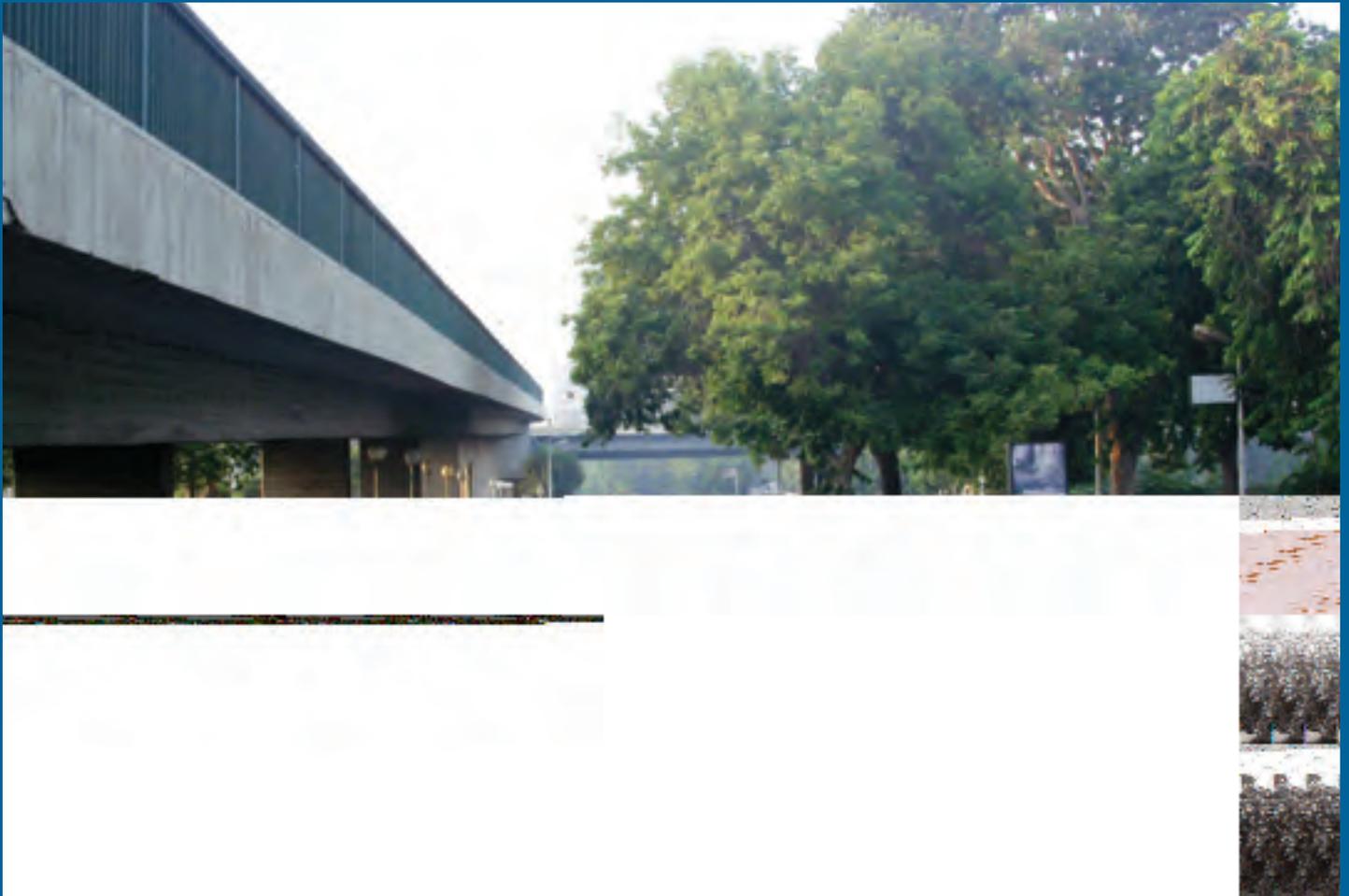


**Solid Waste Management
Privatization Procedural Manual**

Introduction To Solid Waste Privatization



Solid Waste Technical Assistance



**Ministry of
State for
Environmental Affairs**



**Egyptian
Environmental
Policy Program**

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INTRODUCTION

SOLID WASTE MANAGEMENT PRIVATIZATION PROCEDURAL MANUAL

Current Government of Egypt (GOE) Policy¹ calls for delegating solid waste management and public cleaning services to the private sector, with government agencies focusing on solid waste planning, follow-up, and control functions. This, combined with the need for improvement in overall solid waste management in Egypt, has required the Governorates to consider alternative methods of providing solid waste collection, processing, recycling, and disposal.

The Arab Republic of Egypt Ministry of State for Environmental Affairs, the Egyptian Environmental Affairs Agency (EEAA), and the United States Agency for International Development (USAID) proffer this Solid Waste Management Privatization Procedural Manual in response to the need for solid waste privatization assistance in Egypt.

MANUAL PURPOSE AND OBJECTIVE

The purpose of this manual is to provide Egyptian Governorates with a guidance document to improve solid waste management services through establishing a strategic plan for service privatization. The manual provides governmental decision-makers with a tool to perform a thorough evaluation of solid waste management options, and guidance for developing specific solid waste management service performance specifications.

In recent years solid waste management has become an increasingly important environmental, public health, political, and economic issue in the developing world. In Egypt, solid waste management services have been primarily the responsibility of local government. The provision of these services often has been less than satisfactory due to under funding, a low demand for improved services, and a lack of technical solid waste management experience in the Governorates.

This manual was prepared by Abt Associates, Inc., SCS Engineers, Community & Institutional Development, and The Institute for Public-Private Partnerships, Inc. as the Solid Waste Technical Assistance provider under the Egyptian Environmental Policy Program (EEPP). USAID funded the work to complete this manual and provided technical assistance along with the EEAA.

Egyptian solid waste professionals provided significant input to this manual. Feedback on the material presented in this manual was obtained from solid waste professionals from virtually every Governorate in Egypt through a series of solid waste privatization workshops. In addition, the experienced gained through the authors' close working

