

April 17, 2015

MEMORANDUM

**TO:** Mr. Zaidoun ElQasem – Greater Amman Municipality

**CC:** Ms. Swarupa Ganguli – U.S. Environmental Protection Agency

**FROM:** Ms. Sandra Mazo-Nix and Ms. Dana Murray– SCS Engineers, consultants to the CCAC/EPA Amman Team

**SUBJECT:** Best Management Practices for Increasing Private Participation in Municipal Solid Waste Services

### Introduction

The City of Amman (the City) is considering increasing private participation in its municipal solid waste services. The City would like to learn about the different best-management practices to increase the private sector's participation in solid waste services. This memorandum provides a summary of the best management practices used worldwide to increase private sector participation in solid waste service and also ensure that the solid waste services privatization process is efficient, seamless, and beneficial to the locality.

The best management practices presented in this memorandum are a compendium of published recommendations from the reference materials developed by the World Bank, the United States Agency for International Development (USAID), the German Society for International Cooperation (GIZ)<sup>1</sup>, and the Swiss Centre for Development Cooperation in Technology and Management (SKAT). Appendix A supplies links to all referenced materials for downloading from the Internet.

We wish to call out one referenced item, in particular: this memorandum follows the format presented by the USAID's *Solid waste Management Privatization Procedural (SWMPP) Manual* for preparing and implementing private-sector participation in solid waste services. USAID prepared the manual for the use of governorates of Egypt; its methodology was followed in Cairo and Alexandria. Other reports that we reference discuss the process of private-sector participation in less detail.

Some of the referenced materials, such as those from USAID and SKAT, include valuable examples of forms and contracts. The GIZ report includes summaries of case studies detailing private sector participation in solid waste services in African, Asian and Latin American cities.

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<sup>1</sup> Formerly known as the German Agency for Technical Cooperation (GTZ)

The body of this document is divided into four sections, as follows:

- Section 1: Solid waste privatization
- Section 2: Reasons for privatizing solid waste services
- Section 3: Five basic modes of privatization
- Section 4: Solid waste privatization process

## **I. Solid Waste Privatization**

In some developing countries, the word “privatization” has a negative connotation. In these countries, privatization means that the government divests its assets in a particular industry, gives up its involvement as the major stakeholder, and no longer plays a role in that industry. However, as many countries around the world have demonstrated, privatization in the solid waste context translates to private-sector participation in the solid waste management of a city. This private-sector participation is still monitored by city authorities, which are ultimately responsible for managing the wastes of the city.

Private-sector participation in a city’s solid waste industry can take different forms. The degree of private-sector participation will depend on the local needs and conditions of each city. The different forms of private-sector involvement include:

- Private-sector ownership and operation of the all of the different aspects of the solid waste system
- Private-sector ownership and operations of some of the aspects of the solid waste system
- Public ownership of all or some of the aspects of the solid waste system, with private sector involvement in the operations or management.

The optimal degree of private-sector participation for a particular municipality is individual to each municipality. Furthermore, as the local needs and conditions of a municipality change over time, the optimal degree of participation will most likely change as well. Solid waste management is an ongoing process that changes with population, product manufacturing, technologies, resources, etc. Each city’s solid waste sector needs to be continually monitored; as local needs and conditions change, so must the solid waste management system.

Private-sector involvement in solid waste management implies a shift in the principal role of the municipal government institutions from service provision to management and regulation. As described in the solid waste privatization process , the municipality will be responsible for an well-organized tendering and contracting process that will ensure effective oversight and control of the services implemented by the private sector.

## **II. Reasons for Privatizing Solid Waste Services**

Selecting the most acceptable approach to privatization may depend on the municipality’s reasons for exploring private-sector participation: efficiency, change, and policy<sup>2</sup>.

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<sup>2</sup> U.S. Agency for International Development (USAID), et al. *Solid Waste Management Privatization Procedural Manual*. 2009.

## A. Efficiency

In many countries, the private-sector approach to the management of public services has resulted in substantial improvements to the quality and reliability of the services or a reduction in costs. The efficiency of the private sector can be attributed to several factors, including:

**Competition.** The competition among private-sector firms and with any public-sector providers promotes efficiency. Competition also promotes attention to accomplishing the job correctly. A firm that does not do its job correctly is in danger of being fired. A firm that is not efficient is in danger of being put out of business by its more efficient competitors.

**Expertise.** Private-sector firms can specialize in a specific industry or service like solid waste management and end up providing the service in multiple locations for multiple clients. This allows them to build stronger in-house expertise, gives them greater ability to adapt to different circumstances, and gives them the benefit of economies of scale. The ability to access that expertise also makes the private sector more efficient because high-level technical expertise might not be available to local governments. Likewise, for new technologies, the private sector can more readily access newer, more efficient technologies than the public sector.

**Flexibility.** In most cases, the private sector has more flexibility in its institutional and operational structure. The private sector has simpler administrative procedures and, in most countries, relative freedom from political interference. Simpler administrative procedures give the private sector the flexibility to readily deploy its labor and maintain its assets. Also, private-sector management offers greater ease in firing or laying off personnel and in rewarding high performers.

**Economic incentives.** In general, the private sector establishes employee incentive programs to give performance bonuses, raises, other economic incentives, and career-development opportunities to increase productivity and expertise. Fewer incentives exist to encourage high performance in public organizations.

**Access to capital and finance.** One of the biggest challenges facing public-sector solid waste managers in many countries is a lack of capital. Many public-sector solid waste managers feel they could do a much better job if they had the funding to acquire more resources (i.e., purchase land, equipment) and properly manage assets (i.e., maintain new vehicles and equipment). Unfortunately, there are no mechanisms for the public sector to raise capital, other than relying on funding from the national government or on unpredictable and infrequent contributions from donors or international entities. However, the private sector has access to many sources of capital, such as stockholders' equity, bonds, and bank loans. The private sector's ability to raise capital to finance new operations or improve them gives it a distinct advantage over the public sector. Access to capital not only allows improvements in efficiency and coverage, but also allows for better planning.

**Accountability.** Government officials may prefer to escape solid waste management: it is a complex service that relies on optimizing the productivity of workers and equipment. Government officials may wish to place accountability on the private sector. In addition, municipal solid waste services are highly visible. Public solid waste service failures (e.g., uncollected waste, open dumps, smelly treatment or disposal sites) can generate strong sentiments among citizens. Municipal authorities may wish to show voters or higher government officials that they are taking action by privatizing those services in which public agency has failed to provide a good service. After privatizing, the local government can point citizens to the private sector when citizens have complaints about their solid waste services.

