focused specifically on small projects that will help in quick wins; and slower, and more embedded work in countries focused on the larger environment for small-scale PPP projects.** The latter can most preferably be undertaken as part of the general work on strengthening the environment for PPP over the medium to the longer term in countries and therefore, is outside the scope of this review. Reforms to financial regulations and the strengthening of capital markets are among the longer term measures that need to be undertaken as a part of the general strengthening of infrastructure finance, with the requirements of small projects being kept in mind. In addition, institutional and financial strengthening of sub-national bodies—already a part of the work of several World Bank Group units—could be taken up with special focus on those countries and entities that present a scope for PPP implementation.

6.6 **Areas where there could be quick results forthcoming with minor investments in effort and money can be initiated early.** These areas are listed below:

Institutional and policy work targeting small projects: This includes upstream institutional and process level work to smooth out the different phases of small project implementation from conception through development, appraisal, approval, procurement, and contract management. This entails examining a separate framework for small-scale PPP projects and the creation of standard procurement and contract documents, and templates for other intermediate processes. This could be done through the preparation of separate regulations for small-scale PPP projects including these various components. In addition, it would be useful to look at having a repository of all small scale knowledge and capacity such as within the PPP unit in a Small PPP Cell or Sub-Unit. There are several such different mechanisms that can be explored. However, the break-up of the components that are recommended for development as a complete tool or standardized guidance for small projects is as follows:

- **Fast track development and approvals process:** This will include the development of simple institutional structures for developing, processing, approval and procurement of small-scale projects at sub-national levels.
- **Fast track payments process:** This entails looking in-depth at the processes in current small-scale PPP projects for making payments (availability, construction grant, other) and providing a streamlined process with minimum lags.
- **Development of standard procurement and contract documentation:** This will consist of the development of the following standard documents for key identified sectors: conception

report / business case for first approval, detailed project appraisal documentation, contract documents, EoI/RFQ, RFP, performance reports, etc., based on lessons learned from initial cases to facilitate scaling up.

- **Measuring and managing fiscal and contingent liabilities at municipal and aggregate levels:** While many countries do not have a framework even for larger PPP projects, it would make sense to develop these procedures for managing risk of the small-scale PPP projects including standard frameworks, operating manuals and step-by-step how-to-do-it case studies to assist practitioners.
- Harmonizing upstream policy, differing policy regimes and tariff processes prevalent in different sub-national entities, especially in smaller local bodies where projects might have viability issues due to scale.
- Monitoring & Evaluation and contract management processes.

Sector analysis and reform targeted at sectors that feature small projects frequently: This would include country-level work exploring specifically identified emerging small sectors with regard to the current status of sector regulations, appropriateness or adequacy of the regulations for small PPP, identification of gaps, outlining / drafting modifications or new regulations, sector strategy, sector guidance and tariff policy, among other things. While these sectors would differ based on country and region, some frequently seen sectors are listed below. There is existing sector work in some of the sectors, as well as tacit knowledge that would need to be externalized and consolidated. Some sector prioritization may, however, be needed for sector analysis related work as PPPs are expanding to many sectors. There could be a focus on urban or semi-urban infrastructure services that could be more easily replicated when combined with a solution to credit worthiness issues.

- Urban amenities: multi-level parking, solid waste, medical waste, road, streetlight installation and maintenance, parks development and maintenance, health and education.
- Small roads within provinces
- Urban/ city roads
- Small bridges
- Abattoirs
- Tourism
- Accommodation
- Using urban spaces / rooftops for solar energy generation

Support for financing small-scale projects: This would include an examination of available government support mechanisms, the efficiency or otherwise of available frameworks and instruments to cater to small PPP projects, identification of gaps, designing modifications to available mechanisms and instruments, and exploring and outlining possible new mechanisms and instruments; including the examination of roles that multilateral development banks like the WBG can play in these. Some specific areas of work are listed below:

- **Focused work on enabling more commercial bank financing of small projects:** Given that small projects may not be amenable to project-by-project bond financing, and commercial bank financing may continue to be a key source of financing for small projects in the short to the medium term, it is clear that debt funding by banks needs to be increased and streamlined substantially over the immediate future. This can be done through innovative contract clauses to reduce credit risk, funds for support including credit enhancement (see below) and building capacity within commercial banks to understand small projects and their risk profiles.

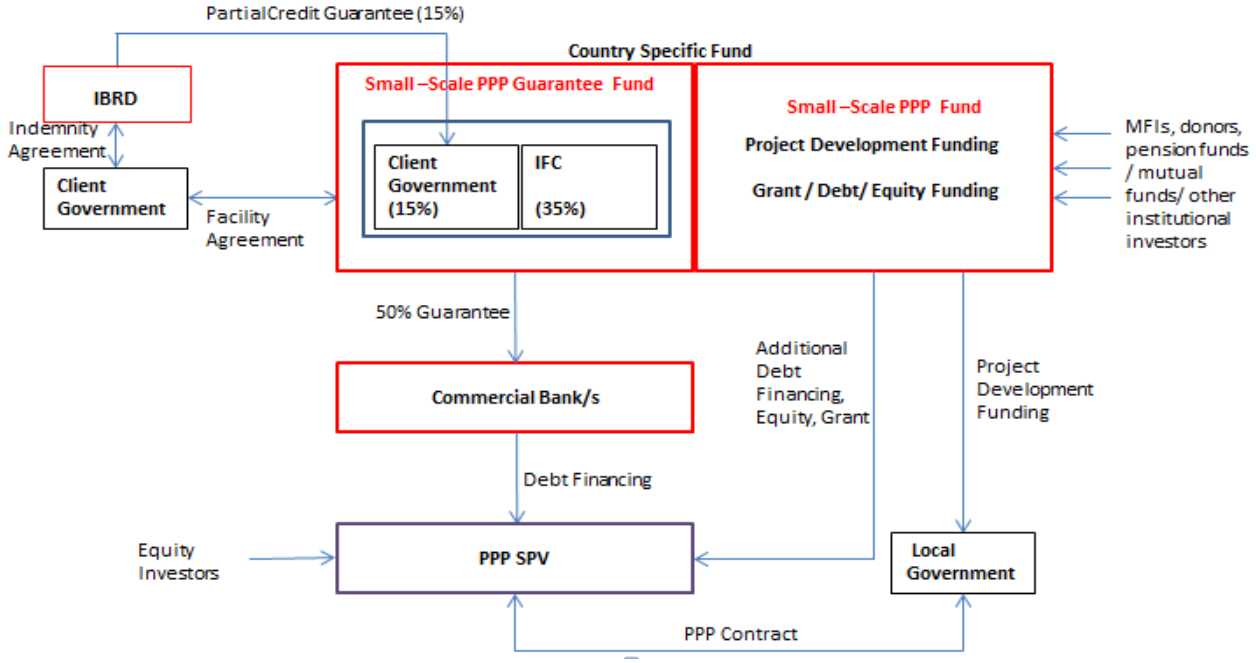
- **Exploring Bank Group guarantee instruments for small PPP projects:** The norm has been for the Bank to provide guarantees in the case of larger more complex projects. However, small

projects have largely remained out of this program. It may help to carry out a preliminary exploration of the pros and cons of Bank Group guarantees for smaller projects to see if this could be a feasible option for credit enhancement for small projects.

