

# Municipal Solid Waste Management Questionnaire

## 1. Introduction

This questionnaire is designed to facilitate the assessment of the current situation of solid waste management service in an urban area.

To enable an accurate assessment, it is important that all information requested in the questionnaire should be provided as completely and accurately as possible.

## 2. General Information

### 2.1 Name and address of authority responsible for solid waste management

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### 2.2 Area of jurisdiction

Urban area: \_\_\_\_\_(km<sup>2</sup>)

Rural area: \_\_\_\_\_(km<sup>2</sup>)

Total area: \_\_\_\_\_(km<sup>2</sup>)

### 2.3 Population

Population	Current -10 years	Current -5 years	Current
Urban			
Rural			
Total			

### 2.4 Department responsible for solid waste management

#### 2.4.1 Name, address, phone and e-mail of the Department

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e-mai:

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#### 2.4.2 Name and e-mail of the Head of Department

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e-mai:

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2.4.3 Name and e-mail of officer responsible for solid waste management

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e-mai:

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2.4.4 Other

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e-mai:

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2.4.5 Function carried out by the Department

Function	Carried out by			Remarks
	Own staff	Contractor	Other	
Solid waste management service to domestic premises				
Solid waste management service to commercial/trade premises				
Solid waste management service to industrial premises				
Street sweeping				
Grass cutting				
Drain/river cleansing				
Public toilet cleansing				
Removal of dead animals				
Removal of garden waste				
Removal of bulky waste				
Removal of abandoned vehicles				
Development/building plan approval				
Procurement of vehicles/equipment				
Maintenance of vehicles and equipment				
Recruitment of solid waste management staff				
Training of solid waste management staff				
Public education				
Special solid waste management campaign/project				
Others				

2.4.6 Additional remarks on functions carried by the Department, if any

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### 3. Planning and Development

#### 3.1 Physical characteristics of solid waste

3.1.1 If data on waste characteristics are available, please complete the following table:

Component	% by weight		
	Current -10 years	Current -5 years	Current
Paper			
Plastic and rubber			
Organic or vegetables			
Glass and ceramic			
Ferrous metal			
Aluminium			
Wood			
Textile			
Garden waste			
Other			
Total			

3.1.2 Data collected by actual survey or by estimation? \_\_\_\_\_

#### 3.2 Storage

3.2.1 Does the Department have a storage bin standardization policy? If so, please briefly outline the policy.

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3.2.2 Type of storage bin used (please tick appropriate space)

Type of Containers		Residential Premise				Commercial Premise			
		A	F	S	N	A	F	S	N
Individual Containers	Metal bin								
	Plastic bin								
	Plastic bag								
	Oil drums								
	Other								
Communal Containers	Metal bin								
	Plastic bin								
	Oil drum								
	Concrete bin								
	Roll-on Roll-off								
	Other								

A= Almost exclusively used, F= Frequently used, S= Sometimes used, N= Never used

3.3 Collection

3.3.1 Collection service coverage for domestic premises for last year \_\_\_\_\_

Population	% of Total Population	Frequency of Collection
Urban		
Rural		

Additional remarks, if any

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3.3.2 Collection service coverage for commercial/trade premises for last year \_\_\_\_\_

Collected by	% of Total Population	Frequency of Collection
The Department		
The Department's Contractor		
Owner's Contractor		
No collection service		

Additional remarks, if any

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3.3.3 Amount of waste collected (the Department and contractors) last year \_\_\_\_\_

Type of Waste	Estimated Recycling Rate (%)	Quantity		Collected	
		Measured	Estimated	Measured	Estimated
Domestic					
Institutional					
Commercial and trade					
Industrial					
Street/ park cleansing					
Drain cleansing					
Bulky					
Other					
Total					

Note: Attempt should be made to provide the breakdown data. If impossible, at least data for the total should be provided.

**3.4 Disposal**

Items	Disposal Site		
	Site 1	Site 2	Site 3
Name of site			
Total area (ha)			
Year when disposal started			
Estimated life span remaining (Year)			
Amount of waste deposited daily (Tonne/day)			
Distance from collection area to the site (km)			
Disposal method (see notes below)			
Existence of animals on site	Yes/ No	Yes/ No	Yes/ No
Existence of waste pickers or scavengers on site	Yes/ No	Yes/ No	Yes/ No
Existence of open burning on site	Yes/ No	Yes/ No	Yes/ No

Note: For disposal method, please specify as follow:

O = Open dumping, C = Controlled tipping (with occasional soil cover), S = Sanitary landfill (with daily cover), D = Dumping into water body (river/sea etc.)

Additional remarks, if any

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## 4. Operation

### 4.1 Contractual services

Service component	Proportion of contractual service in last 3 years			Number of contractors in last 3 years		
	20...	20...	20...	20...	20...	20...
Collection and transport						
Street sweeping						
Grass cutting						
Landfill operation						
Vehicle maintenance						
Other						

Additional remarks, if any

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### 4.2 Vehicles and equipment

#### 4.2.1 General information

Is there any policy to standardize the vehicles and equipment used by the Department? If so, please outline how this policy is being implemented.