## **B. Change**

Unforeseen or future changes in a city can drive the local government to turn to the private sector to provide solid waste services. Two types of changes can drive the local government engage the private sector in its solid waste services:

**Demographic.** Changes in population size, variations in the demographics of the population, and expansion of the population to peripheral areas can strain public solid waste management resources. As a consequence, cities may have difficulties collecting the increasing amounts of waste, expanding the waste collection coverage to peripheral areas, and treating and disposing of the collected waste. These difficulties may lead to common waste collection points filled above capacity, small open dumps in diverse locations, litter, and accumulated debris. In some municipalities, overflowing waste containers and new open dumps compel citizens to indiscriminately burn the waste. Introducing the private sector can increase the coverage of the solid waste services of the city, in particular to low-income areas, where coverage service by the local government may be inadequate.

The health and environmental effects of a struggling solid waste management service include:

- Breeding grounds for disease-spreading rats, insects, and other animals
- Nuisance odors
- Emission of air, water, and ground contaminants, including methane from anaerobic decomposition of the organic fraction of waste in open dumps and black carbon from indiscriminate waste burning
- Unaesthetic spaces.

**Restructuring.** Another driver behind privatization may be local government restructuring, with the goal to provide better public services. Part of that restructuring may involve simplifying the administrative and technical responsibilities of the solid waste management department. Local government officials may look to the private sector to manage complicated or technical tasks for the solid waste department as a way to lessen the administrative burden of that department.

## C. Policy

The regulatory framework governing localities – whether national, regional, or local – may be conducive to participation from the private sector in the solid waste management of the city.

**National Directive.** The private sector may be invited to provide services to comply with central government policies on the environment, health, solid waste management, and privatization. In places where environmental legislation is not enforced, contract conditions can be framed and enforced to ensure adherence to minimum environmental standards. National solid waste management legislatures, either regional or at the city level, may have resource recovery mandates or goals. These mandates or goals may drive the need to involve the private sector, particularly for new non-traditional solid waste services such as composting and anaerobic digestion.

**Risk Minimization.** With increased environmental regulations and changing service profiles, localities have greater financial risks to provide integrated waste services. Liabilities associated with potential pollutants from waste disposal and incineration facilities loom large for some local governments. Workers' health and safety regulations can provide additional financial burden to localities particularly because of the ample risks associated with some of the professions of the solid waste industry. Both kinds of risk, financial and health and safety, have motivated some localities to involve the private sector, which often assumes some or all of these risks.

**Cost Recovery.** Municipalities may enact policies to offset some of the costs related to providing solid waste services in the city. By allowing private-sector participation, the locality may justify the introduction of a waste management fee by arguing that the new private-sector service must be paid for.

## III. Five Basic Modes of Privatization<sup>3</sup>

Below are the five most common basic modes of privatization employed worldwide for the provision of solid waste services. Volume One of Sandra Cointreau-Levine's paper, *Private Sector Participation in Municipal Solid Wastes Services in Developing Countries*, provides a thorough discussion of each mode of privatization, including case examples and how each mode can be used to contract main solid waste services, such as solid waste collection, transfer, and disposal. The paper discusses other advantages to each mode, such as fostering competition, recovering costs, and leasing equipment.

### A. Concession

A concession is a contractual arrangement whereby a private operator is selected and awarded a license to provide specified services over a discrete period of time in return for a negotiated fee. Under a concession agreement, the private sector finances and usually retains ownership of the solid waste management facilities. This ownership is for a period of time sufficient to depreciate investments and to provide a reasonable return to equity investors. The concession agreement

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<sup>3</sup> U.S. Agency for International Development (USAID), et al. *Environmental Guidelines for Small-Scale Activities in Africa (EGSSAA) – Chapter 15: Solid Waste: Generation, Handling, Treatment and Disposal*. ENCAP, 2009.

might include: performance standards, methods of judging performance, penalties for delay or nonperformance, risk assignment, insurance requirements, and dispute resolution, as well as standards for worker health, worker safety, and environmental protection.

Concession arrangements involve building, owning, and operating facilities through long-term contractual agreements. Depending on the objectives of the locality, it may choose two types of concession arrangements:

- Build, own, operate, and transfer (BOOT)
- Build, own, and operate (BOO)

## **B. Management Contract**

A management contract places a municipal service under private management for a specified period of time, for which the contractor is paid a fee. The fee may be based partly on performance. The private firms are paid by the local government from general revenues raised by direct user charges. The private manager has extensive autonomy, as set out in the contract. Among the modes for private-sector participation, contracting the solid waste collection service holds the greatest promise to developing countries as a way of lowering costs. Reduced costs are the product of significant efficiencies that may be achieved even when only a small portion of the city is served under private contract. Efficiencies may be achieved because the public service delivery monopoly is contested, according to the principles of the contestable market theory<sup>4</sup>. Contracting is well-suited for discreet solid waste activities, such as the operation of a transfer station or sanitary landfill. Contracting can also be used for cost recovery, by contracting the billing and collection of solid waste user fees to utility companies, and for leasing equipment.

## **C. Commercialization**

Commercialization is a process in which the city authority forms a wholly owned subsidiary. Shares of the new company are restricted, and consumer representatives, the local government, and other stakeholders make up the board of directors. The ownership of assets, regulation of tariffs, and quality control remain at all times vested in the municipal authority. The new company can function as a private company by making section managers accountable for costs. The company can also give the management the flexibility to hire and fire freely and provide incentives for staff.

## **D. Franchise**

Through a franchise, the city authority awards, through competition, a finite-term, zonal monopoly to a private firm for the delivery of service. The private firm pays a license fee to cover the government's costs of monitoring, recovering earned revenue through direct charges to households and the establishments served. The city authority provides control over the tariff charged to the consumer. The fee may be regulated by ceilings fixed by municipal ordinance. In the case of franchising solid waste collection, larger communities may issue multiple collection franchises, each for a different geographic area, type of customer (single-family, multi-family, or commercial), or material collected (recyclables or refuse). However, economies of service are attainable only when waste is collected along a contiguous route or within an exclusive zone.

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<sup>4</sup> Cointreau-Levine, S. *Private Sector Participation in Municipal Solid Waste Services in Developing Countries. Volume 1: The Formal Sector.* The World Bank's Urban Management Program, 1994.