- **Funding vehicle aimed at small sub-national projects:** Rather than specific project level investments, the World Bank Group could initiate greater thinking around wholesale investing such as through urban infra funds or support vehicles with grant and non-grant products such as loans, guarantees, etc.; IFC or the World Bank can look at contributing to these funding vehicles within a practical and flexible framework in order to leverage private financing. The IDB concept on country specific SIFs could be one way to approach this. Another way to do this is through country specific guarantee / support facilities established exclusively for small-scale subnational PPP projects: the guarantee window can be backed by the client country / state government and IFC, with both together taking the first loss up to 50% or less (the proportion could be 15% client country and 35% IFC), with the client country portion backed up by a Partial Credit Guarantee (PCG) instrument of the World Bank. Further detailed design work is recommended to place the general design in context. However, apart from the guarantee instrument, windows for project development funding and other support instruments would be required. A multi-product small-scale PPP facility is a good option that may work for a variety of projects. A general schematic approach is suggested in **Figure 6** below. However, this would need to be supplemented by both upstream sector and institutional work as suggested earlier in order to structure and bring good projects into the pipeline. In addition, it would help to look at funding innovative small projects through a "challenge fund" window in order to encourage promising new project structures that meet key benchmark criteria.

- **Focused capital markets reforms**: Analyzing markets for legal and regulatory constraints to financing of small-scale projects is another essential area that could help in creating further sources of long term financing for small projects. Specifically, impediments to lease financing and regulatory constraints to investments by institutional investors such as pension funds and insurance funds can be examined in depth in order to suggest focused limited reforms that can give quick results.

Figure 6: Schematic for a Multi-Product Financing Facility for Small-Scale PPP projects



Capacity enhancement: PPP processes are knowledge intensive activities and would need to be supported by smaller initiatives aimed at providing focused capacity enhancement related to specific projects being undertaken by the relevant entity and could include the following:

- Building skills in public entities to develop and appraise projects, initiate and manage the PPP procurement process, to monitor and evaluate and manage contracts; enhancing sector specific knowledge and skills
- Improving local private investors' understanding of PPP and sector issues
- Improving bankers' understanding of relevant sectors in small project and enhance small project related appraisal skills
- Building a knowledge base of case studies of successful small PPP projects with special focus on successful cases of bundling and how institutional, jurisdictional, and financing issues related to bundled projects have been successfully managed.

ANNEX: SUMMARY PROJECT INFORMATION[17]

Kenyatta University Hostel Accommodation Project

Country: Kenya
Sector: Education/ accommodation
Name of Project: Kenyatta University (KU) Hostel Accommodation Project
Contracting agency: KU
Agency type: Autonomous Institution. The University has its own Act, can raise resources and enter into agreements
Type of PPP: DBFOT
Contract term: 30 years
Construction period: 2 years
Bid Parameter: Technical qualification; Financial: Lowest present value of rental income
Total cost of project: Estimated $50 million (first bid received was for $37 million, although it had to be cancelled subsequently and is under re-bid)
Total Population served: minimum 10000
Per unit cost: $5000
Basic specifications: Basic specifications were **s**et by KU to prevent over engineering, and ensure that the infrastructure provided is basic and sufficient (the benchmark level used is the current accommodation provided by KU)
Stage of project: Retendering - RFP. The first tender had to be cancelled after bids were received and the preferred bidder identified due to conflict of interest issues: the CEO of the lead firm in the consortium was appointed the Chancellor of the Kenyatta University. The new proposals were expected to be received on 9th May 2014
Time taken for processing project from concept to contract execution: 18 months
Local or foreign investor: Consortia led by local investors, but each consortium has a foreign partner.
Applicable legislation: PPP Act of Kenya 2013
Approving authority: PPP Steering Committee, National Treasury, Kenya; there is three-stage approval process with the first approval at concept stage, the second approval at feasibility analysis stage prior to procurement and the third approval post-bid
Is the approval process the same as for other projects: Yes
Role of Private Party: Design, finance, construct, operate and maintain project
Role of Public Authority: Monitor contract according to performance standards, collect rentals on behalf of the private party at a fee.
Financing: Remains to be seen after bid is finalized the second time around
Payment Mechanism: Rentals are collected periodically by the KU, 2% service fee is retained and 98% is paid to the private party
Tariff: Tariff cap is set by the KU during procurement in the RFP; however, the tariff is set by the private party with provision for reset at five year intervals;
Comparison to existing rates: The tariff cap has been set at an average of Ksh.6000 (different rates for undergraduate and post graduate accommodation); this is comparable to rental rates charged by private hostels near the University. Government sponsored students pay a lower rate of about Ksh3700.
Government Support: Land for the project has been provided by KU free of cost; 80% occupancy guarantee has been given by KU.

[17] The cases draw heavily from discussions with IFC staff Evans Kamau, Carla M.N. Faustino Coelho, Neeraj Gupta, Isabel Chatterton, Aditya Dhar, Pankaj Mishra, and Bhanu Mehrotra; IFC Success Stories publications; discussions with Ricardo Arias of GPOBA, the World Bank and Ibrahim Dajani of the World Bank West Bank and Gaza office; Arvind Mayaram, Secretary of DEA, GoI; J.S. Oberoi of LT Food Limited, India; Sheo Shekhar Shukla of Government of Madhya Pradesh; Ministry of Education PPP Node of Kenya; Kenya National PPP Unit; and the authors' own experience of working on small projects in different countries.

Advantages as compared to current services availed by students: The contract has performance standards and will be regulated by the KU unlike private accommodation, which tends to be unregulated; while the average rental cap for the PPP accommodation is higher at 6000 KS as compared to the cost of service provided by KU at 3700 KS, it is lower than the cost of service provided by fully private providers outside KU, which tends to be between 8000-10000 KS; in addition, the commute will be removed for students who will shift to the PPP accommodation and result in additional savings; in addition, living on campus will be safer than living in private accommodation outside, and students will also have access to University facilities at all hours of the day e.g., Libraries, health and recreation facilities.
Contingent liabilities created: Contingent liabilities are created for government (Education Department); if KU is unable to ensure 80% occupancy and needs to pay up and cannot do so from own budget/ existing budgetary provisions by government to KU, government may need to pay up.
Risks: Private rental market around KU may reduce rates drastically and students may prefer to stay in private accommodation in such an eventuality
Level of risk: Perceived to be low due to other advantages of staying on campus enumerated above, and since the current demand at 70000 units far outstrips the 10000 units being constructed under this project
Key risk mitigating features: Cost, security, performance standards superior to off campus accommodation available to students; surrounding off-campus area popularly perceived to be poor in safety and security.
Factors affecting decisions on the size of project or population serviced by the project: The project was structured with 10000 accommodation units unlike other hostel accommodation projects that tend to be smaller; this was done in order to bring down the per unit costs and the rental (a) closer to current KU rentals and (b) lower than private rentals for similar accommodation
Lessons learned: • Where local investors are involved, there could be conflict of interest issues on several grounds. In the RFP documents it is important to highlight that bidders should not have relationships with clients that would jeopardize their chance of accepting an award if they are successful. On learning of any issues of conflict consult with relevant parties and authorities to ensure the right decisions are made. Vet the bidding firms and their management to ensure high integrity will be maintained since knowledge of good practices might be low at local level. • From the onset it is important that the client sets up a working committee dedicated to the project and where possible the committee should have relevant knowledge and expertise in project related disciplines e.g., in the current project Architects and Quantity Surveyors had a major role to play in evaluating construction designs and technology in use and the client had in house professionals qualified in both fields and who were on the project committee • Projects can be made viable with appropriate increase in number of consumers served as in this case

