



TRAINING MANUAL 4 Private Sector Participation

Module 4-7: Contract Preparation and Procurement Private Sector Participation in Solid Waste Management in Alexandria Governorate, Egypt

Prepared by the International Consortium
GTZ-ERM-GKW



This Training Module is part of the

TRAINING MANUAL 4: ISWM Private Sector Participation for Waste Management Services

This training Module has been prepared in support of capacity development of waste management service delivery through Private Sector Participation (PSP), Category 3 – “Contract Preparation and Procurement” and forms the third module of this Category and provides a comprehensive case study.

However, as the full approach of development, implementation and operation of PSP in Alexandria, Egypt is described, other relevant aspects of PSP beside contract preparation and procurement are also addressed.

Note: A general discussion of major critical contract issues is provided in Module 4-5 whereas a the procurement approach is discussed in Module 4-6.



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- III Framework Conditions
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- V Implementation of PSP
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I Introduction:

to give some basic data on Alexandria

II WM situation before PSP approach:

to describe background, weakness of the previous system and to explain the reasons for the new approach

III Framework Conditions:

to emphasise the pre-requisites for any successful PSP approach

IV Preparation of PSP

to stress the importance of careful analysis and preparation

V Implementation of PSP

to illustrate the comprehensive approach and the staged implementation

VI Obstacles and lessons learned

to analyse crucial success factors and obstacles, especially difficulties while using the Alexandria approach as a blue print for other governorates

I. Introduction

Alexandria Governorate

- Total population: 3.5 Million
- Industrialised area (approx 40 % of Egypt's industry)
- Historic city / tourism is an important sector especially during the summer season



Introduction:

- Note the conflict between industrialisation, urbanisation and tourism.
- On the one hand industrialisation and urbanisation are key factors for the economic development.
- On the other hand polluted beaches and seaside resorts are not attracting tourists.
- Clean cities are a must for the further development of tourism in the Region.



II. WM Situation Before PSP Approach (1)

Total waste generation: > 3000 t/day

Service provision:

- Mainly by public authorities (6 districts)
- 20 % via local private sector based on short term contracts
- Involvement of informal sector (Zabbaleen system)

Disposal Facilities

- 3 uncontrolled landfills (dump sites)
- Composting plant



WM Situation before PSP Approach:

- 3000 t/ day is a typical waste generation figure for several major cities in the Region.
- The provision of the solid waste management services by the local government often has been less than satisfactory.
- First steps for involvement of private sector (only local companies), had been undertaken but led to poor service provision mainly due to lack of experience and the contract duration was too short.
- Informal sector were mainly represented by the Zabbaleen community providing waste collection and recycling especially in districts with high income inhabitants. (However, extent is not at all comparable with the Zabbaleen community in Cairo).
- Technical standard of facilities was poor.



II. WM Situation Before PSP Approach (2)

Characteristics of the previous system:

- Low collection efficiency
- Uncollected waste streams, polluted areas
- Insufficient waste treatment and disposal
- Lack of waste management know how
- Non qualified staff, low payment, lack of motivation
- Under funding, lack of cost recovery
- Poor monitoring
- Environmental damages (odour, illegal burning of waste, contamination of sites)



WM Situation Before PSP Approach:

- Low collection efficiency
e.g. old and worn down equipment
- Uncollected waste streams, polluted areas
some parts of the city with no services at all
- Insufficient waste treatment and disposal
no sanitary landfill for 3.5 Mio inhabitants!
- Lack of waste management know how
- Non qualified staff, low payment, lack of motivation
low social status of employees
- Under funding, lack of cost recovery
no separate budgets for SWM
- Poor monitoring
expenses without results!
- Environmental damages (odour, illegal burning of waste, contamination of sites)
refer to photo on next slide

Years of complaints by the residents to the local authorities were resulting in no real improvement.

II. Situation Before PSP Approach (3)



WM Situation Before PSP Approach:

Illegally dumped waste in Alexandria before implementation of PSP

Such uncontrolled waste disposal leads to pollution and spreading of disease such as hepatitis and meningitis (which previously was a considerable problem in Alexandria).

Note: Such a situation might be found at several places all over the Region.



