



**Solid waste management performance audit report in the  
Greater Irbid Municipality-Jordan**

**For the Period (2015-2017)**

**May 2019**

**Goal # (6) Clean water and sanitation**

## **Introduction:**

The environmental sector is one of the sectors of the Jordanian economy that is still affected by the negative repercussions of hosting refugees, as this results in increasing pressure on natural resources, which are already scarce for Jordan, and the solid waste sector is the most important environmental sector affected by this crisis. Moreover, the pressure on the solid waste management infrastructure has increased especially in the northern governorates; where the problem of solid waste management is the major problem for nearly (92%) of the municipalities of those areas, With the increase in the amount of waste to more than (360) tons per day than the capacity that was collected daily before the influx of refugee. Household waste dumps in those areas receive extra quantities of waste that exceed their capacity, in addition to the insufficient number of waste collection workers and the insufficient number of containers in those areas. Because of the sudden increase in the amount of waste generated by the refugees, the services of frequent collection and transportation of solid waste were clearly affected, which resulted in the spread of rodents, insects, and unpleasant odors significantly in those areas.

### **Reasons for choosing the audit topic:**

The importance of the effective role played by solid waste management in securing a safe and clean environment as a basic service provided by local municipalities to citizens, and the impact of negligence in providing this service on the local environment and the health of citizens. In the implementation of Goal (6) clean water and sanitation by 2030.

### **Audit Objectives:**

- Verify the ability of the Greater Irbid Municipality to properly plan for the exploitation of all available resources for solid waste management, in addition to consolidating environmental awareness among citizens.
- Studying the measures taken and the operations implemented by the Greater Irbid Municipality in the management of solid waste in terms of collection, transportation, and disposal in a manner that protects the environment and public health.
- Verify that the measures implemented by the Greater Irbid Municipality helped to reach a safe and clean environment.

- Study the procedures followed in the disposal of solid waste in Al-Akaider landfill and study the environmental impacts of those procedures.

### **Legislative environment and legal reference: -**

- Solid Waste Management Regulation No. 27 of 2005
- Environmental Protection Law No. (6) of 2017
- Climate Change Regulation No. 79 of (2019)
- Laws and regulations applicable in the public sector.

## **Results**

### **1. Regulatory framework:**

- a. There is no approved and documented methodology for preparing work plans for solid waste management during the study period, whether by the municipality or the Ministry of Local Administration related to defining the methodology and method for preparing these plans, in addition to specifying the basic data and information that must be available.
- b. The lack of strategic plans and annual work plans in general, or for household waste management in particular, and the lack of implemented service programs based on clear criteria, an assessment of actual needs, and an arrangement of the municipality's own priorities.
- c. There are no documented and approved standards and indicators to measure performance related to solid waste management, as their absence results in the absence of normative values on which to base judgment on the progress made in the municipality's achievement of what is required of it in solid waste management.

- d. There is no approved job description for all municipal jobs, including jobs related to solid waste management.
- e. The municipality does not have a comprehensive and integrated electronic database that includes basic data and information on solid waste management over the past years.

## **2. Technical framework:**

### a. Waste collection:

The collection stage is the first stage of the operations of solid waste management, as it is done by the workers collecting the solid waste generated in all areas of the municipality and placing it in the containers designated for that. The number of workers working in collecting waste from residential neighborhoods in the Greater Irbid Municipality reached (743) workers.

1. The current number of workers is insufficient in collecting waste from all areas of the municipality's borders, as it becomes clear that each worker is responsible daily for (1229) citizens and collects (1106) kg of waste.
2. There are no specific documented and approved work tracks for the distribution of the workers to residential neighborhoods in all areas of the municipality whether inside or outside the zones; The availability of these paths leads to optimal utilization of time and effort expended by the workers, in addition to direct identification of the responsibility for collecting waste, especially in the border areas of residential neighborhoods.
3. The lack of optimal distribution of waste containers to the areas of the municipality due to the lack of approved standards within the municipality.