West Bank and Gaza Solid Waste Management Project

Country: West Bank and Gaza
Sector: Solid Waste Management
Name of Project: Palestine Solid Waste Management Project
Contracting agency: The Joint Services Council for Hebron and Bethlehem
Agency type: Sub-national
Type of PPP: Operation and maintenance contract
Contract term: A total of 7 years, with an initial 5 year contract with a provision for extension of another 2 years
Construction period: The landfill site improvement was funded prior to the PPP project structuring by the World Bank through the Gaza Southern West Bank Solid Waste Management Project of 2009, which is scheduled to close in 2014
Bid Parameter: Technical evaluation and the lowest level of tariff per ton
Total cost of project: -
Total Population served: Approximately 1 million
Per unit cost: -
Basic specifications: Output based performance indicators and targets under the contract
Stage of project: The project is operational. The agreement was signed in September 2013
Time taken for processing project from concept to contract execution: --
Local or foreign investor: Greek investor, W.A.T.T.S.A.-MESOGEOS S.A. and EPEMS.A, which has also invested in the waste business in other countries
Applicable legislation:
Approving authority: The Joint Services Council for Hebron and Bethlehem
Is the approval process the same as for other projects: This is the first PPP project in the area
Role of Private Party: Operation and maintenance of the landfill at Al-Minya and two transfer stations at Hebron and Tarqoumiya as well as transportation of waste form the transfer stations to the landfill, financing of operational costs
Role of Public Authority: Setting standards and specifications, monitoring and verification of performance and contract management
Financing: World Bank financing to construct the project, private financing for operation and maintenance
Payment Mechanism: Payment made by the public entity on per ton basis (output based)
Tariff: Set through bid, paid by government
Comparison to existing rates: NA
Government Support: Construction of landfill site and transfer stations through a specific investment loan of the World Bank, GPOBA grant funding support of $8.25 million over four years upon fulfillment of pre-defined OBA targets by participating municipalities and village councils
Other advantages : Reduction of GHG emissions by 13400 tons during contract period
Contingent liabilities created: Fiscal commitments are created but overall there are net benefits as compared to the situation prior to the project in terms of savings in emissions and better maintenance of landfill
Risks: Demand risk, performance risk, political risk
Level of risk: Moderate
Key risk mitigating features: • A minimum guarantee was provided by the JSC for supply of 500 tons of waste every day taking care of demand risk; also historical user fee collection data was provided to lend comfort to the private party. • A contract cancellation payment of $500,000 is to be made by the authority taking care of termination risk; private party may demand payment for the minimum amount of waste

guaranteed, in addition providing further protection.

- JSC-H&B is required to pay an extra per kilometer charge for waste delivered in the event that Israeli roadblocks elongate the route protecting against political risk/ force majeure risk.

Factors affecting decisions on the size of project or population serviced by the project: A number of municipalities and villages were brought together to make the cost of service sufficiently affordable and the project feasible.

Lessons learned:

- It is important to bring in key changes in the sector before initiating a PPP project. There was a long period of about 4-5 years preceding the PPP where the World Bank through a specific investment loan worked on bringing in a change process in the way waste was being perceived and disposed. The objective of the World Bank project was to improve solid waste disposal services for the communities and businesses of Palestinian municipalities and joint services councils in the Bethlehem and Hebron governorates through provision of an efficient socially acceptable and environmentally friendly mechanism, including (i) strengthening the joint services council administrative and technical capabilities for a cost-effective management of waste disposal services; (ii) improving the waste disposal services through provision of a sanitary landfill facility and related infrastructure; and (iii) carrying out a public awareness campaign for promoting waste minimization, resource recovery and cost recovery for financial viability.
- The JSC was established with security deposit from municipalities to counter their default risks
- The Joint Services Council did not have the financial capacity to undertake the improvement and had to rely on multilateral and bilateral partners such as the World Bank, IFC, GPOBA and others to find a solution to the problem of waste.
- The Joint Services Council also did not have the knowledge or the capacity to handle the PPP process and the project became possible only due to the intervention and long period of work by international organizations
- The project targets were set based on discussions and consultations with the participating municipalities and villages to ensure achievability, which is important when new projects are taken up at local level and the services are of an essentially new nature
- There were no local investors and all the investors who participated in the bid were from other countries; i.e., Spain, Greece and Egypt.
- An important lesson is that if the project is appropriately structured and government support is forthcoming, international firms are willing to work in less politically secure/ stable regions
- Political risks were borne by JSC-H&B.
- Smaller municipalities can be brought together as in this case through the joint services council to form a service area that is large enough and feasible for cost effective waste management and also attractive enough for larger investors to come in
- Partnership between the Bank, IFC and GPOBA enabled the provision of the full range of technical assistance in this case, including subsidy support, and enabled policy and project development and implementation from upstream to downstream