### **E. Open Competition**

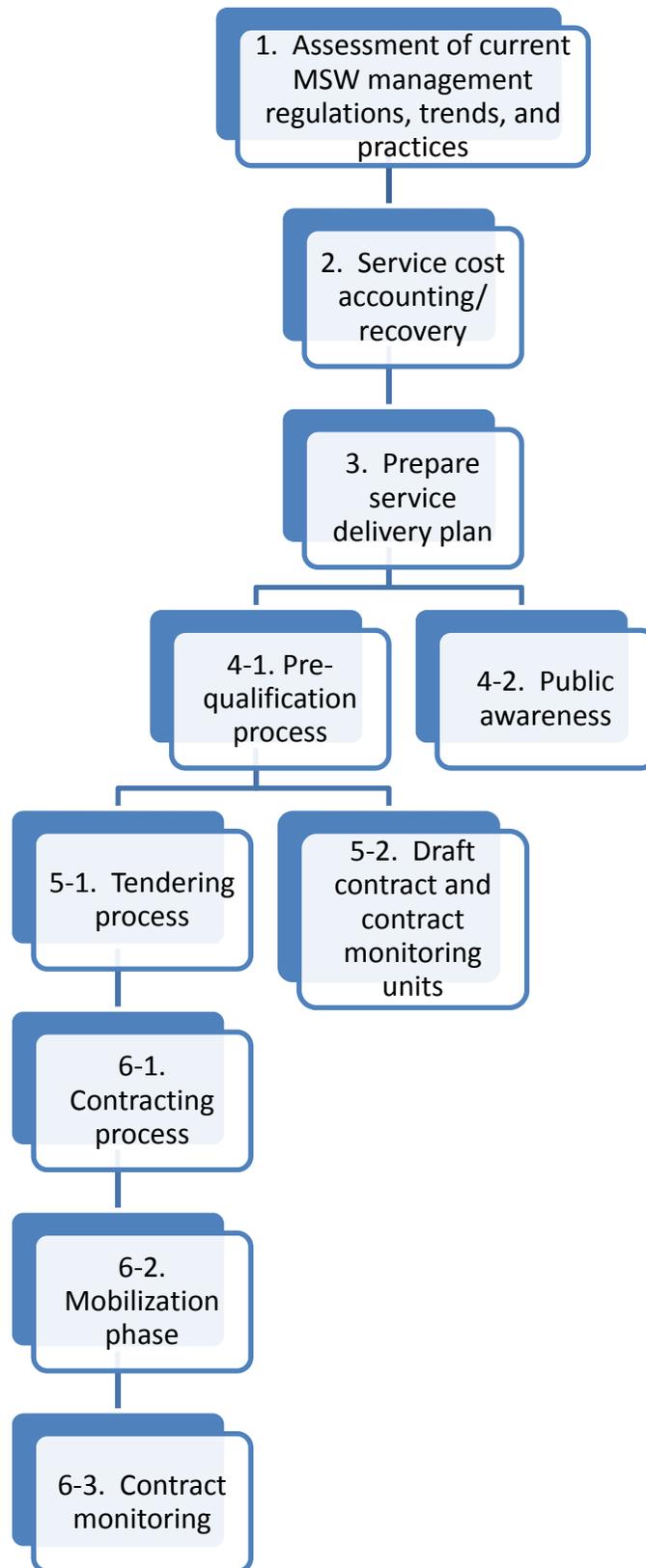
Open competition is also known as private enterprise, private subscription, or entrepreneurship. This is a mode whereby the city service authority freely allows qualified private firms to compete for the delivery of a service. Individual households and establishments make private arrangements with the private enterprises that compete for business. Under such arrangements, city councils license, monitor, and sanction the private firms as needed. Private firms bill their customers directly.

Generally, when this form of privatizing is used for solid waste collection, it leads to substantially higher costs than those incurred when a city contracts with private firms; it is often more costly than public-sector service. When a number of competing firms operate in the same area, along the same streets, each loses “economies of contiguity” and have a higher environmental impact. Open competition arrangements are commonly found in the provision of solid waste recycling and for the maintenance and repair of equipment.

## **IV. Solid Waste Privatization Process**

Private firms can usually provide solid waste services, such as collection, transfer and disposal of waste, more efficiently and at a lower cost than the public sector. However, formal private sector involvement in solid waste management does not in itself guarantee efficiency.

The modes of privatization (identified in Section IV), not including commercialization, share the same preconditions for successful private-sector involvement: competitive bidding, existence of enterprises with adequate technical and organizational capacity, effective regulation of the partnership arrangements, and adequate management of the private partners through clear specifications, monitoring, and control. To ensure that these preconditions are fulfilled, the following schematic diagram (see Figure 1) shows a series of recommended steps to involve private participation in the city’s solid waste management. These steps are described in greater detail in the following sections.



**Figure 1.** Solid waste privatization process schematic

## A. Pre-process Considerations

A few preparations need to be undertaken before the privatization process is started. The involvement of the private sector represents, in many cases, a major change in the procedures of a municipal administration. To prepare for those changes, several considerations need to be made.:

- Public-sector staff need to be prepared with the skills necessary to work effectively with a private-sector provider. The staff also need to understand the reasoning behind the decision to involve the private sector. Their enthusiasm and support are important and can be developed by presenting the benefits of private sector involvement together with data and information from cities that faced similar changes. The staff will need to understand the privatization process, including: collecting data and setting objectives for private-sector participation; preparing comprehensive, specific, and detailed tender documents; choosing a contractor with the ability to provide defined services at an affordable cost; preparing a contract with clear conditions for both parties; and ensuring service standards are met, costs are controlled, and the environment is protected.
- While the skills of the public sector staff are being developed, the assistance of experienced consultants can be useful to guide the decisions that must be made before tender documents can be prepared and published. Experts in the fields of law, accounting, contract management, and solid waste management should participate. Experts in solid waste management should have practical experience working in the field and working together with the public and municipal leaders. This practical experience will enable the local government officials to understand what can reasonably be expected from the contractors. Working with these experts will become part of the training of the public-sector staff.

## B. Steps of the Solid Waste Privatization Process

### 1 Assessment of Current MSW Management Regulations, Trends, and Practices

The first step in the solid waste privatization process is to assess the current state of solid waste management in the city, including trends, practices, and relevant legislation. The assessment should include the following.

***Review of the policies and regulations:*** It is important to review all relevant legislation to determine which laws need to be amended – or which restrictions cannot be changed – to avoid difficulties during the process of involving the private sector. Below are some of the aspects that need to be considered:

- Can the private sector provide a public service?
- Does the legislation allow licensing enterprises for solid waste services?
- Are there regulations regarding the handling of special wastes?
- Does legislation permit the collection of fees? In what manner?
- Do existing laws and contract requirements enable small enterprises to participate?
- Are there regulations that limit the length of contracts? Will these limits be suitable for waste management?

- Are there cross-boundary arrangements for transportation and disposal of waste to neighboring administrative areas?
- Is the local government allowed to sell or lease its vehicles to a private enterprise? Can the status of government employees who will be transferred to contractors be changed?
- What are the applicable labor laws?
- Does the legislation allow the local government to establish an agency to monitor the performance of private-sector providers and to enforce fines or other sanctions?
- What are the current environmental standards? Will new standards be needed to cover services not previously available?
- What are the regulations regarding the participation of international companies?
- Is there legislation to prevent monopolies or cartels?
- Does the law enable transparency and availability of information to the public?