relationships with Egyptian solid waste professionals through USAID in the Governorates of Alexandria, Cairo, and Qalyoubiya, as well as with the EEAA, is represented in this manual.

References to solid waste in this manual shall mean Municipal Solid Waste (MSW), non-hazardous Industrial Waste, Medical Waste, Construction and Demolition Waste, and Street Sweeping and Public Facility Cleaning as defined in the Glossary. For the purposes of this manual, solid waste does not include hazardous waste, radiological waste, agricultural waste, liquid waste, or sludges.



¹ The National Strategy for Integrated Municipal Solid Waste Management – A Frame Work for Action; Ministry of State for Environment, Egyptian Environmental Affairs Agency (Directorate General for Wastes); June 2000; page 8.

MANUAL OVERVIEW

CHAPTER 2: SOLID WASTE MANAGEMENT PLANNING

Chapter 2 provides a step-by-step approach to analyzing existing solid waste management services and developing and analyzing alternative plans for future solid waste management services. The end product will be a new plan (or plans) for providing solid waste management services within the geographic area of concern (Service Area).

Completion of the steps outlined in this chapter will provide the information needed to perform financial analyses of the existing and planned solid waste management service systems as described in Chapter 3.

CHAPTER 3: SOLID WASTE FINANCIAL MANAGEMENT

Chapter 3 provides a step-by-step approach to service cost accounting and options for recovery of costs of solid waste management systems. It will examine demand projections and willingness-to-pay information, prospects for growth, the current tariff system as well as recommended future tariff systems, and methods for calculating the new tariffs.

CHAPTER 4: CONTRACTOR PRE-QUALIFICATION

Chapter 4 provides a step-by-step approach to the contractor pre-qualification process. The chapter describes how to establish the Tender Committee and pre-qualification process schedule; how to prepare the Request for Qualifications (RFQ), advertise the

developing and managing an effective solid waste management system privatization effort is a major task for most Egyptian Governorates. This manual is divided into eight chapters that will lead the Governorate through the process in a methodical manner. It provides a step-by-step approach starting with the up-front planning, performance specification development, and performance monitoring. The following includes a brief summary of each of the remaining seven chapters in the Manual

procurement, and issue the RFQ; and how to evaluate the responses and select Pre-Qualified Contractors.