Lesotho Health Care Waste Management Project

Country: Lesotho
Sector: Medical Waste Management, Urban/ Health
Name of Project: Health Care Waste Management Project
Contracting agency: Ministry of Health
Agency type: National government
Type of PPP: Management Contract
Contract term: Initial contract was for 1 year; renewable for a further 12 months. This has been recently renewed for another 8 months after completion of the first one year.
Construction period: There was no construction involved in this specific contract. The refurbishment of incinerators and other associated construction work was done as part of a larger program of refurbishment of 150 hospitals and Primary Health Care facilities in Lesotho undertaken by the Millennium Challenge Corporation.
Bid Parameter: Lowest lump sum annual payment (payments made monthly)
Total cost of project: -
Total Population served: The project caters to 2 hospitals and 15 Primary Health Care facilities in the three districts of Berea, Leribe, and Maseru.
Basic specifications: Licensing, accreditation requirements per contract/ relevant rules/ regulations
Stage of project: The contract was signed in October 2012 and the project is operational
Time taken for processing project from concept to contract execution: This was a different type of project and the time taken for processing was very short. IFC was retained as transaction advisor in February 2012, the RFP was issued in June 2012 and the contract was signed in October 2012. So, only a very brief period of 10 months was taken to process the project. However, it is relevant to understand that the processing was quick due to the following reasons: (a) This project was part of a larger hospital refurbishment project of the Millennium Challenge Corporation (MCC) (b) A lot of upstream work on the legislation, policy, regulations and standards was completed by the MCC by the time the project came to IFC for transaction related work (c) In addition, the MCC had also funded the feasibility studies for the project and most of the due diligence work required had already been undertaken (d) The government had already decided that this project was to be a PPP management contract and accordingly no time was lost in discussing these aspects (e) The government was keen on doing this early as they wanted this to be a pilot project that was to be used for collection of data on volumes of waste and other routine and day to day data and statistics; data from this would in turn feed into a larger PPP envisaged for collection of waste from all the 150 refurbished hospitals and Health Care Facilities.
Local or foreign investor: Consortium consisting of local and foreign investor; Mediwaste with equity participation by Ditau Health Solutions and Matsete Investments
Applicable legislation: HCWM Bill of 2008; HCWM Policy, HCWM Regulations, Environmental Act 2008, Water Act 2008; National Standards on Health Care Waste Management.
Approving authority: Government of Lesotho
Is the approval process the same as for other projects: Yes
Role of Private Party: Collection, transportation, treatment, incineration and disposal of health care waste, operation of incinerators; routine maintenance of the new vehicles and fuel for the vehicles were to be the responsibility of the private party; the private party also needed to inform the government within the given time frame in case of break down or other repair and maintenance requirement for the incinerators.
Role of Public Authority: Setting standards and specifications, monitoring and verification of performance and contract management, making payments. In addition, in this case, a slightly different system was followed in terms of the purchase of disposables, as well as some of the operational and repair

costs. For example, the government is responsible for supply of bags for waste collection. This was done as the MCC had already supplied bags and some other material required for the project in advance to the government. In addition, while one incinerator in one of the District hospitals was in good condition as it had been recently refurbished, the second one was not in new condition. Given this, the private sector was not keen to take the responsibility for the costs of parts and repair. So, the repair and maintenance is the responsibility of the government.

This had potential for problems. When the bags supplied by the MCC, which were with the MoH, were fully consumed, the MoH had to buy new bags and procurement of these took some time and there were associated delays.

The vehicles for carrying waste were already supplied by the MCC.

Financing:, Equity and debt by private provider; there was no capital investment by the private sector

Payment Mechanism: Payments made by the Department of Health in equal monthly installments based on an annual lump sum fixed by bid

Tariff: There are no tariffs associated with this. While there are private hospitals/ health care facilities in Lesotho, with about a 50:50 ratio of government and private facilities, most of the private facilities are owned by faith based organizations that are subsidized by government. These establishments run mostly on no profit basis and, therefore, may find tariffs for health care waste disposal unaffordable. The government, therefore, decided that while waste from these facilities would be taken to the designated district incinerator for disposal, they would not be charged for it.

Comparison to existing rates: Not applicable

Government Support: The Millennium Challenge Corporation has been working with the Government of Lesotho in the area of medical waste for the last many years and has helped in the development of upstream policy, regulations and standards and a state-of-the-art plan for safe disposal of hazardous waste, apart from refurbishment of the hospitals and health care facilities; this management contract is currently fully paid by government.

Other advantages: The data generated from the project is likely to set the tone for the program of health care waste management in the country

Contingent liabilities created: Fiscal commitments are created as government has undertaken to make monthly payments through contract period. However, it is learnt that there are budgetary issues and government is likely to find it difficult to either continue the program or apply this pilot to the rest of the health care facilities as envisaged earlier.

Risks: Payment risk, performance risk

Level of risk: Moderate payment risk

Key risk mitigating features: Demand risk is fully borne by government through fixed payment

Factors affecting decisions on the size of project or population serviced by the project: The project was taken as pilot to inform the next phase of work in this area involving all health care facilities.

Lessons learned:

- The project reduced disposal of medical waste on general landfill sites, introduced segregation and proper handling of waste in the 2 hospitals and 15 health care facilities included
- Upstream work on legislation, policy and standards can considerably reduce time taken to process projects from conception to signing of contract
- Capital investment by government in facilities appears to be the only solution where a commercial market/ demand for medical waste disposal services on payment basis does not exist
- Bifurcating the supply of disposable material and equipment; and the repair and maintenance work from the management contract might affect private provider performance given that it will be impacted by any delays on the part of the government authority responsible; it has the potential to reduce the efficiencies associated with such contracts
- The fiscal capacity of government to stick to the payment commitments is of immense

importance in such projects and where adequate fiscal space is not available it may not be possible to apply the results of the pilot to the sector

- Also capital investments might go waste if there are few funding options for continuing work of operations and maintenance

Cape Nature (De Hoop) Tourism Project

Country: South Africa
Sector: Tourism
Name of Project: Cape Nature (De Hoop) Tourism project
Contracting agency: Public Entity (Cape Nature)
Agency type: Provincial Public Entity
Type of PPP: Concession
Contract term: 30 years (renewable after 30 years subject to conditions)
Construction period: Approximately 24 months
Bid Parameter: Lowest lump sum annual payment (payments made monthly)
Total cost of project: Capital Expenditure = R40 million (approximately $4 million)
Total Population served: Western Cape Province population and beyond (Tourism project)
Basic specifications: Licensing, accreditation requirements per contract/ relevant rules/ regulations
Stage of project: Signed in 2008 and is operational
Time taken for processing project from concept to contract execution: The project started around 2002 and finalized in 2008.
Local or foreign investor: Local investors called Madikwe. Although this private entity also acted as investment facilitators since it was going to sell some shares to foreign investors who did not want at the beginning to be involved in all PPP processes. Foreign were to be minor shareholders at the time.
Applicable legislation: Public Finance Management Act 1999, Treasury Regulation 16, Environmental legislation, heritage act and many others
Approving authority: Republic of South Africa through its National Treasury (PPP Unit)
Is the approval process the same as for other projects: Yes
Role of Private Party: Design, refurbish, build, finance and operate tourism facilities
Role of Public Authority: What was expected of the Authority was to manage the park. Ensure that the necessary infrastructure (such as roads, electricity) in the park is maintained.
Financing:, Since it was a small project the equity was provided by the private sector provider
Payment Mechanism: User charges (tourists pay for enjoying the facilities during their stay)
Tariff: The tariff is set by the private party. The private party pays the authority a fixed fee plus a variable fee if a certain turnover is exceeded. The fixed fee is set through bid.
Comparison to existing rates: Charge market rates
Government Support: It is not expected that Private operator would maintain roads in the park. This is done by the government. It is only expected to ensure that its facilities are maintained.
Other advantages: The government reduced the subsidies it used to pay the parks as result of its revenue generating activities
Contingent liabilities created: These would arise as a result of termination. Termination payments may result from private party default, force majeure, corrupt activities, etc.
Risks: Demand risk
Level of risk: Moderate to high, as tourists have many choices
Key risk mitigating features: Demand risk is the biggest risk for the private sector since it is expected to pay irrespective of whether business is good or not. However since Cape Nature is also involved in this business in other facilities it does share the information to other stakeholders for the benefit of the private party and itself.
Factors affecting decisions on the size of project or population serviced by the project: The tourism project is a very risky project. Lenders themselves are not that keen to fund it and so it is therefore likely that the project itself will be smaller in nature
Lessons learned: • At first the government was stubborn when the private operator demanded a long concession period. However, they realized that the period cannot be too short for a project where the private

party has design, build, finance and operate functions to carry out and is, at the same time, expected to pay concession fees.