III. Framework Conditions

Improvement of Framework Conditions:

- National Initiative for PSP involving international operators at governmental level after a severe air pollution episode
- Alexandria identified as a priority governorate
- Option for implementation of fee collection via electricity bill
- Granting of economic incentives for waste management services (5 year tax break, exemption from custom duties)
- Real political will to improve the situation at governmental (national) and governorate level!



Framework Conditions:

Note:

The improvement of the framework conditions is an important prerequisite for the success of a PSP approach!

They cover several areas such as:

- General development of a PSP strategy including the identification of priorities
- Implementation of an effective fee collection system via electricity bills.
- Economic incentive for waste management services.
- Real political will for an improvement through a PSP approach.



IV. Preparation of PSP (1)

Steps for Preparation of PSP:

- Comprehensive analysis of existing waste management situation (waste quantities, waste streams, description of collection area, etc)
- Definition of required services
 - service specification,
 - performance level,
 - requirements for treatment and disposal
- Public awareness campaign
- Implementation of new fee collection scheme (electricity bill)



Preparation of PSP

Note: Only a well prepared PSP approach has a chance for a successful implementation!

In parallel to the improvement of the framework conditions several steps for the preparation of PSP had been undertaken carefully:

- Elaboration of a comprehensive analysis of waste management situation
No service specification without analysis of current situation!
- Service specification
The public authorities preparing PSP must know what type of services and level of performance are required (and can be financed)
 - *Example different frequencies of beach cleaning in summer and winter!*
 - *Establishment of transfer stations, and recycling initiatives*
 - *Up grading of composting plants*
- A public awareness campaign was required in order to *sensitise the public and prepare them for the changes of the system.*
- The implementation of the new fee collection system required *a careful analysis and the elaboration of several different tariffs for households, offices, workshops, commercial activities, and even up to large waste generators.*



IV. Preparation of PSP (2)

Development of PSP Strategy and Approach:

- Extensive PSP approach
- Public sector remains responsible for overall policy and planning as well as performance monitoring of operator
- Design, implementation and operation of facilities contracted to private sector
- Financing of investments and cost recovery via fees
- Long term contract (15 year) covering the whole governorate



Preparation of PSP

Development of PSP strategy and approach:

- Extensive PSP approach - *maximum involvement of private sector!*
- Public sector remains responsible for overall policy and planning as well as performance monitoring of operator – *these tasks always should remain at the public sector!*
- Design, implementation and operation of facilities contracted to private sector - *these are tasks that could be provided more efficiently and effectively by the private sector*
- Financing of investment and cost recovery via fees, *financing is the most critical task to be shifted to the private sector, an operator will only invest where appropriate cost recovery mechanisms are in place*
- Long term contract (15 year) covering the whole governorate – *idea: only a long term contract covering a whole governorate can attract the involvement of an international operator especially one who is also responsible for financing of facilities!*



IV. Preparation of PSP (3)

Procurement and Contracting

> 30 companies expressed their interest and took part in the tender procedure

- Contract was finally awarded to ONYX (end of 2000)
- Contract value at start of operation approx LE 72 Million/ year (21 Million €/year)
- Initial investment LE 200 Million (59 Million €)



Preparation of PSP

Note:

As Alexandria was the first example for such extensive PSP approach the interest of Operators was strong.

However, it required extensive investment for facilities and equipment and only strong international companies were able to and willing to sign the contract.

Note:

Do not assume that the private sector will always be keen on signing such contracts. Depending on the framework conditions the project preparation and the experience from other projects in the Region the situation might change considerably.



V. Implementation of PSP (1)

Step by Step Implementation:

- Starting with two collection zones in 2001
- Full implementation in all 9 collection zones at end of 2002
- Coverage of areas that had previously not been served
- Staged implementation and up grading of facilities
- Payment scheme adjusted to services conducted



Step by Step Implementation

A step by step implementation process was essential as the project size is enormous and several different tasks and waste streams have to be managed:

- Collection of municipal waste, healthcare waste, industrial non hazardous waste
- Cleaning of streets, beaches, markets, gardens
- Transportation, treatment and disposal of waste

The same refers to the step by step phase out of the existing public and private service providers.

V. Implementation of PSP (2)

Previous waste collection system using plastic bags



New waste collection system using bins



Implementation of PSP:

The improvement due to the new collection system was visible for the public right from the beginning!

This was one reason for the strong public support.

However, numerous waste bins disappeared during the implementation period and had to be replaced by the Operator....