CHAPTER 5: TENDERING AND CONTRACTING

Chapter 5 provides a step-by-step approach to tendering and contracting. It describes how to prepare and issue the Request for Tenders (RFT), how to establish the Tender Evaluation Committee and receive and evaluate the Tender Offers, and how to select a Contractor and execute the contract.

CHAPTER 6: CONTRACT MONITORING

When a Governorate signs a contract with a private sector contractor to provide solid waste management, the contract must be monitored by the Governorate to ensure that the contract terms and conditions are being met, and that residents and businesses are being provided with the services specified in the contract. Chapter 6 provides a step-by-step approach to developing and managing a Contract Monitoring Unit within a Governorate. The chapter focuses on organizational and

management structures, job descriptions, and qualifications and experience required of personnel to monitor the privatized solid waste system.

CHAPTER 7: PUBLIC AWARENESS AND COMMUNICATIONS

Chapter 7 provides a step-by-step approach to developing a public awareness campaign to ensure that the public is made aware of the privatization process, especially the new services to be provided, how the contractor will be paid, and how public participation is essential to a successful outcome. The chapter describes a variety of techniques used to communicate effectively with residential and commercial customers throughout the process. The chapter will also cover feedback mechanisms for the general public.

CHAPTER 8: RESIDENTIAL AND COMMERCIAL WASTE COLLECTION

Chapter 8 is intended as a guide for those tasked with improving or implementing new residential and commercial waste collection systems. It provides a step-by-step approach to implementing collection systems including gathering the information needed to evaluate the existing system, evaluating new service alternatives, developing a final design based on the selected alternatives, and creating the required technical documents if the service is to be privately provided.



Chapter 8 is the only “technical” chapter currently scoped to be provided under the EEPP, although chapters on other solid waste technical disciplines such as recycling, composting, street sweeping, public facility cleaning, waste transfer and containment, waste disposal, and medical, industrial, and construction and demolition waste management may be

provided under a later contract.

However, since sanitary, efficient, and cost-effective collection of solid waste is a pre-requisite for the achievement of all other solid waste management objectives, the information presented in this chapter will be used throughout the Manual to demonstrate concepts.

GLOSSARY AND APPENDICES

A Glossary containing definitions for solid waste and tendering and contracting terms used in the Manual is provided at the end of the Manual.

SOLID WASTE PRIVATIZATION CONSIDERATIONS

Privatization can be a misunderstood concept. In some industries it means that the government divests its assets and no longer plays a role in that industry. However, in the solid waste context, privatization really is “Private Sector Participation”. Because regardless of the level of private sector provision of solid waste management services, the Governorate is still responsible for ensuring that the management of the wastes is done for the benefit of the public, properly, and in accordance with Egyptian law, regulation, and policy.

Solid waste privatization can take place in many ways depending on local needs and conditions. Solid waste privatization may include:

- Private sector ownership and operation of the entire solid waste system.
- Private sector ownership and operation of portions of the solid waste system.
- Governorate ownership of all or portions of the solid waste system with the private sector responsible for operations and/or management.

The optimal solid waste privatization option and service delivery method likely will vary between Governorates based on local needs and conditions. Similarly, the optimal solid waste privatization option and service delivery method may vary within one Governorate over time as local needs and conditions change. It is important to understand that solid waste management is an on-going process. Going through the process one time does not solve all solid waste management needs forever. As local needs and conditions change so must the solid waste management system change to meet those needs.

The question “Why Privatize?” is often asked by those in the public sector tasked with managing the solid waste system. Although privatization may not be the only alternative, there are some compelling reasons to turn to privatization for the management of solid waste. In Egypt, change, efficiency, and policy drive the need for privatization.