- Infrastructure in the parks must be up to standard and be maintained. This cannot be expected from the small investors of the parks who are competing with others (bear in mind that they are not land owners so the land cannot be used as security for financing)
- Need to look at government contribution but the State has other competing needs
- Approval processes need not be stringent. Establish toolkit designed for these kinds of projects and not treat the same as other big projects. Note that this project took a long time to bring to agreement signing stage.
- Ensure that contract management meetings take place so that issues can be solved and the red flags are identified earlier
- Government should not just say the private sector knows its business and decide not to support them. The government needs to support them and also ensure that other government entities can use the services in order to help overcome the demand risks

Provision of Urban Amenities in Rural Area (PURA)

Country: India
Sector: Multi-sectoral Infrastructure Services
Name of Project: Thirurangadi Provision of Urban Amenities in Rural Areas (PURA) Project
Contracting agency: Thirurangadi Gram Panchayat
Agency type: Sub-national entity – gram panchayat (village council)
Type of PPP: Concession, BOT
Contract term: 13 years including construction period of 3 years
Construction period: 3 years
Bid Parameter: Technical proposal, lowest PURA grant required
Total cost of project: $25.6 million
Total Population served: The project serves an area of 17.73 sq. km with a population of 59612 and 8525 households
Per unit cost: NA
Basic specifications: The works are undertaken based on technical parameters set by government under the PURA and the other associated MoRD and non-MoRD schemes undertaken under each individual PURA project
Stage of project: The agreement was signed on February 22, 2012. The project is operational
Time taken for processing project from concept to contract execution: 22 months
Local or foreign investor: Local investors, the SPV for the project—which constitutes the Concessionaire consists of the Lead Member, Infrastructure Kerala (INKEL) Limited with 51% equity and Kerala Industrial Infrastructure Development Corporation (KINFRA) with 49%.
Applicable legislation: PURA, A PPP Scheme – Guidelines issued by MoRD
Approving authority: Ministry of Rural Development, Government of India, Inter-Ministerial Empowered Committee
Is the approval process the same as for other projects: PURA projects have a special approval process; they do not need to go through the PPPAC process used for other national PPP projects or the PPP approval process for state government projects; however, since PURA is composed of several existing small infrastructure development schemes of various ministries as well as some central schemes executed by the state government, based on the schemes included in the particular project various kinds of associated approvals of the specific scheme are required at central Ministries as well as state government. In addition, a resolution of the Gram Panchayat concerned is required.
Brief Description of Project: This project is a multi-sectoral infrastructure project consisting of the following sub-projects: *MoRD schemes* (i)New road construction of 1.3 km length with full drainage (ii) Increase in water supply coverage to all households, and embankment protection and desilting of 6 common ponds (iii) Establishment of 7 solid waste collection centers. (iv) Establishment of a Skill Development Center with courses such as mobile technology, catering, tailoring, etc. *Non-MoRD schemes* (v)Coverage of 23 km roads with street lighting (vi) Setting up of a rural BPO (vii) Strengthening of Marketing Infrastructure (viii) Provision of a meat processing and cold storage facility (ix) Treatment plant for Solid Waste (x) Establishment of an Emergency Care Center at the Taluk Hospital (xi) Establishment of a Coconut Processing Unit (xii) Establishment of an Export Promotion Rural Apparel Park providing infrastructure facilities for the

apparel industry
Income-generating activities
(xiii) Development of Boating Club
(xiv) Development of Bus Terminal cum Commercial Complex

Role of Private Party: The Concessionaire's role is to design, engineer, finance, procure, construct, operate and maintain facilities under the MoRD and non-MoRD schemes, and the Add-on Economic Facilities under the project.

Role of Public Authority: Various public authorities are intimately involved in the PURA process. The Gram Panchayat is responsible for providing access to land, for MoRD and non-MoRD activities, and help in obtaining permits, clearances and approvals. The District Rural Development Agency (DRDA) sets up a dedicated bank account for the flow of various government grants to the Concessionaire as provided. The MoRD undertakes procurement and ensures timely release of PURA grant as well as grants under the MoRD schemes into the dedicated account as provided in the agreement. The State Government pays its share of grants for MoRD and non-MoRD schemes into the dedicated account. Setting standards and specifications, performance and contract management are other activities jointly performed by the Gram Panchayat and the MoRD.

Financing: Upfront PURA grant, equity and debt by the Concessionaire for income generating activities, government funding from various ministries. Financing of Thirurangadi PURA project is given in the table below:

Component	Total	MoRD	Non-MoRD	State	GP	Concessionaire
MoRD	11.14	4.66		4.5	0.08	1.94
Non-MoRD	3.83		2.39	0.14		1.3
Add-ons	2.37					2.37
PURA Grant	8.30	8.30				
Total	25.64	12.96	2.4	4.6	0.08	5.6
Percentage	100	50.54	9.36	17.95	0.31	21.84

Payment Mechanism: All government installment payments are made into an account opened by the District Rural Development Agency. The DRDA routes the payments to the concessionaire on receipt of the report of the independent engineer. All payments are made during the first three years of the contract during the construction period.

Tariff: There is provision for user charges under PURA. However, this specific project has no user charges. If user charges are to be levied these would have to be fixed by the Gram Panchayat following the normal applicable rules for tariff setting.

Comparison to existing rates: NA

Government Support: The program is fully supported by government through the PURA grant and capital investments by the concerned ministries. The PURA grant covers the present value of the 10-year O& M expenditure on the MoRD and Non-MoRD projects, RoI annuitized at 15% on the Concessionaire's investment in the MoRD and non-MoRD projects, management fee at 1% of the capital expenditure on MoRD, non-MoRD and add-on activities and the payments made to the independent engineer for his services; and is capped at 35% of the capital expenditure on the project, which is itself capped at Rs. 120 crore (approximately $25 million).

Other advantages: The program brings together several existing schemes of the government for integrated implementation in a small geographic area. Upgrading multiple types of infrastructure simultaneously has positive economic benefits. In addition, under the existing schemes there was no provision for continuing maintenance and operational costs; the PURA grant makes provisions for this over a period of 13 years.

