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 m³ per day**. • **Process:** The plant treats sewage water to levels safe for irrigation purposes, adhering to environmental standards for the maintenance of green spaces.

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2. **Measurement Protocols**

The Engineering Department utilizes specific metering system to track water volume at three intervals:

1. **Daily Flow**
2. **Weekly Aggregates**
3. **Annual Totals**

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<tr><td>Quantitative Data Analysis (2023-2024)</td><td>

The following data demonstrates the University's active measurement of its water cycles.

1. **Irrigation Water Consumption**

The university maintains extensive green spaces which require consistent irrigation. The measured consumption rates are as follows:

Metric	Measured Volume
Daily Irrigation Usage	269.5 m^3 / day
Weekly Irrigation Usage	1,886.5 m^3 / week
Total Annual Usage	98,098 m^3 / year

2. **Impact of Water Reuse**

The University measures the specific contribution of treated wastewater to the total water budget.

- **Daily Treated Effluent:** Approximately **207 m^3** of treated water is produced daily (during standard operation days).
- **Annual Reused Contribution:** Out of the total 98,098 m^3 used for irrigation annually, **75,348 m^3** is sourced directly from treated wastewater.

Conclusion of Data: Approximately **76.8%** of the University's annual irrigation needs are met through measured, reused water.

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<tr><td>Innovative Recovery: Air</td><td>In addition to sewage treatment, the University measures and captures "grey water" generated by air conditioning systems.</td></tr>
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Conditioning Condensate	• **Measurement:** The Engineering Department has calculated the condensate recovery based on an 8-hour daily operation cycle. • **Volume Recovered: 12 m³ per day**. • **Method:** This water is diverted into the university's sewage network, where it joins the treatment cycle to be processed and reused for irrigation.