Sustainable Management of Sanitary Landfills

2017
**RECENT ISSUES**

**GENERAL ISSUES**
- Growing Population and Increasing Waste
- Waste’s Organic Matter and Moisture Content
- Lack of Efficient Waste Sorting at Source

**SPECIFIC ISSUES**
- Insufficient Space for Sanitary Landfills
- Increasing Waste Amount Kept in Sanitary Landfills
- Failure to Reach Objectives Specified in Legal Regulations

![Graph showing population growth in Istanbul](image1)

![Graph showing waste generation](image2)
OUR POLICY

LEGAL RESPONSIBILITIES

Metropolitan Municipality Act No. 5216
Municipality Act No. 5393

District Municipality
- To collect domestic waste from its source (homes, workplaces, streets, etc) and transport to transfer stations.
- Waste sorting at source

Metropolitan Municipality
- To build, operate, and manage transfer stations and disposal facilities.

LEGAL OBJECTIVES

Regulation on Regular Waste Collection dated 26 March 2010

Compared to quantities in 2005, biodegradable waste will be reduced to 75% in 5 years, 50% in 8 years, and 35% in 15 years.

National Waste Management Plan - Goal 2023
In 2023, it is aimed to recover 35% of total waste and dispose of 65% in sanitary landfills.
**OUR IMPLEMENTATION MANAGEMENT**

**SANITARY LANDFILLS**

- Odayeri Sanitary Landfill (11,219 tonnes/day)
- Komurcuoda Sanitary Landfill (6,115 tonnes/day)
- Seymen Sanitary Landfill (598 tonnes/day)

**SOLID WASTE TRANSFER STATIONS**

<table>
<thead>
<tr>
<th>2016</th>
<th>UM</th>
<th>Odayeri</th>
<th>Komurcuoda</th>
<th>Seymen</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Space</td>
<td>Ha</td>
<td>266</td>
<td>233</td>
<td>226</td>
<td>725</td>
</tr>
<tr>
<td>Empty Space</td>
<td>Ha</td>
<td>121.6</td>
<td>114</td>
<td>170</td>
<td>405.6</td>
</tr>
<tr>
<td>Total Landfill</td>
<td>Metric Tonnes</td>
<td>62,000</td>
<td>31,250</td>
<td>295</td>
<td>93,545</td>
</tr>
<tr>
<td>Estimated Max Fill Time</td>
<td>Year</td>
<td>2030</td>
<td>2030</td>
<td>2045</td>
<td>-</td>
</tr>
</tbody>
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Baruthane; Yenibosna; Halkali; Silivri; Hekimbasi; Kucukbakkalkoy; Sile; Aydinli

Solid Waste Transfer Stations
OUR SUSTAINABLE APPROACH

➢ To allow for efficient use of sanitary landfills and dispose of less waste in these landfills

DOMESTIC WASTE INCINERATION FACILITY PROJECT

➢ To manage high organic matter and moisture content in waste

WASTE CHARACTERIZATION STUDY
BIOMETHANATION FACILITY

➢ To decrease the influence of growing population and increasing waste amount on the waste management system

GASIFICATION FACILITY

NEW TRANSFER STATIONS
1- MANAGEMENT OF LANDFILL GAS AND LEACHATE OCCURRING IN SANITARY LANDFILLS
• Both LFG facilities available as of this date produce power from landfill gas occurring in sanitary landfills.
• Leachate as a by-product of the process is discharged to watercourses or channels.

2- SAVING SPACE IN SANITARY LANDFILLS
• Alternative Disposal Facilities have been planned.
• Currently, 5% of the domestic waste received in IMM’s disposal facilities are recovered in recovery facilities.
• Once planned facilities are completed in 2020, this rate is expected to reach 20%.

Amount of Electricity Produced from Landfill Gas (MWh)