Contingent liabilities created: Fiscal commitments are created as the grants are paid in installments during construction in the first three years of the contract

Risks: project non-viability, payment risk, performance risk

Level of risk: Low

Key risk mitigating features:

- Payments are made six months in advance of the date of the installment payment as agreed under the contract into the DRDA account at district level.
- The interest on the moneys deposited into the DRDA account is used for the purpose of establishing a risk fund to honor any contingent commitments that might arise.
- The risk of non-viability is basically limited to the income generating activities that the private party is expected to invest in.
- To reduce this risk, the concessionaire has the choice to suggest the project site or Gram Panchayat where the project will be implemented. The location of this specific project has been chosen by the concessionaire based on a market study of viability of the specific activities undertaken, which reduces the risk of non-viability considerably.
- Performance risk could be high in a project where all moneys are essentially paid up front; i.e., during construction. However, this risk is covered through project life by requiring pre-agreed levels of performance guarantees from the concessionaire through project life.

Factors affecting decisions on the size of project or population serviced by the project:

- The government has fixed a cap of Rs. 120 crore (approximately $25 million) for the capital investment in the project that will be considered for payment of subsidies.

Lessons learned:

- There was a 13 month slippage in the first two projects in which contracts were executed. In all other 7 projects that were put to tender, there is no information to date. Government has now gone on to the second phase of the PURA where they have advertised many more projects with slight changes in the guidelines based on lessons learned in the first phase
- Initial Detailed Project Reports (DPRs) submitted by the bidders were faulty due to lack of detailed manual of procedures and processes and lack of detailed instructions on the type of information required to be included in the technical and financial proposal
- Requirement of state government approval for the DPR due to the presence of state executed projects resulted in some part of the delay
- The upstream approval processes from each ministry are cumbersome and numerous resulting in additional delays
- All project sites chosen by the concessionaires were in peri-urban areas; i.e., outside the municipal limits but near to the city rather than remote areas. The inclusion of mandatory income generating activities for investment by the Concessionaire has resulted in this selection of areas where there is likely to be greater demand or less demand/ revenue risk
- The level of penalties has not been set scientifically and appears to be very low; there may be incentives to the concessionaire to not fulfill some of the targets for indicators and pay penalties instead.
- There is lack of capacity in the gram panchayats to negotiate and manage the contract. The MoRD has found a temporary solution through splitting the concession agreement into three parts of which Concession Agreement 1 is signed by the GP and remains in the possession of the GP, the second part is heavy with the legal requirements and is negotiated and remains in the possession of the MoRD. But as the number of projects keeps growing, it will not be feasible for the MoRD to play the detailed / micro-level role it is trying to play in the projects.

Gandhinagar Rooftop Solar Project

Country: India
Sector: Solar
Name of Project: Gandhinagar Rooftop Solar Project
Contracting agency: Gujarat State Petrochemical Corporation Limited/ Department of Energy and Petrochemicals
Agency type: Sub-national entity
Type of PPP: BOO
Contract term: 25 years
Construction period: -
Bid Parameter: Technical qualification and lowest tariff
Total cost of project: $9 million
Total Population served: 12000
Per unit cost: ~ 19 cents/unit
Basic specifications: Industry best standards are used, government's agreed technical specifications
Stage of project: The agreements were signed in April 2012. The projects are operational
Time taken for processing project from concept to contract execution: 18 months
Local or foreign investor: Local investors, Azure Power and SunEdison
Applicable legislation: Gujarat Solar Power Policy 2009, Gujarat Infrastructure Development Act 1999
Approving authority: Committee headed by the Chief Secretary for approval of PPP projects, Principal Secretary, Energy & Petro Chemicals, Government of Gujarat who is also Chairman cum Managing Director, Gujarat Power Corporation Limited at line Ministry level
Is the approval process the same as for other projects: Yes
Role of Private Party: Procure financing; install solar photovoltaic panels on the rooftops of public buildings made available by government and on private residences and connect to grid; identification of private rooftop space; supply to grid
Role of Public Authority: Provide access to rooftops of public buildings; facilitate Power Purchase Agreement (PPA) with power procurer; monitor contract according to performance standards
Financing: IFC loan of $3 million to Azure Power; other financiers were IDBI Bank, India; financial support of $300,000 was provided by Netherlands and Finland.
Payment Mechanism: The local private power distributor Torrent Power buys the power according to the PPA and pays based on the tariff set through bid.
Tariff: Tariff is based on bid.
Comparison to existing rates: -
Government Support: Facilitation of PPA; public rooftops made available by government
Other advantages: Emissions savings of 6000 tons
Contingent liabilities created: Termination payments- 3 year equivalent of tariff payment in case of Government of Gujarat default.
Risks: Site risk
Level of risk: Low for demand risk as well as site as the public entity covers these adequately as shown under the risk mitigating features
Key risk mitigating features: PPA covers the demand / revenue risk, most of the rooftop sites are public buildings committed to be made available by government
Factors affecting decisions on the size of project or population serviced by the project: This specific project was small, but government has been looking to prepare packages of a size acceptable to the investors. The Gandhinagar project consists of two projects of 2.5 MW each totaling approximately $15 million
Lessons learned: • Policy framework is required in order to scale up the projects—the IFC is now working on a

policy framework for rooftop solar, regulations are being drafted by the forum of regulators

- Multiple agreements needed to be signed: rental agreements between private provider and the private residential owners; between the private entity and the public entities owning rooftop space; but there were no standardized documents—for example, appropriate rental agreements for renting rooftop space had to be developed from scratch for this project.
- Grid connectivity issues needed to be solved and a framework for connecting such projects to grid could be useful
- Choosing between technical options—in this case the issue was between choosing concentrated solar power or photovoltaic panels
- Whether gross metering model should be used or the net metering model; there were no specific guidelines for choosing options
- Multiple jurisdictions can be joined as seen from the efforts to bundle 5 cities into 3 packages for rooftop solar projects in Gujarat following the first success of this specific project.

Bhubaneswar Street-lighting Project

Country: India
Sector: Street-lighting
Name of Project: Bhubaneswar Street-lighting Project
Contracting agency: Bhubaneswar Municipal Corporation
Agency type: Sub-national entity – urban local body
Type of PPP: Performance based operation and management contract
Contract term: 10 years
Construction period: 8 months from effective date of contract
Bid Parameter: technical qualifications and energy savings committed by the bidder with a minimum of 30%
Total cost of project: $4.8 million
Total Population served: The project covers all the streetlights of the city numbering about 20000. The population of the city is over 0.8 million.
Per unit cost: NA
Basic specifications: Meter based billing, remote switching, use of energy efficient bulbs
Stage of project: The agreement was signed in October 2013. The project is operational.
Time taken for processing project from concept to contract execution: 24 months
Local or foreign investor: Local investors, Shah Investments, Developments & Consultants Private Limited (An Energy Savings Company or ESCO)
Applicable legislation: Odisha PPP Policy
Approving authority: Bhubaneswar Municipal Corporation
Is the approval process the same as for other projects: Approval Process followed was as per Odisha PPP policy i.e., approvals were sought at the ULB, Department (Housing & Urban Development) and Empowered Committee on Infrastructure
Role of Private Party: Finance and install luminaire retrofits, operate and maintain the city's street-lighting system by way of a remote control center
Role of Public Authority: Setting standards and specifications, monitoring and verification of performance and contract management
Financing: DevCo financing, equity financing
Payment Mechanism: Payments made by the Bhubaneswar Municipal Corporation based on the savings realized. ESCO to receive 90% of energy savings realized plus an Operation and Maintenance fee for each light pole that is taken over by the ESCO under the contract
Tariff: NA
Comparison to existing rates: NA
Government Support: Monthly payments made to the private party out of the energy savings realized plus operation and maintenance fee
Other advantages : Annual savings to government of $100000 by way of decreased energy consumption and operation and maintenance costs and emissions savings
Contingent liabilities created: Fiscal commitments are created but overall there are net benefits as compared to the situation prior to the project in terms of savings in energy that cover the payments of the provider fully and leave a net benefit to the municipal corporation in addition
Risks: Project non-viability, payment risk, performance risk
Level of risk: Low
Key risk mitigating features: Advance payments using escrow accounts and automatic approval of 75% of operator invoices; detailed performance targets against indicators; covering all streetlights in the city for a viable project size
Factors affecting decisions on the size of project or population serviced by the project: The project needs to be large enough to be viable and to realize sufficient savings in energy to the municipal