V. Implementation of PSP (3)

Waste Collection Truck



Street Sweeping Vehicle



Chained Waste Bin



Workshop



Implementation of PSP

Note:

The new Operator imported the whole fleet of collection, transportation and street sweeping vehicles.

(based on a 15 year contract period this is a reasonable approach for an efficient service provision)

Note: the chained waste bin on the well cleaned Alexandria Corniche in order to make sure that it remains at this place.....

V. Implementation of PSP (4)

Transfer Stations and Transportation System



Transfer Station and Transportation System:

As a new centralised landfill had been established outside Alexandria, a waste transfer and long distance transportation system was required including 3 transfer stations.

(Roofed transfer station, loading of long-distance transportation vehicles via wheel loaders)

V. Implementation of PSP (5)

Sanitary Landfill

- 40 km from Alexandria centre
- Clay / HDPE liner system
- Leachate water and landfill gas collection and treatment
- Complaints due to close proximity to residential areas



Sanitary landfill

The sanitary landfill that has been implemented was a major improvement compared to the previous dump sites.

The landfill site, an old limestone quarry, is divided into 14 cells - the smallest about 40,000 square meters in areas.

Each cell will take one to two years to fill.



Landfill Construction



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Sanitary landfill

Liner system:

- Compacted clay
- two layers of a thick and impermeable geotextile
- high-density polyethylene
- sand and gravel

Drainage of the leachate into an adjacent treatment basin.

Resulting gases, such as methane and the odorous hydrogen sulphide, will be burnt off.
Waste compaction coupled with the dry air will also lessen the production of such gases.

Landfill Operation



Landfill

Specialised equipment including bulldozer and refuse compactors

However, although an Environmental Impact Assessment (EIA) study was carried out for the landfill, there was a large number of complaints from the residents due to the proximity of the landfill site from residential areas. The prepared EIA did not cover some critical aspects with regards to the landfill siting

V. Implementation of PSP (6)

Implementation of a Performance Monitoring System

- 165 controllers (inspectors)
 - Advanced computerised monitoring system
 - Complaints management
- ⇒ Number of complaints is decreasing rapidly,
⇒ Public satisfaction and support for the system is increasing

Note:

- Similar to the careful preparation of the PSP approach, continuous monitoring has also been developed and implemented in a very professional manner
- Performance monitoring remains the responsibility of the public sector
- Pro-active complaint management leads to increasing satisfaction and public support.



V. Implementation of PSP (7)

Employment Issues

- Step by step phase out of public sector operation
- Critical interface with the informal sector
- Approx. 4000 private sector employees
- Work Uniforms (common dress code)

⇒ Status of waste management staff improved



Employment Issues

- Step by step phase out of public sector operation – *job opportunities for former waste management personnel inside and outside the public sector need to be identified, some staff was shifted to the private operator*
- *However, Not every waste management worker can become an inspector!*
- Critical interface to informal sector – *the new collection system does not fit together with the collection and recycling practice of the informal sector (e.g. implementation of collection via waste bins, new interfaces for informal sector and often no further potential for their activities) . However problem was manageable due to limited Zabbaleen community.*
- *Note: similar critical interface to previous local private collection companies that are no longer involved in the system.*
- Approx. 4000 private sector employees working for the Operator
- Work Uniform dressing is one example of the improvement of the working conditions. Moreover, the *status of waste management staff improved (and is acknowledged by the public!)*.



VI. Obstacles and Lessons Learned (1)

The Alexandria approach was a Blue Print for other Governorates in Egypt! 17 other governorates followed the exact footsteps of Alexandria governorate.

Considerable variation of progress achieved :

- A number of governorates, especially the major ones, have progressed steadily in the process,
- Others, especially rural Governorates, have slowed down or have even frozen the process due to mismanagement of the privatisation activities



Obstacles in Alexandria and other Governorates

The Alexandria approach was a Blue Print for other Governorates in Egypt!

17 other governorates followed the exact footsteps of Alexandria governorate. *This included the priority governorates, as well as other governorates that were not originally on the privatisation list.*

Keen to eradicate their long standing solid waste problems, and not fully recognizing the requirements and costs associated with international waste management operators, these governorates also issued international "integrated solid waste management tenders".

These tenders generally: covered the governorate entirely, included the full scope of solid waste management services i.e. collection, transportation, treatment and final disposal, involved all kinds of wastes such as municipal, healthcare, industrial non-hazardous waste, and the contract duration ranged between 10-15 years.

