University : Al-Mustaqbal University (formerly name: Al-Mustaqbal University College)
Country : Iraq
Web Address : https://uomus.edu.iq/Home/IndexEn

6.2 Water consumption per person

6.2.1 Water consumption tracking: Measure the total volume of water used in the university that is taken from mains supply, desalinated, or extracted from rivers, lakes, or aquifers?

Link to the public evidence:
https://sustainability.uomus.edu.iq/SDG_Hub/Goals/6

Yes, Al-Mustaqbal University has actively implemented a comprehensive water conservation policy.

Al-Mustaqbal University has implemented a comprehensive water conservation policy (Policy). As part of this initiative, the university has installed several water meters (see Figure 1) to accurately measure the volume of water used for drinking. Water storage across the campus is managed via control panels in each building, monitored by specialized engineers. These meters and control panels ensure precise data collection on water consumption and encourage responsible water use by minimizing waste. Additionally, the quality of drinking water is continuously monitored through an electronic control system connected to sensors that assess water quality. This system enables real-time tracking of both the quality and quantity of water supplied to university buildings and facilities (see Figure 2).



Figure 1: Water meters installed in Al-Mustaqbal University (on campus)



Figure 2: The control system for monitoring and regulating the quality and quantity of drinking water produced by the RO (Reverse Osmosis) unit.

In addition, the university has transitioned toward eco-friendly agriculture by cultivating low-water-consuming and drought-tolerant plant species, which has contributed to reducing the total annual water consumption for irrigation across all campus areas from 101 cubic meters in 2021 to 47 cubic meters in 2025, as illustrated in Figure 3. Furthermore, the university has adopted a modern and efficient irrigation network that now covers most agricultural and green spaces on campus, primarily utilizing drip and sprinkler irrigation based on landscape needs, as shown in Figure 4. It can be seen that the water consumption for irrigation in 2025 was increased compared to 2024, this is due to the university has acquired a number of agricultural areas for agricultural purposes.

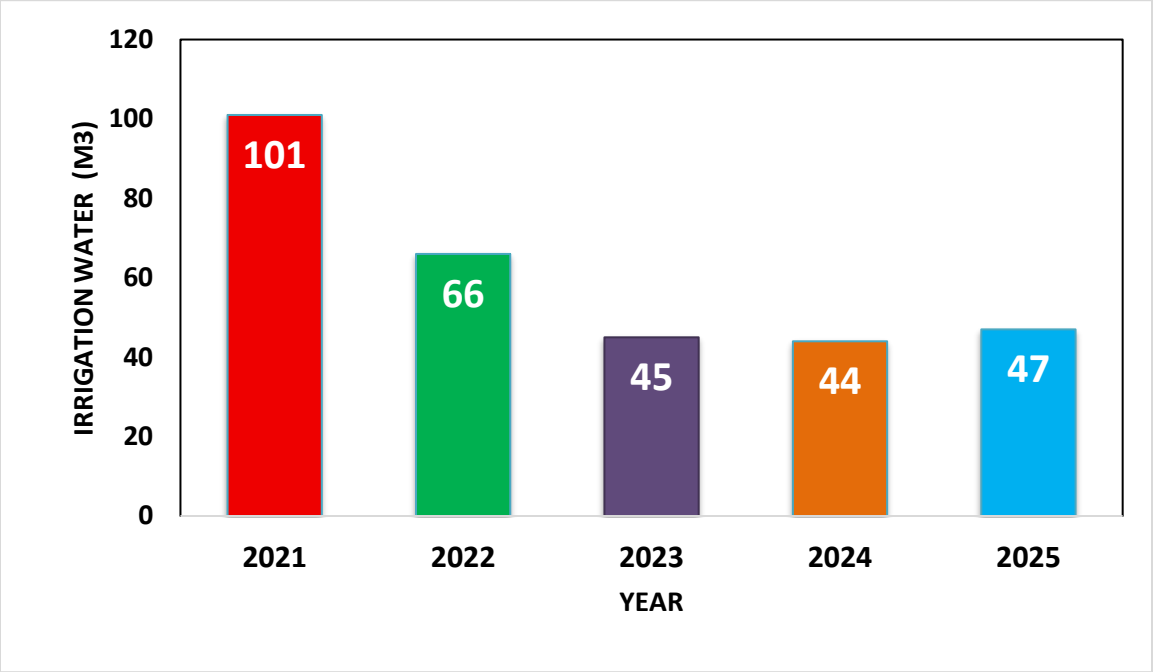


Figure 3: Water consumption for irrigation (m^3).