CHANGE

Change in solid waste management in Egypt is needed. Litter and accumulated debris is rife, existing collection systems and disposal facilities are inadequate, and in too many places garbage is indiscriminately burned. These practices result in the following:

- Providing a breeding ground for disease spreading rats, insects, and other animals.
- The release of odors and pollutants to the air, water, and ground with resulting contamination.
- Discouragement of visitors and investment.

Using the private sector to provide solid waste management services in the future offers an opportunity for change by:

Why Privatize? Three factors drive the need for privatization in Egypt:

- **Change**
- **Efficiency**
- **Policy**

The current system endangers both public health and the environment, causes economic harm, and is aesthetically unappealing.



- Contracting with firms with broad experience in solid waste management. These firms typically have more experience in providing these services under more scenarios than does a public sector provider.
- Developing contracts with the firms that include strong incentives for them to provide the services in accordance with the Governorate's requirements. For example, the contractor can be fined if they do not perform according to the contract. This provides strong encouragement for the contractor to perform their job well.

EFFICIENCY

Worldwide experience has shown that private sector (business) approaches to the management of public services can substantially improve the quality and reliability of service and/or reduce costs. Some of the reasons for private sector efficiency are:

- Competition. Private sector firms must compete with each other, and in many cases with public sector providers as well. This competition promotes efficiency, and 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.

- Economic incentives. Performance bonuses, raises, and other economic incentives are a normal part of private sector operations, where they are used to stimulate and motivate management and employees to a higher level of performance than might be found in similar public organizations. In a government setting, fewer incentives exist to encourage high-performance productivity.
- Ability to finance. One of the biggest challenges facing public sector solid waste managers in Egypt is a lack of capital. Many public sector solid waste managers feel they could do a much better job if they had the money to purchase and properly maintain new vehicles and equipment. Unfortunately, there are no mechanisms, other than relying on funding from the national government for local governments to raise capital. 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 and improved operations gives it a distinct advantage over the public sector.

POLICY

Private sector participation in solid waste management is in keeping with overall GOE policy on solid waste management and privatization. Accordingly, solid waste privatization can help effect positive change in Egypt's solid waste management and is in compliance with Egypt's overall solid waste and privatization national strategies.

A schematic diagram of the solid waste privatization process is presented in Figure 1.1.