corporation to enable payments to the provider from the savings realized.

Lessons learned:

- Policy framework is not required for projects in this sector, however standardizing documents could help scale up the projects;
- There is less precedence for these projects and these are less known by lenders; therefore, there is less appetite for lending to such projects. Lenders in general do not have lending products for these projects. So projects are mostly financed by 100% equity
- There is only lender in India that has specific clean energy lending products; i.e., Tata Cleantech Capital Limited (TCCL), which is a JV of the Tata Capital Limited and IFC.
- In addition, lenders do not have appraisal skills for such projects; upstream work is required on how to appraise such projects for financing;
- Partial risk facilities may need to be created. BEE has created such a facility in India
- BEE grades companies for energy efficiency projects based on financial capacity. However many companies are too small, with Grade A companies having a net worth of Rs. 1 crore or approximately $0.5 million
- Wholesaling with projects in multiple cities being packaged could work well from the point of view of project structuring and financing, but such efforts have failed in the past due to multi-jurisdictional issues and enhanced risk profile of projects arising from this reason
- There are capacity issues at local body level both in the public sector as well as the local equity investors/ service providers/ financiers

Punjab Grain Silo Project

Country: India
Sector: Grain storage/ silos
Name of Project: Punjab Silo Project
Contracting agency: Punjab State Grain Procurement Corporation (PUNGRAIN)
Agency type: Sub-national, state owned enterprise
Type of PPP: BOO
Contract term: 30 years
Construction period: 12 months
Bid Parameter: Technical evaluation and the lowest level of fixed tariff
Total cost of project: $7 million
Total Population served: NA
Basic specifications: The silos are required to be fully equipped with weighing and testing facilities, automatic quality control devices, mechanized conveyor systems, and arrangements for the unloading and loading of wheat grain and for the scientific management and handling of the grain.
Stage of project: The agreement was signed in 2010, and the project was commissioned in April 2012 and is operational.
Time taken for processing project from concept to contract execution: 24 months
Local or foreign investor: Local investor, LT Foods Limited, a company with 40 years of experience in processing, storing and marketing Basmati rice globally.
Applicable legislation: Punjab Infrastructure Development Act, 2002
Approving authority: Empowered Committee chaired by the Chief Secretary
Is the approval process the same as for other projects: Yes
Brief Description of the project: The project consists of 4 silos of 12500 MT each for a total capacity of 50000 MT, which will store grain procured by the government for its food subsidy schemes as well as under its support price operations.
Role of Private Party: The private party is responsible for the financing, design, construction, operation and maintenance of the silo. The private party is also responsible for procuring land for the project.
Role of Public Authority: The Authority (PUNGRAIN) is required to procure and deliver the wheat grain in bags to the Concessionaire for storage in the Silos. The authority is responsible for making payments based on availability to the private party as agreed. It is also responsible for setting standards and specifications, monitoring and verification of performance, and contract management
Financing: IFC's advisory services were funded by DevCo; Debt financing to LT Foods was by YES BANK, Rabobank
Payment Mechanism: The payment mechanism consists of fixed and variable charges; the fixed charges for the agreed tonnage are paid irrespective of usage.
Tariff: The Fixed Service Charge was at Rs. 1,400/MT and the Variable Acceptance and Dispatch Service Charges are at 7.5% of the Fixed Service Charge. However, subsequently, the Government of Punjab decided that the rates were too high and re-negotiated these to Rs. 1100/ MT.
Comparison to existing rates: Higher than rates later fixed for MP silos, higher than the prevailing FCI/ government rates for storage. However, there's a basic difference in the two models; i.e., the MP model where land and VGF is provided by the government and the Punjab model where land is procured by the concessionaire and there is no VGF.
Government Support: Availability payments irrespective of usage, but subject to availability of agreed storage
Other advantages : Savings to government of $6 million
Contingent liabilities created: Fiscal commitments based on fixed charges for guaranteed tonnage over 30 years, termination payments
Risks: Payment risk
Level of risk: Low

Key risk mitigating features: -

Factors affecting decisions on the size of project or population serviced by the project: The project needs to be of a size sufficient to ensure coverage of all costs and reasonable returns to the investor over a reasonable period of time without unreasonably increasing the tariff level

Lessons learned:

- Policy framework was not in place at the time, so documents had to be prepared from scratch
- Quick scaling up was not possible due to the same reason
- Large savings to government due to reduction in wastage and retention of grain quality
- Need to replicate projects all over the country
- Planning Commission working on finalizing standard contract document for silos given that if a project is to be scaled up, upstream work needs to be in place while creating the project structure to save time and money
- The bid tariff was relatively high (as compared to the later MP model) due to the specific model adopted; i.e., no construction grant (VGF), land by private party; probably also newness of the project and no precedence for rates for this type of storage
- The tariff was renegotiated and brought down after bidder selection, but it is not clear what the basis of modification was; essential that benchmark tariffs are created by government early on in order to be able to gauge bids against government's own well analyzed benchmark levels
- Only 10 year financing is available to projects in India. Financing is difficult to come by even with availability payments. There is no true project finance as the credit rating of the firm and debt profile of the firm continues to remain an important consideration of financiers
- There were major governance issues at the provincial government level that delayed contract signing