Progress achieved by the different governorates on the privatization process varied considerably. A number of governorates, especially the major ones, have progressed steadily in the process, while others, especially rural Governorates, have slowed down or have even frozen the process due to mismanagement of the privatization activities.

VI. Obstacles and Lessons Learned (2)

Obstacles in Alexandria and other Governorates

- Inappropriate clauses and mechanisms for contract adjustment (price escalation based on exchange rate, inflation or change of waste quantities)
- Provision/ suitability of sites for treatment and disposal
- Involvement/ modalities of cooperation with informal sector (local NGO, role of Zabbaleen as a critical issue especially in Cairo)

Obstacles in Alexandria and other Governorates

Given the extended nature of the contracting period of services (10-15 years), clear mechanisms were not identified in the contracts to address unforeseen inflation rates as well as changes in exchange rates of foreign currencies. Inflation or the exchange rate have a strong impact on the return on invest of the international operator. Where a contract will not be profitable at all, the Contractor might withdraw, or at least refuse to sign new contracts in other governorates.

- In general, no properly sited landfills and/or areas designated for landfills were available. – However, site selection, identification and implementation via private sector is even more critical than through the public sector.
- The modalities of co-operation between operators, local NGOs, Zabbaleen and small private operators is uncertain.
 - How does the implementation of the new system affect the informal sector?
 - Does the informal sector have a role in the new system?
 - Might there be an opportunity to design the system in such a manner that the interfaces are also suitable for the informal sector. E.g. door to door collection provided by the informal sector
- Especially in Cairo which has the biggest Zabbaleen community, it lead to a situation in which no interface was foreseen to the Zabbaleen system at all. The Zabbaleen workers could no longer provide their door to door services and the related recycling of materials. The international Operators have not been contracted to design interfaces to the existing informal system or to involve the Zabbaleen workers within the new collection and disposal system. Details of the conflict between PSP and the informal sector are provided in “Integrating Local Community-based Waste Management into International Contracting”, Laila Iskandar published in: www.skat-foundation.org/activities/ws/cwg/pdf/cwg-31.pdf



VI. Obstacles and Lessons Learned (3)

Obstacles in Alexandria and other Governorates

- Unclear rules for monitoring/ excessive application of penalties
- Adjustment to local conditions before starting tender procedure (no blue print for rural areas)
- Reserve of international Waste Management Sector to enter new similar long term contracts in other Governorates



Obstacles in Alexandria and other Governorates

- Unclear rules for monitoring/ excessive application of penalties – *Examples have been reported where even before the start of operations penalties have reached an excessive level – at the same time mobile equipment was blocked in custom procedures as the custom incentives had not been issued and clearly defined.*
- Adjustment to local conditions before starting tender procedure - *Alexandria is not a blue print for rural areas, which require a different technical approach and have considerably less financial capacity.*
- Reluctance of the international Waste Management Sector to enter new similar long term contracts in other Governorates – *consideration of alternative models which might increase the interest of international operators (better project preparation, consideration of provision of financing via public sector / IFI)*



VI. Obstacles and Lessons Learned (4)

Lessons Learned

- Successful example for the implementation of an advanced PSP approach.

Although the approach is not a blue print for other projects some of the key success factors and lessons learned are:

- Supporting framework conditions (cost recovery, incentives)
- Clear and strong political will
- Careful project preparation as a precondition for success
- Sound and transparent tendering process
- Staged implementation of services and facilities
- Appropriate performance monitoring



Lessons Learned

- Successful example for the implementation of an advanced PSP approach. (*advanced especially due the contract size, the combination of various works services and the need for financing*).

Although the approach is not a blue print for other projects some of the key success factors and lessons learned are:

- Supporting framework conditions (cost recovery, incentives) – (*based on an initiative on a national level*)
- Clear and strong political will – (*support, decision making, importance*)
- Careful project preparation as a precondition for success - (*more than one year of intensive preparation work of the tender documents*)
- Sound and transparent tendering process – (*in order to attract capable bidders*)
- Staged implementation of services and facilities - (*in order not to secure a careful preparation and implementation via the Operator and first concentrate on priority measures*)
- Appropriate performance monitoring (*using advance monitoring methods and not misusing penalties*)