Figure 4: Several photos show the irrigation system of Al-Mustaqbal university

All the above demonstrates that the water consumption process at the university is controlled, and overall consumption is monitored by the Water Authority of Babil Province, Iraq.

6.2.2 Water consumption by campus population: Inbound (treated/extracted water)

A) Water consumption

The table below presents the total volume of water consumption across various uses, including drinking, washing, and agricultural purposes. Figure 5 further illustrates the monthly water consumption on campus. Notably, water usage significantly decreases during the summer break, encompassing the months of June, July, and August, due to the reduced presence of students and staff. It can be observed that the daily consumption amount has increased due to the rise in the number of students, in addition, a number of new buildings was constructed.

Year	Campus population (Capita)	Volume of water used in the university (m^3/yr)	Water consumption by campus population (m^3/capita/yr)
2025	**20,150**	**141,050**	7.00
2024	**18,781**	**130,565**	6.95

A slight increase in water consumption during July was observed (Figure 5), attributed to the university's adoption of the Bologna Process in education. Following instructions from the Iraq Ministry of Higher Education and Scientific Research, the summer break was interrupted for some professors and students to conduct final exams. As a result, the university had to provide additional water for drinking and sanitation during this particularly hot month. *Please note that the university's system includes no summer semester.*

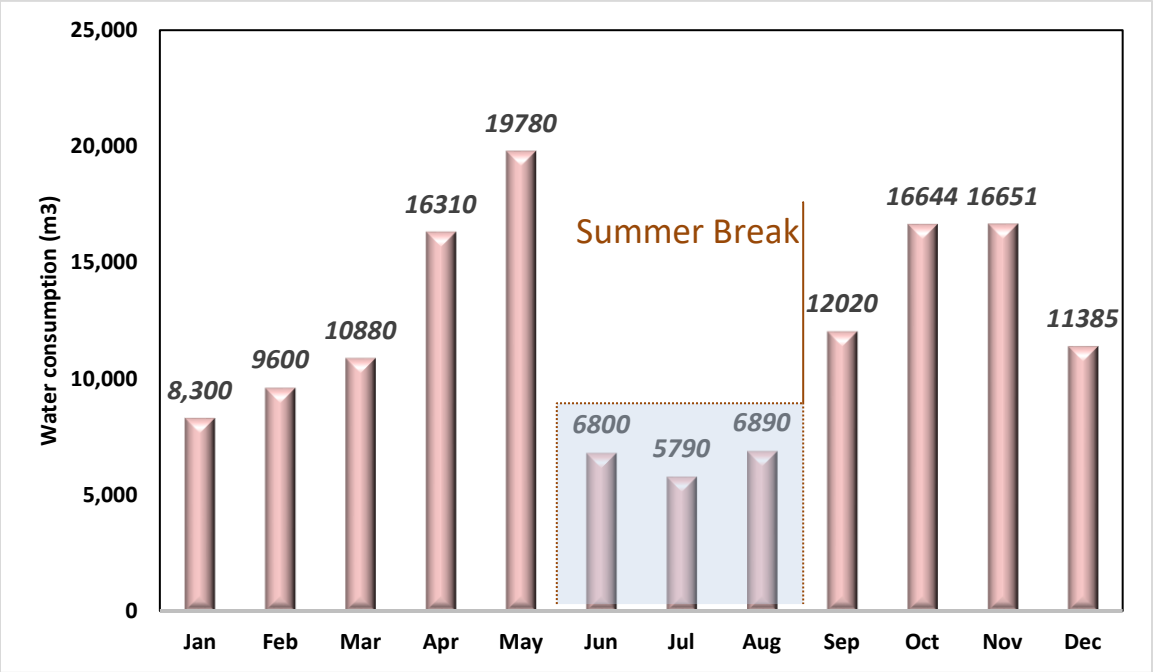


Figure 5: Water consumption (m^3) per month

B) Consumption of treated water [> 75% treated water is reused]

The entire amount of treated water that produced from the greywater treatment plant is reused for agricultural purposes, irrigation of campus lands, and feeding the irrigation channels within the university.