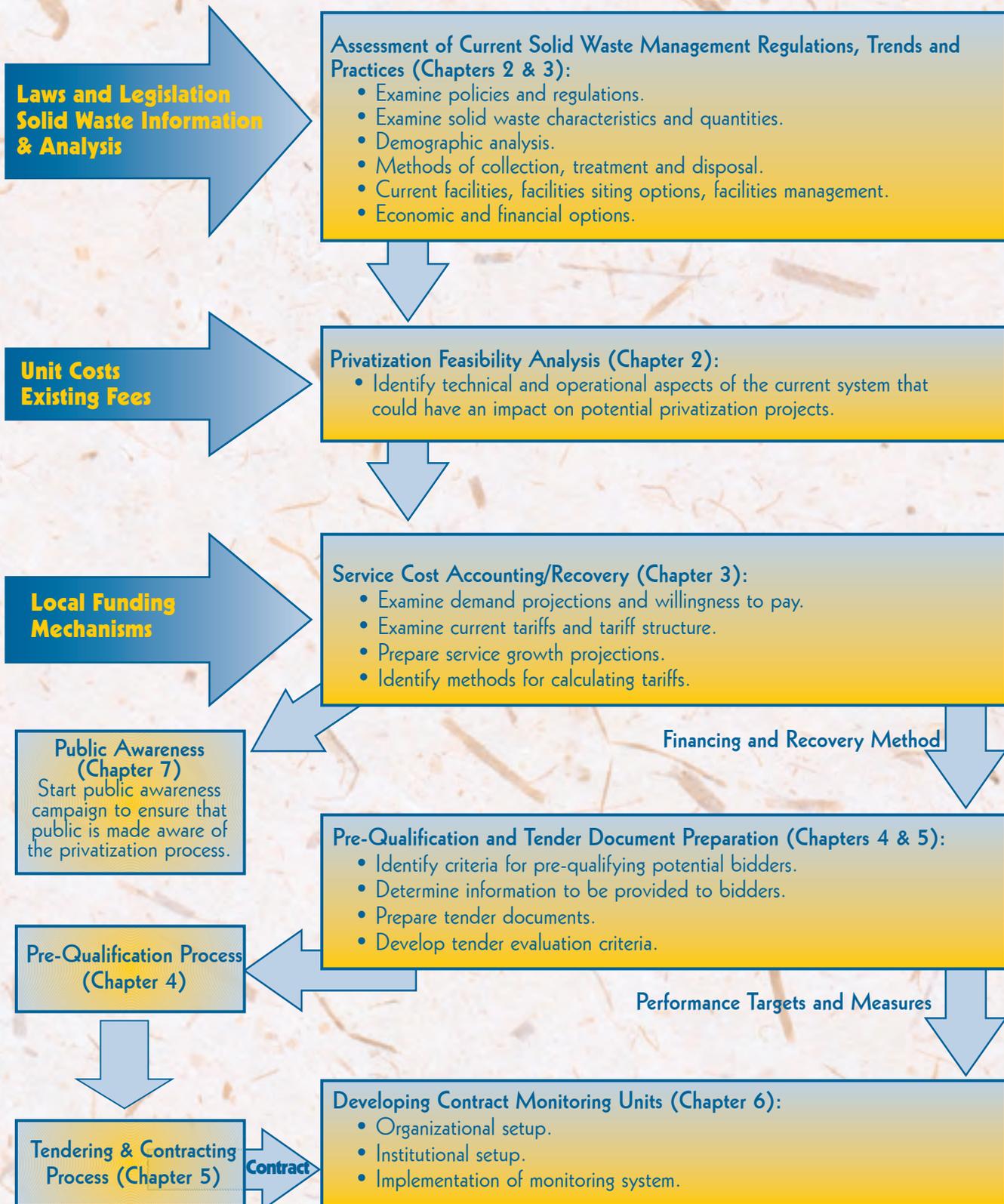
Egypt's National Strategy on Solid Waste Management states: "Public cleansing services and solid waste management² will be gradually designated to the private sector. The role of governmental agencies will then be focused on the planning, follow-up and control functions...as well as a well grounded 'public-private partnership' approach."

Competition forces efficiency.



¹ The National Strategy for Integrated Municipal Solid Waste Management – A Framework for Action, Ministry of State for Environment, Egyptian Environmental Affairs Agency, Directorate General for Wastes, June 2000.

FIGURE 1.1: SOLID WASTE PRIVATIZATION PROCESS



HOW TO USE THIS MANUAL

This manual provides a step-by-step approach to the solid waste management planning and privatization processes. The approaches to planning, tendering, and contracting provided herein are not the only ways to accomplish solid waste planning and privatization, but they are offered with the Egyptian context in mind. These approaches have been adapted from actual recent practice in Egypt, and it is expected that if these approaches are followed, the Governorates should be able to successfully transfer solid waste management services to the private sector, and see an improvement in their local solid waste management practices.

The decision to turn over services being provided by the public sector is never easy and often results in opposition from citizens and non-governmental organizations. Therefore it is important that the Governorate understand why and how the services will be privatized.

Chapters 2 and 3 of this Manual are designed to help the Governorate better understand the existing solid waste system and how to properly evaluate the services currently being provided. In most cases the existing solid waste services are being provided by the Governorate, by the informal sector, or under very simple contracts between the Governorate and one or more private sector providers.

UNDERSTANDING THE EXISTING SYSTEM

It is very important that the Governorate understand the existing solid waste system and have an idea about what is needed to improve the service. This understanding of the existing system is the basis for determining the need for and scope of privatization. It may also indicate that the Governorate is better served by improving the existing service itself and not turning to the private sector.