Berhampur Solid Waste Project

Country: India
Sector: Solid Waste Management
Name of Project: Berhampur Solid Waste Management Project
Contracting agency: Berhampur Municipal Corporation
Agency type: Sub-national, local body
Type of PPP: BOT
Contract term: 20 years
Construction period: 12 months
Bid Parameter: Technical evaluation and the lowest level of grant required (with a cap of 25% of total project cost)
Total cost of project: $10.3 million
Total Population served: 400000
Per unit cost: NA
Basic specifications: Standards based on legislation and rules
Stage of project: The contract was signed in August 2013. The waste processing facility is under construction; operations are expected to begin in August 2014
Time taken for processing project from concept to contract execution: 24 months
Local or foreign investor: Local investor, UPL Environmental Engineers Limited
Applicable legislation: Municipal Solid Waste Management and Handling Act and Rules, Odisha PPP Policy
Approving authority: Government of Odisha
Is the approval process the same as for other projects: Approval Process followed was as required by the Odisha PPP policy i.e., approvals were sought at the local body, Department (Housing & Urban Development) and Empowered Committee on Infrastructure level
Role of Private Party: The private party will be responsible for collection, transportation, segregation, recycling, treatment and scientific disposal of waste, construction, operation and maintenance of composting facility and closing of existing dump site.
Role of Public Authority: Setting performance standards, monitoring and verification of performance and contract management
Financing: Support from DevCo, Ministry of Foreign Affairs, Netherland; debt and equity financing by investor
Payment Mechanism: Payments made by the Berhampur Municipal Corporation based on output
Tariff: Berhampur Municipal Corporation is not levying user charges
Comparison to existing rates: NA
Government Support: Monthly payments made to the private party; construction grant and concessional loan from Odisha Urban Infrastructure Development Fund (OUIDF), which is financed by KfW
Other advantages : Annual GHG emissions savings of 16000 tons
Contingent liabilities created: Fiscal commitments and contingent liabilities are created for the municipal corporation as a result of (a) monthly payments during contract term, (b) provision for termination clauses; comfort letter may present contingent liabilities to the state government as well.
Risks: project non-viability, payment risk, technology risk, performance risk
Level of risk: Moderate
Key risk mitigating features: Construction grant to mitigate lack of viability; 3-month reserves maintained in escrow account and automatic release of funds monthly to cover payment risk as also a letter of comfort from the Housing and Urban Development Department; detailed performance targets against indicators to cover performance risk;
Factors affecting decisions on the size of project or population serviced by the project: Viability was an issue here, but as the project serves the entire municipal area and is not a joint project, there was no

scope for increasing the size of the project; however, in the case of Cuttack and Bhubaneswar municipalities, they have developed a joint solid waste management project to ensure project viability
Lessons learned: • Standardizing documents could help scale up the projects; two other projects are being developed and implemented on similar lines now; • Waste treatment technologies are limited and it is especially difficult to understand at local level which technology will work or not work; • Solid waste projects with waste treatment facilities require large upfront investments but revenues are low; • There is less precedence for these projects and these are less known by lenders; there is less appetite for lending to such projects; • Since the Municipal Corporation pays, the payment risk was high due to lower credit profile ; this had to be supported by escrow mechanisms as well as comfort letter from the state government; • Lenders do not have appraisal skills for such projects; upstream work is required on how to appraise such projects for financing; • Infrastructure development funding facilities and partial risk facilities may need to be created to improve financing flows to such projects; • There are capacity issues at local body level both in the public sector as well as the local investors/ providers/ financiers

Health Diagnostics Project

Country: India
Sector: Health
Name of Project: Upgrading Radiology Services in Andhra Pradesh
Contracting agency: Department of Health, Medical and Family Welfare, Government of Andhra Pradesh
Agency type: Sub-national; provincial government
Type of PPP: BOOT
Contract term: 7 years
Construction period: 8 months
Bid Parameter: Lowest tariff
Total cost of project: $7 million
Total Population served: An estimated 1.2 million persons over 7 years in the cities of Kakinada, Kurnool, Vishakhapatnam and Warangal
Basic specifications: Output based standards and specifications derived specifically for the project maintaining the most recent quality accreditation, compliance with Atomic Energy Regulatory Board (AERB) guidelines
Stage of project: The project is operational since 2010-2011
Time taken for processing project from concept to contract execution: 8 months
Local or foreign investor: Local investors, Wipro GE Healthcare Limited and Medall Healthcare Private Limited
Applicable legislation: Andhra Pradesh Infrastructure Development Enabling Act 2001, AERB Guidelines
Approving authority: PPP Committee in Government of Andhra Pradesh
Is the approval process the same as for other projects: Yes, the route followed is as follows: approvals within the Department of Health, Medical and Family Welfare followed by approval of the Government of Andhra Pradesh
Role of Private Party: Financing, building / upgrading radiology facilities, equipment including MRI and CT, operation and maintenance in 4 teaching hospitals in the state
Role of Public Authority: Setting standards and specifications, monitoring and verification of performance, contract management and making regular payments for referral patients
Financing: Equity and debt by private provider
Payment Mechanism: Payments made by the Department of Health, Medical and Family Welfare for low-income patients, user charges for non-referral patients
Tariff: Set by bid, INR 1700
Comparison to existing rates: The tariff for the PPP radiology services is at 50% of the average prevalent tariff in the market per scan; however some anecdotal evidence is reported that tariff in the surrounding markets did fall following the commissioning of the 4 diagnostic facilities
Government Support: Advisory work supported by the Dutch Technical Assistance Trust Fund, VGF of 0.6 million by state government with the help of DFID funding, monthly payments made to the private party by the state government, GPOBA subsidy
Other advantages: • Government can now enable treatment of a much larger number of patients (almost double the earlier number) with the same budget due to the low price of bid; • Since these facilities are attached to teaching hospitals, they provide good opportunities for students to acquire skills using sophisticated diagnostic equipment
Contingent liabilities created: Fiscal commitments are created but overall there are net benefits as compared to the situation prior to the project in terms of a larger number of patients treated.
Risks: Demand risk, payment risk, performance risk

Level of risk: Moderate
Key risk mitigating features: There is no escrow mechanism or letter of support of the Government. For demand risk, while no minimum level of demand has been guaranteed, it is mandatory for all public hospitals in the area to refer patients to the PPP project for diagnostic testing
Factors affecting decisions on the size of project or population serviced by the project: The project needs to be large enough to be viable and to realize sufficient revenues to cover investment and costs; therefore, 4 teaching hospitals catering to populations in four districts were brought together in one single project.
Lessons learned: • The project reduced long waiting lines • Resulted in getting in better skills as well as better maintained equipment • A policy framework and standardized documents could help scale up the projects • The project had high level champions and therefore, could be rolled out within a reduced time frame, however, it is important to institutionalize processes, produce standardization and encourage use of templates to reduce dependence on individual champions. • Availability of financing is not a problem for such projects. There are several health equity funds in India, so there is a lot of private equity looking for such projects • Cumbersome process of approvals for project needs to be shortened • Cumbersome process for approving and making payments to the private party, which needs some overhaul given that the initial payments to the project were delayed • Substantial upgrading work in the hospital environment was required before the equipment could be installed and used • There are capacity issues at the level of hospitals as they need to acquire currently non-existent contract management skills in order to ensure best performance • Governments need to aggregate and roll out such projects in the future whereby there could be a better effort at contract management • GoAP did not have the Rashtriya Swasthya Bima Yojana (RSBY)/ health insurance scheme to provide cover for the out-patient diagnostic services. It had Agrogyashree, which caters to in-patient services only; GoAP therefore took the burden of paying for all low income patients.

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