1. Reuse of Treated Water

As part of the **Greywater Treatment-Reuse Project**, Al-Mustaqbal University ensures that the entire amount of treated water from the greywater treatment plant is reused. **Seventy-five percent (75%)** is allocated for irrigation of green spaces and agriculture on campus, while the remaining **twenty-five percent (25%)** is used to feed irrigation channels and for other landscaping purposes. This initiative significantly reduces reliance on freshwater and promotes sustainable water management practices.

2. Importance of Recycling

- **Protecting water resources:** reduces dependency on freshwater for irrigation.
- **Reducing operational costs:** lowers water bills by using treated water.
- **Improving the campus environment:** preserves green spaces and supports afforestation.
- **Enhancing practical education:** offers students hands-on experience in water recycling technologies.
- **Minimizing pollution:** treats greywater before discharge, reducing environmental contaminants.

3. Standards Applied at the University

- Compliance with reducing **BOD** and **COD** levels to ensure safe reuse.
- Use of an integrated system including sand and textile filters, biological and chemical treatment units.
- Daily production capacity of **10,000 liters**.
- Alignment with the Sustainable Development Goals (SDGs):
    - **SDG 6:** Clean Water and Sanitation
    - **SDG 11:** Sustainable Cities and Communities
    - **SDG 12:** Responsible Consumption and Production
    - **SDG 13:** Climate Action