4. There are no documented and approved paths to the places for distributing containers to residential areas, contrary to the provisions of Article (5/D) of Solid Waste Management Regulation No. 27 of 2005.
5. There is no official statistic with the municipality regarding the number of complaints registered by citizens related to waste collection, the procedures taken in this regard, and the time taken to correct them.
6. The failure of the internal control unit in the municipality to periodically follow up on the work related to the collection and transportation of waste.

#### **B. Waste transportation:**

1. There are no documented and approved tracks for waste collection vehicles of all kinds, contrary to the provisions of Article (5) (c) of the solid waste management Regulation No. 27 of 2005; And thus leads to an increase in the financial cost and time spent in collecting and transporting waste.
2. The municipality does not have documented data on the volume of waste that is transported daily to the Ekaider landfill, as the data currently available is an estimated quantity.
3. The high difference in the volume of transported waste between the data of the Greater Irbid Municipality and the Joint Services Council in Irbid, where the difference amounted to approximately (80,583 tons during the years 2015, 2016 and 2017.
4. There is no electronic link between the Environment Department and the relevant departments concerned with providing the necessary information, especially the Department of Maintenance to benefit from the detailed data on maintenance costs spent on solid waste transport machines and vehicles.
5. There is no electronic tracking system for the movement of waste collection and transportation vehicles (Tracking System), as the system provides periodic and continuous monitoring of these vehicles.

6. There is no approved, documented methodology for preparing solid waste management plans by the Joint Services Council related to defining the methodology and method for preparing such plans, in addition to specifying the basic data and information that must be available.
7. The absence of strategic plans and annual action plans in general, or for the management of household waste in particular, and the absence of programs and services implemented based on clear basis, an assessment of actual needs, and an arrangement of priorities for the municipality.
8. The use of methods that are not suitable in the environment at “Toqbol Transformation station” when the “Al-Muhqan” refinery and garbage compressor fail, as the waste is dumped in the station yard for a certain period of time and then transferred to the Al-Ekaidar landfill, where this leads to the mixing of the waste sap with the soil layers in that area.
9. There is no maintenance department in “Toqbol Transformation” station”, where the station staff performs corrective maintenance that may lead to causing physical damage to the staff and technical damage to the machines due to the lack of necessary technical expertise for the staff.
10. The waste baler did not operate at the Transforming Trucks City station, despite the completion of the preparation process at the station for more than five months, due to the mismatch of the specifications of the baler with the container lifting arm.
11. Receiving medical waste as part of the waste that is supposed to be re-sorted, as this resulted in the injury of sorting workers.
12. Receiving inorganic waste from among the waste that fertilizers are supposed to produce, which affects the fertilizer production process at the station.
13. The lack of an electronic database at the landfill management that includes the collection of data on solid waste management.
14. There are no detailed records of the maintenance costs of the vehicle.

**Key Recommendations:**

1. Emphasizing the importance of having a single umbrella for solid waste management that unifies the legislation governing this field, in addition, to directly defining the implementation responsibility of each concerned party.
2. Commitment to issue the instructions referred to in the Solid Waste Management Regulation No. 27 of 2005
3. Emphasizing the importance of issuing the framework law for solid waste management as soon as possible.
4. The necessity to committing to the Ministry of Environment to prepare plans and operational programs related to solid waste management.
5. Issuing special conditions for collecting, transporting and sorting solid waste in accordance with the provisions of Article (4/b) of the Solid Waste Management Regulation No. 27 of 2005.
6. Emphasis that the Ministry of Environment's commitment should issue and approve what is required in the solid waste management development project.
7. Emphasizing the importance of the role of the Cities and Villages Development Bank in preparing technical studies to help municipalities in determining their actual needs in the field of solid waste.
8. Providing the necessary technical expertise by the concerned authorities and performing basic training workshops to qualify the technical cadres that working in the field of solid waste.
9. Emphasizing the importance of preparing strategic plans and action plans by the municipality in accordance with actual needs and approved criteria.
10. Emphasizing the importance of raising the awareness role of the municipality with regard to solid waste management.
11. Commitment to prepare an electronic database at the municipality that includes all data related to solid waste management.
12. The necessity of the municipality's commitment to follow up on the observations related to the collection and transportation of waste.
13. The necessity of the Joint Services Council's commitment to follow up on the observations related to the transfer stations and the Ekaider landfill.