***Establish objectives and who should be the client:*** Before involving the private sector, establish the objectives of the new solid waste management system and which government entity will be the client. The objectives might include:

- Complying with national and local laws
- Improving all or certain solid waste services, such as waste-collection efficiency, waste-disposal practices, street cleaning, recovery of valuable materials, etc.
- Setting up a solid waste cost-recovery system
- Setting up and maintaining a relationship between public- and private-sector partners that is sustainable and effective.

In many cases, it may be clear which government entity will be the client of the private service provider. However, depending on the service, there can be several options for the client role. For example, in the case of street cleaning or waste collection, the client might be the municipality or a district, but the transfer and disposal of waste might be the responsibility of a regional organization. The client of each service should be defined early on in the process, to establish associated responsibilities and a framework to work with the contractor.

***Evaluate the existing solid waste management system:*** Part of this step is to evaluate the existing solid waste management system of the area or service area requiring new waste management services. This evaluation should provide the information necessary to assess which components of the existing system are satisfactory and which are not. This latter information should guide the selection, planning, and implementation of a future waste-management system that includes private-sector participation. Below are the aspects of the solid waste management system that need to be included in the evaluation.

- What types<sup>5</sup> and quantities of waste are produced in the service area?
- What waste-management services are currently provided in the service area?

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<sup>5</sup> Types of waste include: residential, commercial, industrial/manufacturing, institutional, agricultural, medical, and construction/demolition, as well as municipal service waste, such as from sweeping and collecting waste from public areas.

- Who is providing the identified waste-management services?
- Are the existing waste-management services adequate? Service delivery should be evaluated against the goal of meeting specific performance and cost efficiencies.

The information gathered during this evaluation should allow the city authorities to determine which waste services in the service area need to be improved and go start developing waste-management service alternatives.

***Develop waste-management service alternatives:*** Based on the legal review, the established objectives, and the evaluation of the existing waste system, the city authorities should be able to identify one or more preferred waste-management service alternatives for the targeted service area.

Each preferred service alternative should address:

- The desired service types to be provided (see the glossary for the different types of waste management services)
- The desired customer base for each service type (i.e., single-family housing, multi-family housing, small commercial business, large commercial business, etc.)
- The level of service for each service type (i.e., door-to-door collection, building-to-building collection, waste recycling and composting, landfill, etc.)
- The service frequency for each service type (i.e., daily collection, bi-weekly collection, 24-hours-a-day waste disposal, weekly sweepings, etc.).

City authorities then will use a financial model to ascertain the financial feasibility of the preferred service alternative. If the model indicates that the initial preferred service alternative is too costly or is otherwise financially unfeasible, then the service alternative should be modified and its feasibility re-evaluated.

## **2 Service Cost Accounting/Recovery Analysis**

The locality must understand the costs of the existing waste-management system and be capable of approximating the cost of each of the services to be privatized. The USAID's *SWMPP Manual* on solid waste management privatization recommends using full cost accounting (FCA). Using FCA will allow the locality to develop and operate a financial management system that will determine the cost of existing services, estimate future costs based on new and different service standards, and estimate and collect solid waste management fees based on the services provided. Chapter 3 of the manual provides detailed information, broken down into seven steps, on how to use FCA to develop the financial management system and conduct the financial analysis. The results of the analysis will provide a solid foundation for selecting the desired type and level of services that the public or private sector will provide within the service area.

Chapter 3 of Adrian Coad's book, *Private Sector Involvement in Solid Waste Management*, stresses the importance of obtaining a reliable estimate of the costs of the service. The chapter also provides key considerations for determining and estimating revenue sources, evaluating and addressing "willingness to pay" for solid waste services, evaluating the mechanisms of fee collection, and anticipating actual revenue collection.

### **3 Prepare Service Delivery Plan**

If a particular waste management service is being provided in an entirely dissatisfactory and inefficient manner, then it would be logical to make significant changes to the existing service delivery system. In this case, the results from the completion of the previous steps will inform the new service delivery plan. The service delivery plan describes the desired service alternative and the desired methods for delivering the waste-management services. The service delivery plan must clearly identify:

- All services to be provided, including service level and frequency
- Service area
- Locations or areas where the services are to be provided
- Service provider (private or public) for each service
- Mechanisms for service delivery (see Section IV)
- Revenue systems to pay for the services
- Plans to implement the service delivery plan.

For the purpose of this memorandum, the service delivery plan identifies service providers as those from the private sector. The different options for each of the service delivery plan elements, identified above, allow for different configurations, as Figure 2 suggests.