FIGURING THE COSTS OF THE CURRENT AND NEW SYSTEM

Before moving forward in the privatization process, the Governorate must also have an understanding of the existing system cost and be capable of approximating the cost of each of the services to be privatized. This is explained in detail in Chapter 3, which also looks at methods of payment and the willingness of citizens and commercial and industrial business to pay for their solid waste service, whether provided by the public sector, the private sector, or by public-private sector partnerships.

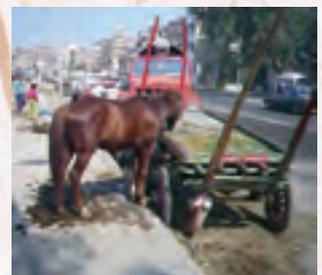
THE CONTRACTING PROCESS

After the Governorate decides what services it wants to privatize and has developed an understanding of the fees required to privatize the service, then the next step is selecting and entering into a contract with a Contractor(s) to provide the desired services. Chapters 4 and 5 of this Manual describe an approach to Contractor Pre-Qualification and Tendering that has been developed based on the Egyptian experience and has been used successfully in Egypt.

THE CONTRACT MONITORING PROCESS

When the decision is made to privatize any type of service, the Governorate's responsibility does not stop. As the contract holder with the private sector, The Governorate will be responsible for developing contract-monitoring procedures to enforce the conditions of the contract. Typically this entails developing a Contract Monitoring Unit (CMU) or department within the Governorate to monitor the Contractor's performance. Depending on the complexity of the contract and the

number of services that have been privatized, the CMU can range from a few to several hundred individuals. Chapter 6 focuses on designing the institutional structure needed to manage the CMU and monitor Contractor performance.



THE NEED FOR PUBLIC AWARENESS AND COMMUNICATIONS

Along with developing a CMU, public awareness and communications makes up the primary institutional building phases of the privatization process. The public awareness process is one of the most important parts of the privatization process and it is often given the least attention by Egyptian Governorates. It is very important that all stakeholders in the new solid waste system be made aware of how the changes will affect them and that they “buy-in” to the changes. Chapter 7 provides guidance in public awareness and communications and describes a process for public awareness campaigns that have worked in Egypt.

DETERMINING PERFORMANCE SPECIFICATIONS

The remaining chapter in the Manual pertains to specific residential and commercial solid waste collection services. Chapter 8 should first be used to evaluate the potential service options discussed in Chapters 2 and 3. It can then be used to develop specific design and performance specifications for use in the tender documents. The real contract is developed from this chapter (and any other technical chapters eventually developed). The Governorate in most cases will not have the technical expertise to develop these specifications and should consult with qualified engineering firms to provide the expertise.



CONSIDERATIONS FOR RURAL AREAS

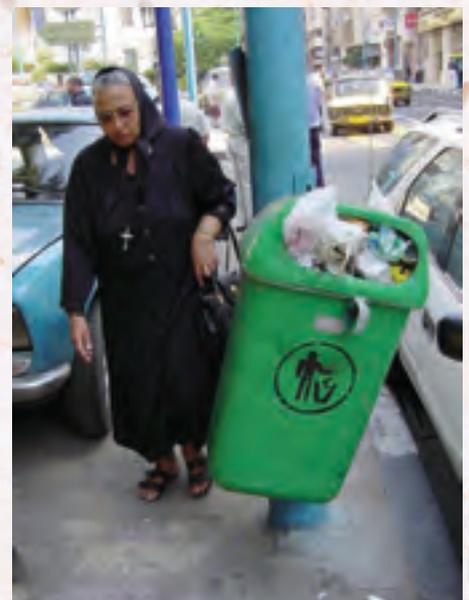
Egyptian Governorates have been encouraged to seek international solid waste service providers. This may not be the best solution for smaller or rural Governorates that do not require, or cannot afford, the same level or type of solid waste service. Regardless, rural areas and urban centers face similar challenges. Typically they lack the solid waste and public cleaning infrastructure to collect and properly dispose of wastes generated by their citizens. In addition, rural areas are often overlooked in the budgeting process and are not able to obtain the proper vehicles and equipment needed to provide adequate service. This often results in wastes being burned or disposed in irrigation canals.