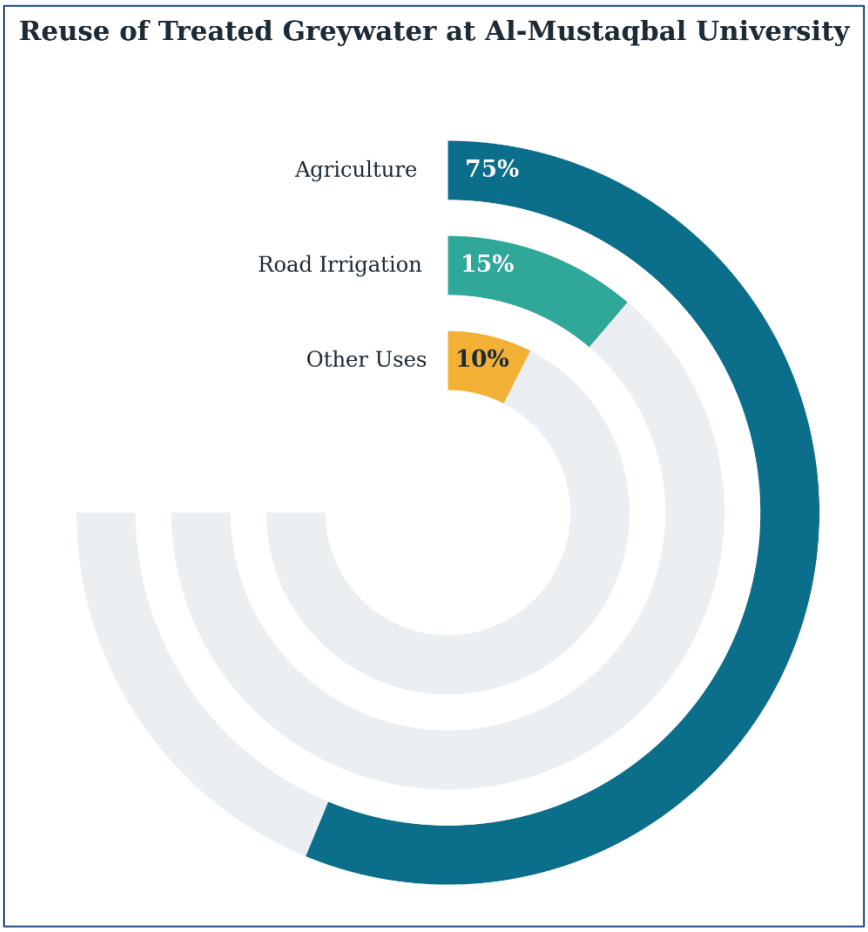


Figure below depicts the percentage of treated water consumed from the water treatment systems compared to all water sources at Al-Mustaqbal University in 2025. The proportion ranges between **75–80%**, highlighting that treated water from the greywater treatment plant constitutes the majority share of the university's total water consumption. In contrast, the remaining **20–25%** of water demand is fulfilled by other sources, including groundwater, rainwater collection, and municipal supply.

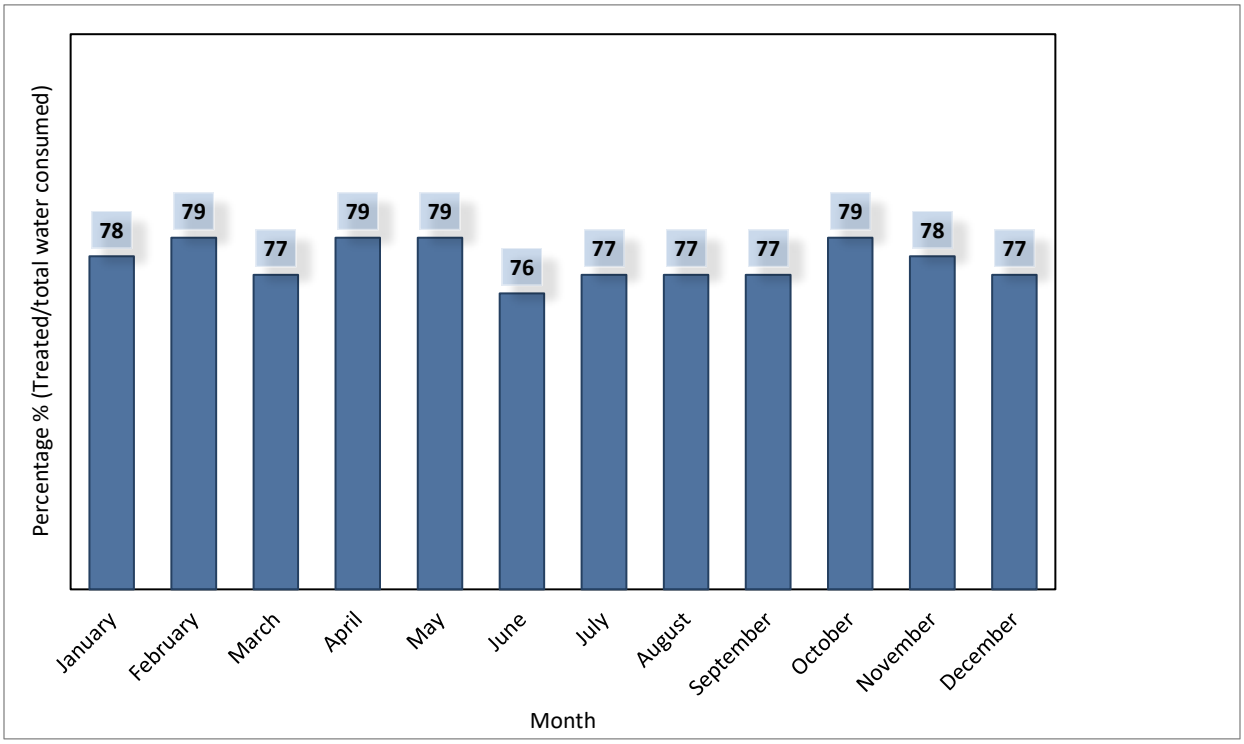


Figure 6: **The percentage of treated water consumed at A-Mustaqbal university in 2025**