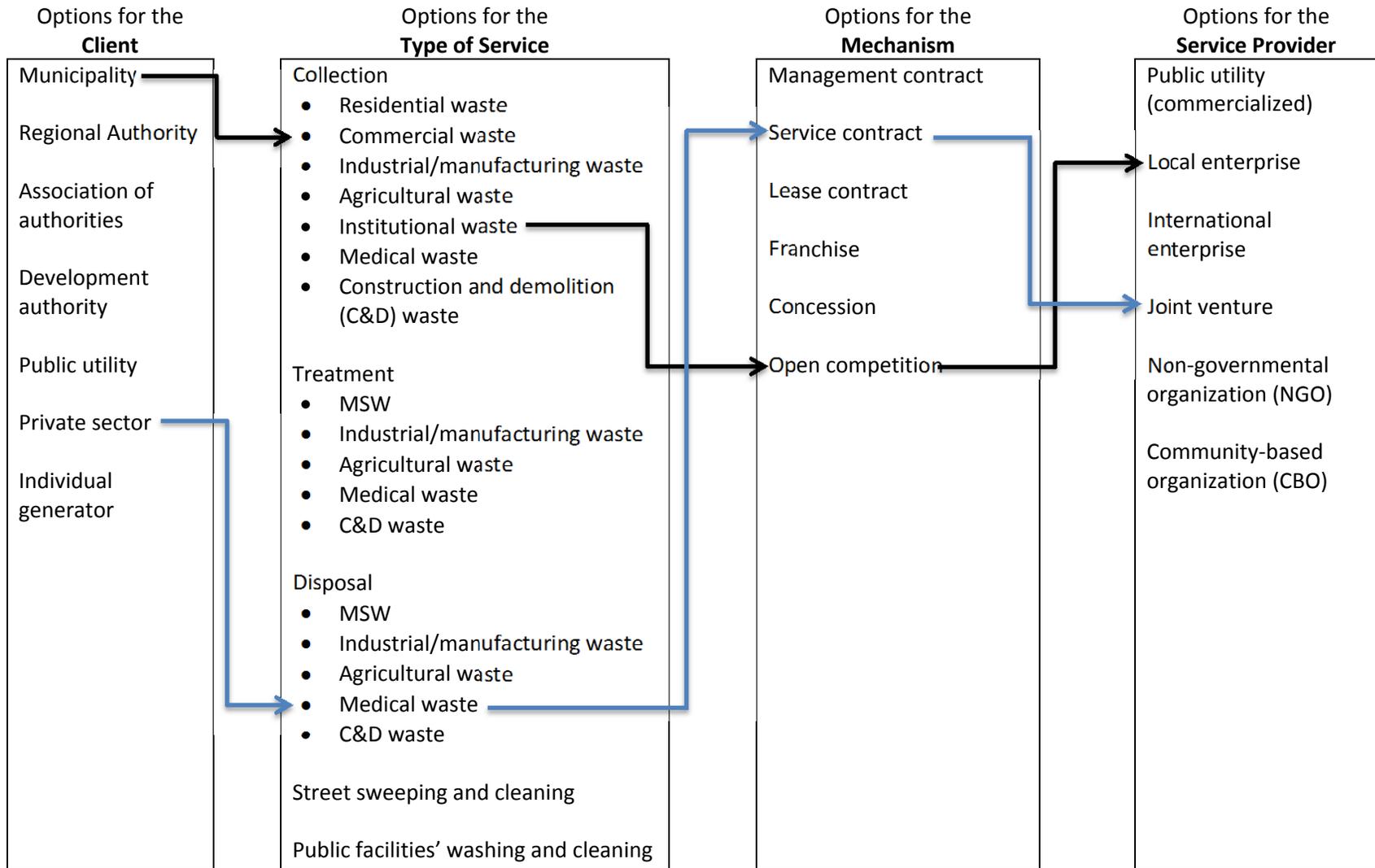


Figure 2. Institutional options

#### 4-1 Pre-Qualification Process

A pre-qualification process can help filter out the firms that are unlikely to be successful in winning the formal bid. The pre-qualification process saves time in the long term because it will reduce the amount of time spent assessing the proposals, most of the time large documents, to decide which bid is the best.

Therefore, it is in everyone's interest to reduce unproductive use of time by excluding the firms that are unlikely to meet the tender requirements. At the end of the pre-qualification process, only those interested companies that satisfy certain criteria are eligible to compete in the full proposal stage. The pre-qualification criteria may include the following:

- Relevant experience with similar work; work in a similar location
- Evidence of good financial and managerial conduct
- Financial reserves sufficient to start and maintain the work.

Chapter 4 of the USAID's SWMPP manual describes in detail the contract pre-qualification process and suggests that it can be conducted in six steps:

1. Establish a tender committee
2. Establish the pre-qualification process schedule
3. Prepare the Request for Qualifications (RFQ)
4. Advertise the procurement to the public
5. Issue the RFQ to interested contractors
6. Evaluate the responses, select the pre-qualified contractors, notify perspectives bidders, and publish the results.

#### 4-2 Public Awareness

A successful solid waste management system needs the cooperation of citizens to maintain a clean and healthy environment, as well as to ensure a high level of participation in fee payment. The public must have a clear understanding of the benefits of a clean environment and how good solid waste management minimizes health risks and protects the environment. Members of the public should understand the important role they play within the locality's solid waste management system and what actions they are required to take, including abiding by the guidelines about waste disposal, cooperating with the service provider, and reducing pollution.

An improved understanding of the importance of a clean environment and of the expected actions from the public and the service provider should lead to a decrease in unnecessary workload of the service providers that results from bad habits such as:

- Littering
- Discarding of waste outside of the set-out times and locations
- Burning waste inside the containers or in improvised open dumps
- Digging waste out of containers and scattering it to find recyclable materials
- Illegal dumping of difficult wastes, such as waste oil, furniture, and electronics
- Using the incorrect waste container

Some of these practices have environmental and health effects, including the generation of methane and black carbon; all of them lead to significant financial burdens for the locality and service providers. Informing the public about the environmental, aesthetic, and financial

consequences of the practices above may help establish a sense of ownership, reduce service costs, benefit the environment, and maintain a cleaner locality.

Public awareness is particularly important concerning the following aspects of the process.

- *Communicating status*: Members of the public should have access to information of the elements of the solid waste management system so they understand how the different solid waste services are provided. Information should be available on positive developments, such as the addition of a new service or the extension of an existing one; on winners of competitions and incentive benefits; and on other factors expected to improve service or standards. In particular, information that requires public action should be available, including set-out requirements of the waste collection service and handling methods for special types of waste (i.e., C&D, white goods, unwanted furniture).
- *Before the changes to the service*: The public should be informed of any changes to the type of service, in particular if a new service provider will require the public to take new or different actions.
- *During the service provider contract's period of performance*: The public needs to know how to make complaints regarding unsatisfactory services.

More information on how to implement a public-awareness campaign can be found in Chapter 7 of the USAID's SWMPP manual. Adrian Coad's book, *Private Sector Involvement in Solid Waste Management*, has additional considerations regarding public awareness, including consulting members of the public in decisions that affect them directly and empowering the public to provide valuable monitoring of the solid waste management services.

## 5-1 Tendering Process

The standard steps in a normal tender or proposal process appear in Figure 3; they are:

1. Prepare the tender documents
2. Notify pre-qualified bidders
3. Receive and open the offers
4. Collate offers for adjudications
5. Adjudicate the tender.

Preparing the tenders and evaluating the offers are the most important steps of the tendering process. Both steps will be discussed in more detail in sections below. After the tender documents have been prepared, a formal invitation is sent to the pre-qualified bidders. The formal invitation is a written request to the pre-qualified bidder to submit a tender offer for the desired services in accordance with the terms and conditions of the tender document. The invitation should inform the bidder of the location to obtain the tender document.