Another concern in the rural Governorates is that there is usually less technical and management capacity to develop qualification and tender documents. It may also be more difficult for rural Governorates to effectively monitor Contractor performance. This may necessitate the need for the rural Governorate to reduce the number of services requested or seek outside assistance on technical and management issues during the tendering process and during contract monitoring once the service has been implemented.

That being said, service procurement procedures in urban and rural areas should be conducted in a very similar manner. A contract with technical specifications is needed with any type of solid waste service procurement. The same contractual requirements should be included in contracts for both population sectors. The primary differences will be in the technical specifications.

When preparing technical specifications for rural areas, the types of services desired and the monies available to pay for the service should be identified. Then the best-suited and most affordable service should be procured. For example, the rural Governorate may want to select a simpler or less expensive level of service. In a rural area solid waste collection may consist of the placement of containers at Waste Pooling Sites instead of more labor and capital intensive—and therefore more costly—collection services such as door-to-door or building-to-building (see Chapter 8). Service level considerations for rural Governorates are addressed in each chapter that discusses a specific solid waste management service.

The following case study provides an example evaluation of the appropriate level of service based on the ability of the rural community to pay for the service.



CASE STUDY: RURAL AREA

A rural village in the Delta area of Egypt decided to procure contract services for the collection and disposal of its wastes. As a first step, the village leaders characterized the waste that they need to dispose. Since this is a farming area, most of the citizens remove the vegetative portion of the waste stream and use it for animal feed. This leaves approximately 10 tons per day of waste that needs to be collected and disposed.

The village then looked for the method of waste collection that best fit their needs and ability to pay for the service. Three types of collection service were identified by the village for investigation. The first method of collection evaluated was door-to-door collection, where the resident would set their waste beside their door and the waste collection company would then come into the building and pick up the waste. For optimal sanitation and efficiency, the waste would need to be placed outside the door in plastic bags each day for collection.

The second waste collection alternative evaluated was building-to-building collection. Building-to-building collection

requires residents of a building to place their waste in a common bin typically located at ground level. The waste collection contractor would then be required to empty the bin on an agreed upon schedule. This type of collection is less labor intensive and should result in a lower cost to the village.

Waste pooling sites were the third type of collection alternative evaluated. Waste pooling sites require placing larger bins in public areas that are convenient to the residents. The residents are required to take their waste to the bin for subsequent collection and disposal. The waste collection contractor then empties the containers. This type of collection service requires the greatest level of effort from residents, since they are required to take their waste to the waste pooling site location. At the same time, it takes the least amount of effort on the part of the waste collection contractor, which should result in lower system costs.

After evaluating the three collection alternatives, the village decided to establish waste pooling sites for waste disposal. The contractor would place one or more 20-cubic meter bins at the waste pooling sites and the residents of

the village would place their household waste in the bins. There were two primary reasons for selecting the waste pooling site option. The first reason was the lower cost for the service. The second reason was that the residents of the village were already using the area of the waste-pooling site as a location to informally dispose their household wastes. They were bringing their waste to the location and then it was either burned or pushed into an adjacent canal.

The residents that wanted their waste collected from their residence had the option of continuing to pay the local village garbage collector. The local village garbage collector would then be required to take the waste to the waste-pooling site.

In this case, the village could pay for the solid waste collection and disposal service within their annual budget. In the future they may need to evaluate and select an alternative payment method, and as income levels increase over time, improved collection service options also could be considered.

The above example demonstrates that the urban and rural areas must evaluate services in a similar manner. For example, urban areas often do not have space for waste pooling sites and therefore may require more door-to-door or building-to-building collection services. Both urban and the rural areas must work within their typically tight budget constraints. This may vary from city to city or village to village, but they all must work with the money available. This same example is also applicable to other solid waste services. Solid waste and public cleaning service alternatives need to be evaluated from both the operational and financial sides. Urban and rural areas might have different problems with their solid waste systems, which they need to identify, investigate, and evaluate, and then procure the appropriate services.



Solid Waste Technical Assistance

