

# SDG 6



**Indicator**

**6.4.2**

## Water Reuse Measurement

Water conservation and reuse strategies implemented by Misr International University (MIU). Based on official engineering data for the academic year 2023-2024, the University acts as a centralized body to measure, treat, and reuse wastewater. The data confirms that a significant portion of the university's landscape irrigation requirements are met through on-site water treatment and reuse.

Infrastructure and  
Measurement  
Methodology

### 1. Centralized Collection and Treatment

The University has established a comprehensive infrastructure to measure and manage water reuse. All wastewater generated within the campus is diverted through a dedicated sewage network to the on-site **Sewage Treatment Plant (STP)**.

- **Plant Capacity:** The STP operates with a capacity of **225 m<sup>3</sup> per day**.
- **Process:** The plant treats sewage water to levels safe for irrigation purposes, adhering to environmental standards for the maintenance of green spaces.

	<p><b>2. Measurement Protocols</b></p> <p>The Engineering Department utilizes specific metering system to track water volume at three intervals:</p> <ol style="list-style-type: none"> <li><b>Daily Flow</b></li> <li><b>Weekly Aggregates</b></li> <li><b>Annual Totals</b></li> </ol>								
<p>Quantitative Data Analysis (2023-2024)</p>	<p>The following data demonstrates the University's active measurement of its water cycles.</p> <p><b>1. Irrigation Water Consumption</b></p> <p>The university maintains extensive green spaces which require consistent irrigation. The measured consumption rates are as follows:</p> <table border="1" data-bbox="643 955 1276 1245"> <thead> <tr> <th>Metric</th> <th>Measured Volume</th> </tr> </thead> <tbody> <tr> <td>Daily Irrigation Usage</td> <td>269.5 m<sup>3</sup> / day</td> </tr> <tr> <td>Weekly Irrigation Usage</td> <td>1,886.5 m<sup>3</sup> / week</td> </tr> <tr> <td>Total Annual Usage</td> <td>98,098 m<sup>3</sup> / year</td> </tr> </tbody> </table> <p><b>2. Impact of Water Reuse</b></p> <p>The University measures the specific contribution of treated wastewater to the total water budget.</p> <ul style="list-style-type: none"> <li><b>Daily Treated Effluent:</b> Approximately <b>207 m<sup>3</sup></b> of treated water is produced daily (during standard operation days).</li> <li><b>Annual Reused Contribution:</b> Out of the total 98,098 m<sup>3</sup> used for irrigation annually, <b>75,348 m<sup>3</sup></b> is sourced directly from treated wastewater.</li> </ul> <p><b>Conclusion of Data:</b> Approximately <b>76.8%</b> of the University's annual irrigation needs are met through measured, reused water.</p>	Metric	Measured Volume	Daily Irrigation Usage	269.5 m <sup>3</sup> / day	Weekly Irrigation Usage	1,886.5 m <sup>3</sup> / week	Total Annual Usage	98,098 m <sup>3</sup> / year
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<p><b>Innovative Recovery: Air</b></p>	<p>In addition to sewage treatment, the University measures and captures "grey water" generated by air conditioning systems.</p>								

<b>Conditioning Condensate</b>	<ul style="list-style-type: none"><li>• <b>Measurement:</b> The Engineering Department has calculated the condensate recovery based on an 8-hour daily operation cycle.</li><li>• <b>Volume Recovered: 12 m<sup>3</sup> per day.</b></li><li>• <b>Method:</b> This water is diverted into the university's sewage network, where it joins the treatment cycle to be processed and reused for irrigation.</li></ul>
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