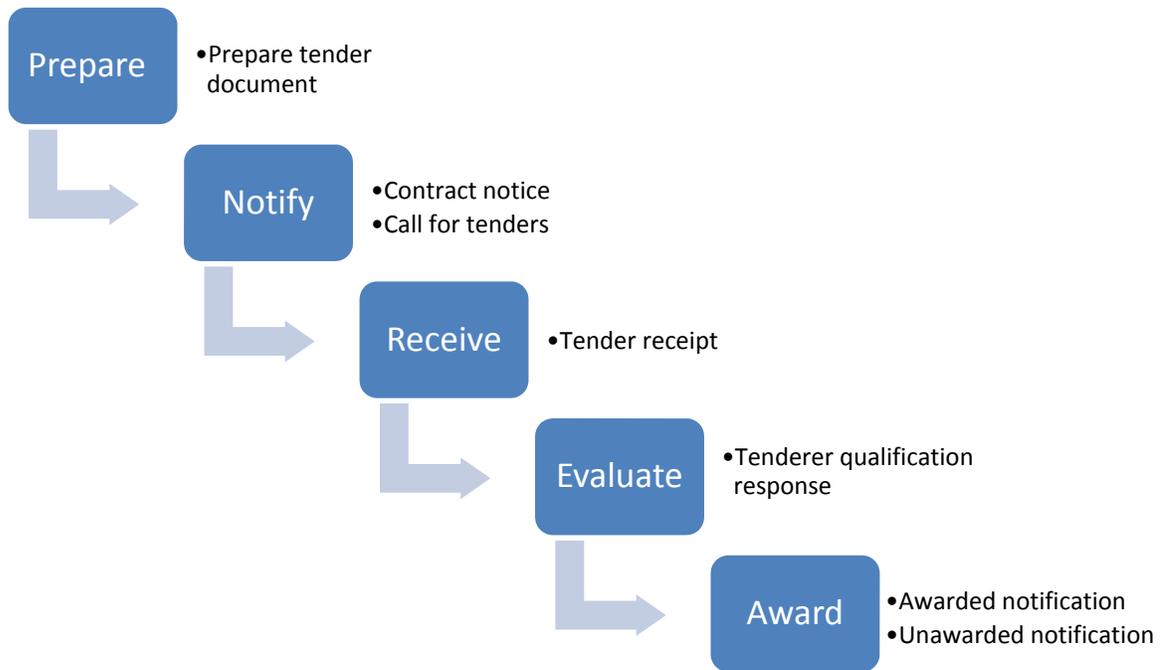


Figure 3. Tendering process

Ample time should be given for the bidders to prepare their responses to the tender document. The time allowed for the bid preparation should be in relation to the complexity of the desired services. The allowed time should be enough for bidding companies to effectively organize their resources and produce their proposal in time for the deadline for submission. Last-minute postponement of the submission deadline penalizes bidders who plan their work. An extension of the deadline should be granted if fundamental questions are raised by one or more bidders, and the resulting decision by the locality has a major effect on the services to be provided – thus requiring significant modifications to the proposals. Extension requests coming from several bidders should be handled with care because it may be a sign of collusion among bidders.

Formal procedures for receiving and opening proposals should be framed in such a way as to reduce opportunities for corruption. A common approach is to open all of the technical proposals in the presence of representatives of the bidding companies. During this ceremony, the attendance of the representatives is registered and the names of the bidders are announced. Other information that might be given during the opening bid ceremony include a reminder of the timeline for the evaluation of the technical proposals, the date and place of the announcement of bidders who met the requirements for further consideration, and the date and place of the ceremony to open the financial proposals of the bidders who qualified.

After the proposals have been evaluated, the locality should notify the successful bidder, in writing, that its tender offer has been accepted. Notifications of no-award should be sent to unsuccessful bidders.

## A. Tender Document Preparation

Preparing tender documents is a time-consuming and complex activity. Through the tender document<sup>6</sup>, the locality communicates the technical information for the project and establishes specific terms and conditions for the services to be provided by the contractor. In addition, the tender document should contain specific managerial, business, performance and security requirements, and other general terms and conditions of the proposed contract.

Below are some of the items that should be included in the tender document. More detailed information on each of these items can be found in Chapter 5 of the USAID's SWMPP manual.

- Project background
- Instructions for clarifications of the tender; site visitations
- Instructions for the submission of the technical and financial proposals, including format and content
- Schedule of the tender process
- Language regarding the cost of tender offers
- Specific instructions for joint ventures or other associations
- Right to accept or reject any proposal and to annul the tender process
- Instructions for modifications and withdrawal of the proposals
- Process to evaluate the tender offers
- Instructions for the successful bidder.

Tender documents should be written in a way that facilitates the comparison of the resulting bids. Extreme caution should be taken when the tender documents need to be prepared by the locality under a limited amount of time. Time pressures and the unavailability of tender expert writers often lead localities to copy tenders from other localities, which can lead to errors regarding the needed services and facilities.

## B. Evaluate the Tender Offers

Evaluating proposals requires a good understanding of solid waste management and contract management. Preparing evaluation criteria in advance is mandatory and should have been clearly stated in the tender document or have been available to the bidders during the bid preparation time.

Below are some of the recommended steps to evaluate the tender offers.

- *Determine compliance with general submittal requirements.* The locality may disqualify a bidder if the significant submittal requirements are not met.
- *Evaluation of the technical proposal.* The tender evaluation system should include a method for assigning different weights to the evaluation criteria, based on their importance. A weight (numeric value) can be assigned for each criterion based on its importance. The priority of each criterion, relative to each other, is represented by its share of the total points. Typical technical proposal evaluation criteria include consideration of the following categories: qualification and experience of proposed personnel, scope of work, schedule, equipment, and facilities being offered by the bidder.

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<sup>6</sup> A.k.a. : Request for tender (RFT), request for proposal (RFP), requests for bids (RFB), or invitations to bid (ITB).

A list of sample criteria for evaluating the technical proposals is provided in Annex A5 of Part III of Sandra Cointreau-Levine's *Guidance Pack* (2000). The end result of the technical proposal evaluation should be a list of bidders that have clearly demonstrated that they are technically competent to perform the require services and have the institutional capacity to fulfill the contract requirements.

- *Evaluation of the financial proposal.* If the bidders have met the minimum requirements of the technical proposal, then their financial proposals should be opened and evaluated. The evaluation of the financial proposal is normally a simple and straightforward process. The tender document will usually include a form or table listing each item or service and a space for the bidder to give a price for providing the described items and/or service. Financial proposals can be evaluated on the basis of lowest reasonable total price for a service or the lowest reasonable price of a unit, for example, price per ton disposed or price per household. The lowest-priced qualified bidder would rank first in the ranking of bidders based on price. One important consideration is to determine the reasonableness of the proposed price by the bidder. This is particularly true when the lowest price differs in great amount from the prices of the other bidders.

After unifying the comparison criteria among the submitted proposals regarding all technical and financial considerations, the tender will be awarded to the bidder who offered the best terms and conditions and has the lowest reasonable price.

## 5-2 Develop Draft Contract & Contract Performance Standards

Overall, tender documents are expected to be the model for the contract that is ultimately agreed upon between the client and the successful bidder. Starting the preparation of the draft contract while preparing the tender document is recommended, therefore ensuring that both documents are congruent. The draft contract can include most of the elements for solid waste management services. The formal contract is an extensive document, often more than 100 pages long; it must be precise in its definition of words, tasks, responsibilities, risks, allowances for variations, and courses of action to be taken to resolve disputes.

Chapter 5 of the USAID's SWMPP manual describes in more detail the basic elements of the draft contract. Annex A10 of Part III of Cointreau-Levine's *Guidance Pack* provides guidelines for developing contractual arrangements for different types of agreements for the collection, transfer, and disposal of MSW by the private sector.

The contract must contain the definition of measurable outputs of service required of the contractor; this enables performance monitoring. Contract performance standards establish minimum acceptable levels of performance relative to a service specification. Normally, financial penalties are associated with contract performance that does not meet the specified requirements of the contract. The contract must stipulate how the performance will be monitored to ensure that the contractor is providing the specified services. Generally, monitoring is accomplished by observing and supervising, first hand, the work of the contractor. However, other methods are available, such as requiring "self-reporting" by the contractor, or receiving and monitoring complaints expressed by the customers served. Chapter 5 of the USAID's SWMPP

manual provides examples of contract performance standards and associated performance monitoring parameters.

