



## COUNTRY PROFILE ON THE SOLID WASTE MANAGEMENT SITUATION IN

# LEBANON

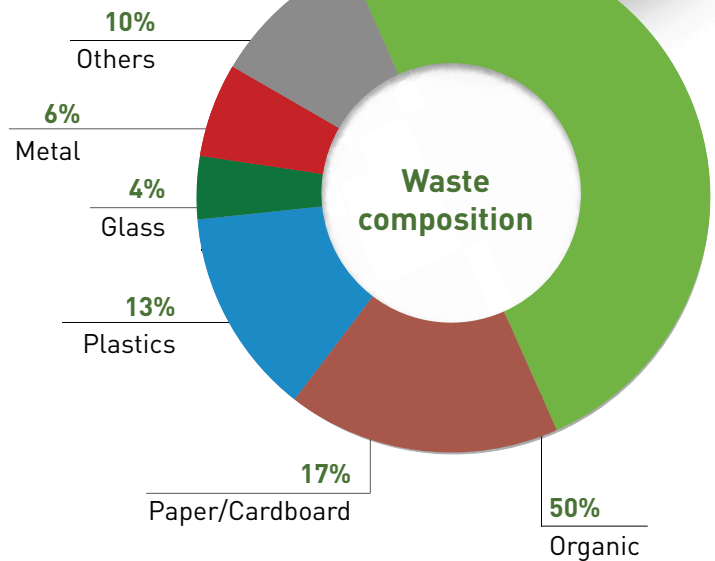


July 2010



### BACKGROUND INFORMATION

• Population :	4.5 million (2009)
• Municipal solid waste (MSW) generation:	1.57 million tons (2009)
• Per capita MSW generation:	
urban areas	~ 0.85 - 1.1 Kg/day
rural areas	~ 0.7 Kg/day
• MSW generation annual growth:	1.65%
• Medical waste generation:	~ 25,040 T/year
• Industrial waste generation:	188,380 T/year
• Hazardous industrial waste generation:	3,380 T/year
• Agricultural waste generation:	-



### TECHNICAL PERFORMANCE

#### • Municipal waste

- MSW collection coverage :	
in rural areas	99%
in urban areas	100%
- MSW final destination:	
- Composted:	9%
- Recycled:	8%
- Landfilled :	53%
- Open-dumped:	30%
- Number of sanitary landfills	
- Under study:	-
- Under construction:	0
- Built:	3
- Operational:	3

#### • Hazardous and industrial waste

- Number of treatment units/centers of industrial wastes (physical chemical treatment)	
- Under construction:	0
- Built:	0
- Operational:	0
- Types of treatment of medical waste:	60% of the waste is treated by autoclaving and shredding

### LEGAL FRAMEWORK

#### General Legal Framework

- No specific legislative framework dealing directly with Solid Waste Management (SWM) ;
- Two decrees address the sector specifically:
  - Decree 8735 of 1974 assigning SWM as a municipal responsibility ;
  - Decree 9093 of 2002 providing municipalities with an incentive to host a waste management facility ;
- A Draft Law on Integrated Solid Waste Management under METAP (Mediterranean Environmental Technical Assistance Program) is still under review.

#### Legal framework related to specific waste types

- Law No. 64 (August 1988) regulating hazardous waste management ;
- Decisions on industrial wastes management issued by the Ministry of Environment (MoE) concerning the required environmental conditions to be respected by the industries ;
- Decree 8006 (June 2002) amended through Decree 13389 (September 2004), classifying the different healthcare waste categories and addressing their relative disposal conditions.



## INSTITUTIONAL FRAMEWORK

### Policy and planning

- Numerous government institutions: Ministry of Environment (MoE), Ministry of Interior and Municipalities (MoIM), Council for Development and Reconstruction (CDR).
- Overlapping responsibilities and unclear lines of authority.

### Implementation and operation

- In Beirut, Mount Lebanon and Tripoli: CDR, and to a lesser extent, the MoE and the MoIM.
- In the rest of Lebanon: the municipalities.

### The institutional structure under the draft Law on integrated SWM

- A single independent SWM board regrouping many stakeholders: responsible for planning and decision-making at the national level, as well as waste treatment.
- Local authorities (municipalities, unions of municipalities): responsible for the waste collection.

## POLICY AND PLANNING

Variable Solid Waste Management (SWM) plans depending on the stakeholder:

- Municipal SWM Strategy for Lebanon prepared by the MoE in 2002.
- Waste Management Plan prepared by the CDR in 2005.
- The National Integrated Strategy for SWM in the country presented by the MoE to the Council of Ministers (CoM) in 2010.

## FINANCIAL AND COST RECOVERY ARRANGEMENTS

### SWM Financing

- Allocation of budget to waste management infrastructure from the CDR.
- Allocation of budget from a Municipal Fund.
- International loans and grants.
- Proper financing by the Municipalities.

### SWM Costs

Costs of SWM vary greatly in Lebanon.

## PRIVATE SECTOR INVOLVEMENT

**In collection and transfer** : highly involved.

**In disposal and treatment** : landfilling in Greater Beirut; constructing an anaerobic digester in Saida, pressing and exporting recyclables (paper, plastics, and glass), recovering materials by Informal and semi-formal private sector, etc.

## OPTIONS FOR IMPROVEMENT

- Issuing the policy/ legal/ institutional framework through the issuance of the Law on the ISWM ;
- Developing and issuing a specific implementable national policy and strategy ;
- Ensuring an efficient and cost effective implementation of private sector participation in the sector (competitive bidding, appropriate types of contracts ensuring possible project financing) ;
- Focusing on enhanced cost recovery and set the applicable decrees and the institutional framework for cost recovery ;
- Ensuring capacity development ;
- Enhancing public awareness ;
- Ensuring the institutional viability of any project in terms of commitment and support at both the national (CoM and Parliament) and local (municipalities) levels ;
- Ensuring political commitment in support to locally developed strategies ;
- Setting the mechanism for data management and sharing between the various stakeholders ;
- Establishing and support SWM networks, such as SWEEP-Net network ;
- Monitoring, in the medium and long term, the future implementation of the strategies, in order to identify the eventual gaps and needed adjustments and improvements.

	Cost for collection and transport	Total cost from collection to disposal
Greater Beirut and Mount Lebanon (excluding Jbeil)	USD 30 / ton	USD 130/ton
Zahleh and Tripoli	-	USD 45-50 / ton
Some rural areas	USD 10-18 /ton	USD 20-30/ ton

supported by