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Does the Department have its own workshop to maintain and repair its vehicles and equipment? If so, how does the workshop purchase spare parts? What is the average time taken for the purchase? What is the policy on stock maintenance?

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4.2.2 Equipment for primary collection (i.e. collection of solid waste from households to communal bin or depot for subsequent collection by collection vehicles)

Type of equipment	Number	Average capacity (m <sup>3</sup> )
Wheel barrows (1 wheel)		
Push carts (2-4 wheels)		
Other		

Additional remarks, if any

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4.2.3 Vehicles

All vehicles owned both by the Department and contractors are to be counted with those of the contractors given in parenthesis.

Type of vehicle	No.	Avg Cap (m <sup>3</sup> )	No. of vehicles by condition			No of vehicles by age (Year)			
			G	F	B	>10	5-10	2-5	<2
Compactor vehicle									
Tipping truck with sliding cover									
Open truck with tipping mechanism									
Open truck without tipping mechanism									
Open truck with crane									
Tilt-frame or hoist truck for big metal bin									
Night-soil tanker									
Vacuum truck									
Water tanker									
Tractor									
Administration vehicle									
Other									

Note: G = Good condition, F = Fair condition, B = Bad condition

Additional remarks, if any

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4.2.4 Machinery used in landfill, including machinery owned by both the Department and Contractors

Type of machinery	No.	Avg Cap (m <sup>3</sup> )	No. of machinery by condition			No of machinery by age (Year)			
			G	F	B	>10	5-10	2-5	<2
Bulldozers									
Bucket-loaders									
Backhoes									
Compactors									
Tractors									
Other									

Note: G = Good condition, F = Fair condition, B = Bad condition

Additional remarks, if any

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4.2.5 Typical purchase price of equipment in recent years

Type of equipment	Purchase price	Year purchased
Compactor vehicle (for collection)		
Tipping truck with sliding cover		
Open truck with tipping facility		
Open truck without tipping facility		
Tilt-frame or hoist truck		
Bulldozer		
Landfill compactor		
Tractor		

Additional remarks, if any

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4.2.6 Problems encountered in solid waste management service. Please tick appropriate spaces.

Problem	Very serious	Serious	Not so serious	No problem
Inadequate service coverage (some people not given service)				
Lack service quality (not frequent enough, spill, etc.)				
Lack of authority to make financial and administrative decision				
Lack of financial resources				
Lack of trained personnel				
Lack of vehicles				
Lack of equipment				
Old vehicle/equipment frequent breakdown				
Difficult to obtain spare parts				
Lack of capability to maintain/repair vehicle/equipment				
No standardization of vehicle/equipment				
No proper institutional set-up for solid waste management service				
Lack of legislation				
Lack of enforcement measure and capability				
Lack of planning (short, medium and long term plan)				
Rapid urbanization outstripping service capacity				
Uncontrolled proliferation of squatter settlements				
Difficult to locate and acquire landfill site				
Difficult to obtain cover material				
Poor cooperation by Government agencies				
Poor public cooperation				
Uncontrolled use of packaging material				
Poor response to waste minimization (reuse/recycling)				
Lack of qualified private contractors				
Difficult to control contractual service				
Lack of control on hazardous waste				
Others				

Additional remarks, if any

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## 5. Finance

### 5.1 Revenue (in local currency) of the authority where the Department responsible for solid waste management is located.

Revenue source (€)	Year before last .....		Last year .....	
	Budgeted	Actual	Budgeted	Actual
Property tax				
License				
Loan				
Grant by Government				
Foreign grant/aid				
User charge for SWM				
Other user charge				
Fine/penalty				
Others				
Total				

Additional remarks, if any

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### 5.2 Expenditure for solid waste management service (in local currency)

Expenditure items (€)	Year before last .....		Last year .....	
	Budgeted	Actual	Budgeted	Actual
Remuneration				
Material & Supplies				
Equipment/Vehicle				
Others				
Total for SWM				
SWM as a % of total expenditure of Authority				

Additional remarks, if any

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## 6. Human Resources

**6.1 Personnel for solid waste management service. In case where a person is responsible for other duties beside solid waste management, please put the number of such persons in parenthesis.**

Type of personnel	Area of Work							Total
	A	CT	S	G	F	D	O	
Administrator								
Health officer								
Public health inspector (PHI) or equivalent								
Assistant to PHI								
Engineer								
Technical assistant								
Technician								
Mechanic								
Mechanic's assistant								
Supervisor								
Driver								
Laborer								
Others								
Total								

A = Administration/supervision, CT = Collection and transportation, S = Street sweeping, G = Grass cutting, If the same person carries out street sweeping and grass cutting, please indicate the number of persons in S column and write same in G column. FD = Final disposal

Additional remarks, if any

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