### 6-1 Contracting Process

After a bidder has been selected through the tendering process, the next stage is the contracting process. During this process, the locality has to finalize structuring the contracting of the solid waste services. The main objective in contract negotiation should be establishing an agreement whereby the local government maintains needed control over its waste stream, users are assured low-cost and high-quality waste management services, and the private contractor is able to maintain a profitable business.

Sometimes, the locality or the client asks for changes to the terms of the tender offer just before the contract is signed. The bidder's tender offer cannot be modified unless the bidder agrees to do so and the bidder is not required to modify the terms of his tender offer. A negotiation of changes may occur before the execution of the agreement, but this is a bad practice and can cause significant delays in the signing of the contract.

Adrian Coad's book, *Private Sector Involvement in Solid Waste Management*, has additional considerations regarding the preparation of contracts. Mr. Coad explains the need for contracts to be precise, comprehensive, and practical; he discusses the shortcomings of brevity, excessive detail, and vagueness. The book stresses the use of the contract to establish a balanced partnership between the client and the contractor. Risks should be allocated between the two partners. The contract needs to state the rights of each side and how each will be held to their obligations. Other key considerations when developing a contract include text to accommodate for unforeseen changes (i.e., financial fluctuations such as inflation and in exchange rates or physical changes such as new collection areas, new waste sources, unaccounted population increases, etc.), for transfer arrangements for staff or equipment, and provisions for resolving disputes.

### 6-2 Mobilization Phase

After the contract has been signed, the contractor is allowed a period of preparation and mobilization. This period can be one of intense activity, depending on the type of services to be provided, and can include:

- *Data collection*: The data needed for the initial planning of the operations can include detailed maps of the waste generators (residential, commercial, institutional, and industrial), estimates of the population, characteristics of the streets, etc.
- *Formulation of a detailed plan*: Amend proposed plan with new available details and operations' schedule.
- *Acquiring equipment*: Depending on the specifications of the contract, the contractor may be required to purchase or lease the existing equipment or introduce new equipment. In the former case, the contractor and the client need to assess the condition and value of the machinery as close as possible to the time when it is handed over to the new contractor. This will allow that the contractor can determine how much will be required to invest in the machinery and if more equipment is needed. In the case of needing to import

equipment, the contractor will have to work with the client to streamline customs processes.

- *Preparation of facilities:* It is generally the responsibility of the client to ensure that the land to be used by the contractor for transfer, treatment, and disposal operations is ready to be accessed and developed. The necessity to rehabilitate a site needs to be specified in the contract because such rehabilitation requires a considerable amount of work.
- *Recruiting staff:* The contractor may need to hire additional workforce to staff the different elements of the contracted service.
- *Preliminary public awareness activities:* In the case that the contract service interacts directly with the public, the contractor will need to start developing preliminary public awareness activities.

### 6-3 Contract Monitoring

Contract signing marks the beginning of the contract administration and monitoring process. However, the importance of contract administration and monitoring is often not realized in the preparation stages of involving the private sector. Although it is a significant cost and responsibility that remains with the private sector, the public sector must also invest resources and time to ensure that contract administration and monitoring is done efficiently and fairly. Contract monitoring is a public-sector function requiring personnel and equipment allocations and training effort.

A good contract precisely defines the services that the contractor is engaged to provide, measurable outputs, and shortcomings that will attract a penalty. The contract should also specify which shortcomings the contractor will be given a specific amount of time to rectify before a specified penalty is charged, and which actions will result in an immediate specified penalty. Furthermore, for both cases, the contractor should be informed of the intention to impose a penalty to allow for an opportunity for discussion. The main purpose of monitoring is to encourage consistent, good performance of the service. Efficient and fair monitoring helps the service provider develop good working habits and achieve high standards so that it will provide good service in a sustainable way.

Monitoring inspectors should understand solid waste management, the contract they are enforcing, the exact contractor requirements, and the agreed-upon operation schedules. The operations schedule enables the client to check that the services are being provided according to the contract. This is part of the client's basis for evaluating the contractor's performance and determining, objectively, if fines should be imposed. Also, monitoring inspectors should have sufficient training and be given incentives to ensure that they spend their time in the field and following proper procedures. It is recommended that all inspectors sign their monitoring sheets, thereby accepting responsibility for them, and that these reports are checked regularly for alterations and for accuracy by supervisors in the field.

The first time a service is contracted, a probationary period is recommended at the beginning of the operations phase so that both client and contract can learn and develop their methods. During this period, penalties are not charged, but the contractor is informed of each shortcoming that would normally lead to a penalty, or penalties are charged at a reduced rate. After this period, the

contractor can be expected to provide the service according to the contract; members of the contract monitoring department can be expected to understand their mission better and do their work efficiently.

The Chapter 6 of the USAID's manual presents a seven-step approach to implementing a contract monitoring department or unit. The seven steps are as follows:

1. Build a base for contract monitoring and administration
2. Choose an organizational structure
3. Staff the organization
4. Identify equipment needs
5. Develop a budget
6. Develop a contract monitoring plan
7. Hire and train staff.

The contract monitoring department will be solely responsible for monitoring the work of the contractor and issuing instructions to the contractor. Other government agencies must report to the contract monitoring department any apparent shortcoming of the contractor's service so that the contract monitoring department can assess if there was a failure for which the contractor is responsible and administer the penalty, according to the contract.

The beneficiaries of the services being provided by the private sector can make an important contribution to monitoring. The general public is more likely to report failures of the service if there is a system for reporting complaints that is convenient and efficient. The system needs to ensure the public that their complaints are being listened to and there will be a follow up response. Complaints can be cross-checked with the reports of the monitoring inspectors to get a more accurate picture of the service provider and the inspectors' work. The inspectors may also be involved in following up on major complaints by checking that the situation has been rectified and reporting back to the system.

## Conclusions

Private-sector participation leaves municipal resources available for other municipal services, such as urban infrastructure and equipment. The privatization of solid waste services can reduce the cost of public services to consumers; lessen the financial and administrative burden on the government; increase productivity and efficiency by promoting competition; stimulate the adoption of innovation and new technology; improve the maintenance of equipment; and create greater responsiveness to cost-control measures.

The introduction of the private sector in providing solid waste services allows the public sector to focus on a management role, in which it will: be responsible for the preparation of bidding documents and contracts, making sure that performance-based specifications are included in the contracts; organize the tendering process; evaluate the tender documents; award the contracts; make arrangements for quality and performance control; and set up payment mechanisms.

