



## DESCRIPTION SOLID WASTE & RESOURCE MANAGEMENT STRATEGY

### LEGAL FRAMEWORK

To date, there is no specific legislative framework that deals directly with solid waste management in Lebanon. The government often relies on indirectly related legislation such as public health acts or anti-litter decrees. The main piece of legislation providing the general guidelines of environmental protection is the Environment Code. This Law does not only authorize but also gives responsibility to different governmental organizations to prepare and issue detailed rules and regulations for the preservation of different environmental components. The lack of a solid waste legislation constitutes a major obstacle to implement a proper MSW management system in Lebanon. The Ministry of Environm. has prepared a draft law for SWM.

### INSTITUTIONAL FRAMEWORK/ POLICY AND PLANNING

Numerous government institutions, ministries, independent agencies and municipalities are involved in policy-making, planning and the management of the waste sector in Lebanon:

1. Ministry of Environment:
  - Review all studies related to SWM (EIAs, TORs, Tender documents, ...)
  - Participation in committees for reception of works linked to SWT facilities.
  - Preparation of Strategies, Master plans and programs related to SWM.
  - Define standards and environmental limit values for treatment of SW.
2. Ministry of Interior and Municipalities:
  - Municipalities are responsible for waste collection, building facilities.
  - The Ministry controls the Independent Municipal Fund IMF.
3. Council for Development and Reconstruction:
  - Implementation of SWM plans in Lebanon.
  - Develop proposals, TORs and Tender Documents for SWM.
4. Office of Minister of State for Administrative Reform
  - Develop a program to improve the provision of SW services in rural areas by funding municipal projects related to the construction and operation of sorting and composting plants.
  - Develop proposals, TORs and Tender Documents for these projects under the same program.

## FINANCE & COST RECOVERY ARRANGEMENTS

### SOLID WASTE MANAGEMENT FINANCING

MSW collection and transportation are financed entirely from the municipal budget of the UC El Fayhaa.

### SOLID WASTE MANAGEMENT COSTS

The collection cost in Urban Community El Fayhaa is 3.246.587\$/year (estimated as 31\$/ton) while dumping operation in Tripoli landfill costs 24,46\$/ton.

## PRIVATE SECTOR INVOLVEMENT

### COLLECTION

The management of solid waste relies on collecting and disposing Municipal Solid Wastes (MSW) in the landfill. The job of collecting MSW is notified to a private company "LAVAJET" which collects MSW in three shifts (morning, afternoon, midnight). The jobs of landfill operation and supervision are notified to BATCO and DAR al HANDASAH. Households do not practice formal waste separation. The collection contractor is supervised by the Municipality Cleansing Department in each municipality. This Department is in charge of waste services.

### TREATMENT

The current operation of the Tripoli Landfill includes control of incoming wastes, compaction, application of daily cover, biogas flaring and limited leachate control. A leachate treatment plant is under construction for treating leachate produced. Today, the Tripoli Landfill receives wastes from municipalities of Tripoli, El Mina, El-Bedawi, El-Qalamon, and other zones at an average rate of 300 Tons/Day.

A sorting plant for solid waste is under construction in Tripoli for the 3 municipalities of Al Fayhaa. The design capacity of the sorting plant is defined as 150 tons per day and two shifts. The Tripoli sorting facility will include a materials recovery facility (MRF) for the segregation of wastes and further recovery of recyclables (plastic, glass, paper, aluminium). The organic material will also be separated from the waste. Finally, the remaining waste will be delivered to the Tripoli landfill.

## COMMUNICATION AND AWARENESS RAISING

Awareness campaigns have not yet been developed.

### SOURCES

1. Dar Al Handasah Nazih Taleb & partners reports
2. TEDO reports
3. "Solid waste management in Lebanon – 19.09.2011" presentation Eng. B. Sabbagh
4. Diagnostic report - GODEM project

## MORE INFORMATION

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