Private-sector involvement in solid waste management implies a shift in the principal role of government institutions from service provision to management and regulation. To effectively

regulate and control the activities and performance of contracted private enterprises, appropriate systems of monitoring and control need to be established, and corresponding skills and capacities developed at the local- and central-government levels. In some cases, it is also advisable to provide technical assistance to those enterprises that demonstrate a potential for engagement in solid waste management services.

Below are various concluding thoughts about some of the key aspects of the tendering and contracting processes.

- *Preparation of tender documents.* To foster competition among private companies, a key factor is a good tender document. The tender document should be prepared in a way that recognizes the capabilities and limitations of the local private sector and enables it to bid competitively toward providing an acceptable standard of service. The tender documents will be developed to allow for precise and objective evaluation, flexibility, economies of scale, efficient contract length, and accountability.
- *Contract.* The contract should include several critical elements. These include:
  - A clear definition of the scope of work required
  - A definition of minimum-service requirements
  - A description of risk, rate, and termination provisions
  - Well-defined quantitative and qualitative performance measures
- *Monitoring.* The monitoring of the performance of the private sector is important and its goal is to ensure a consistent and satisfactory service. A good contract clearly defines measurable outputs of the service required of the contractor and thus enables performance monitoring. A good contract also clearly defines the sanctions that are to be imposed for nonperformance.

## Other Important Considerations

### *Public and Private Competition*

There is value in small, measured steps in involving the private sector. This will allow for the introduction of contestability to the public monopoly and provides the government with a performance reference point. When a public-service agency is placed in competition with private contractors and is allowed to make the necessary adjustments to become competitive, the public agency is often able to attain costs comparable to those of the contractors. Therefore, creating a reasonable mix of public- and private-sector service is one way of establishing contestability and competition. For example, a locality can contract waste-collection services for some zones of the city and maintain public services for the remaining zones. The same could be done for waste treatment facilities, where some are public and the rest are private. In the future, the bids for solid waste services can be open to public and private enterprises. In such a public-private arrangement, a third party, public or private, has to be involved to monitor both private- and public-sector waste services on an equitable and comparable basis.

### *Unsolicited Proposals*

In developing countries, local governments need to be wary of unsolicited proposals from a single vendor with unsupported, exaggerated claims that its technology would lead to a remarkable reduction of costs of solid waste management and to substantial revenues from sales of recovered resources (compost, steam, or electricity). When politically motivated decisions are made to buy equipment or facilities from such vendors, the customary procedure of a feasibility

study to determine the most viable waste disposal option for the locality is often bypassed and a competitive procurement of viable waste disposal options is evaded. Unfortunately, some of these facilities are unwittingly financed by grants or soft loans from bilateral donor agencies, which gives the appearance of minimal risk. Also, those facilities have only been tested under particular circumstances that could differ tremendously in scale and waste composition from the local conditions.

***Length of contract***

For low cost to be achieved through contracting, it is generally agreed that the contract should have a long enough duration to enable the private sector to depreciate capital expenditures for appropriate equipment and facilities.

## Glossary

**Economies of contiguity** This refers to the physical layout of a collection route. A collection route is contiguous if it includes all the sources of waste along that route. This is not the case when several collection agencies collect from the same street under a private subscription (or open competition) arrangement. In such a case, one truck may collect waste from a waste generator (i.e., house, business), then drive past other waste generators that are served by other companies. As a result, each truck collects from only some of the waste generators in the street. Such an arrangement is not economical because it involves wasted time, travelling more to collect from subscribed waste generators, and driving for more kilometers to fill the truck. This arrangement is said to lack economies of contiguity.

## **Waste Management Services**

- Residential waste collection
- Commercial waste collection
- Industrial waste collection
- Medical waste collection
- Medical waste treatment and disposal
- Construction/Demolition (C&D) waste collection
- C&D disposal
- MSW treatment
- MSW waste disposal
- Industrial waste treatment and/or disposal
- Street sweeping and cleaning
- Public facilities' washing and cleaning.

## Appendix A - List of literature related to the Private Sector Participation in Solid Waste Management

Coad, A. *Private Sector Involvement in Solid Waste Management – Avoiding Problems and Building on Successes*. Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ), Eschborn, 2005. <http://www2.gtz.de/dokumente/bib/05-0412.pdf>

Cointreau-Levine, S. *Guidance Pack: Private Sector Participation in Municipal Solid Waste Management*. Swiss Centre for Development Cooperation in Technology and Management (SKAT), St. Gallen, Switzerland, 2000. <http://sandracointreau.com/PSPGuidefulltoolkit.pdf>

Cointreau-Levine, S. *Private Sector Participation in Municipal Solid Waste Services in Developing Countries. Volume 1: The Formal Sector*. The World Bank's Urban Management Program, 1994. <http://sandracointreau.com/Cointreau1994PSPguide.pdf>

United Nations Development Programme's (UNDP) Public-Private Partnership for the Urban Environment (PPPUE) programme, Toolkit for Pro-Poor Municipal Public-Private Partnerships (PPPs). Accessed February 16, 2015. <http://pppue.undp.2margraf.com/en/index.htm>

U.S. Agency for International Development (USAID), et al. *Environmental Guidelines for Small-Scale Activities in Africa (EGSSAA) - Chapter 15: Solid Waste: Generation, Handling, Treatment and Disposal*. ENCAP, 2009. <http://www.encapfrica.org/egssaa/solidwaste.pdf>

United States Agency for International Development (USAID), et al. *Solid Waste Management Privatization Procedural Manual*. 2009. <http://www.usaid.gov/results-data/success-stories/privatizing-solid-waste-management-services>

<i>Chapters Manual</i>	<i>USAID website link</i>
1. Introduction to Solid Waste Privatization	<a href="http://pdf.usaid.gov/pdf_docs/pnacy328.pdf">http://pdf.usaid.gov/pdf_docs/pnacy328.pdf</a>
2. SW Management Planning	<a href="http://pdf.usaid.gov/pdf_docs/pnacy329.pdf">http://pdf.usaid.gov/pdf_docs/pnacy329.pdf</a>
3. SW Financial Management	<a href="http://pdf.usaid.gov/pdf_docs/pnacy330.pdf">http://pdf.usaid.gov/pdf_docs/pnacy330.pdf</a>
4. Contractor Pre-Qualification	<a href="http://pdf.usaid.gov/pdf_docs/pnacy331.pdf">http://pdf.usaid.gov/pdf_docs/pnacy331.pdf</a>
5. Tendering and Contracting	<a href="http://pdf.usaid.gov/pdf_docs/pnacy332.pdf">http://pdf.usaid.gov/pdf_docs/pnacy332.pdf</a>
6. Contract Monitoring	<a href="http://pdf.usaid.gov/pdf_docs/pnacy334.pdf">http://pdf.usaid.gov/pdf_docs/pnacy334.pdf</a>