

# 6. Clean Water and Sanitation



Scholarly Output:

**2**



International Collaboration:

**2**



Field-weighted Citation Impact:

**0.85**



Number of Total Projects:

**1**



Number of Events:

**1**

**1.**

## Operational water use

OzU's Sustainability Policy provides guidance and direction to minimize resource consumption through good design, including actively promoting efficient water use and maximizing its reuse across the University. In 2021, OzU consumed a total of 5,31 m3 of potable water per person in higher education operations, a decrease of %10 from 2020 (5,88 m3) and a decrease of %39 from 2019 (8,68 m3). This decrease was significantly influenced by the COVID-19 Pandemic and the move to remote learning.

OzU Design Standards provides minimum standards for new buildings and refurbishments to minimize water use, through general design principles, water sensitive urban design initiatives, and specifying minimum water efficiency standards for fixtures and fittings. The University also applies water conscious planting considering the selection of drought-tolerant planting in the urban environment.

OzU actively encourages conscious water usage by sending messages to OzU community to promote reusable water bottles and advice students and staff to report dripping and leaking taps and toilets. OzU has drinking fountains and refill taps in kitchens and kitchenettes, providing students, staff and visitors with free drinking water.



**2.**

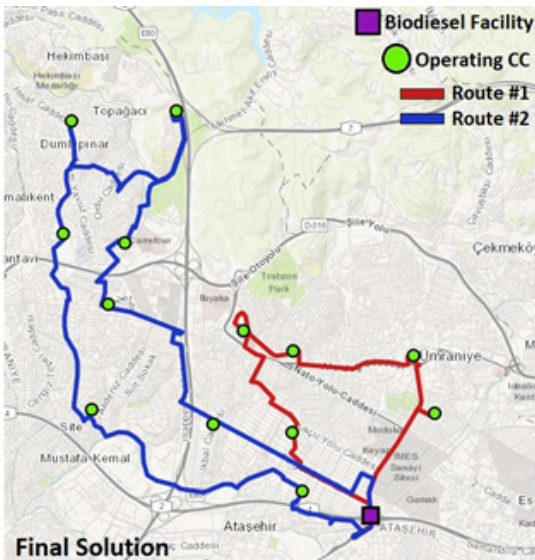
## Ozyegin Campus

Ozyegin University campus buildings have LEED Gold certification. During the planting studies, it is aimed to reduce the consumption of water and the use of chemical fertilizer least by selecting local and adapted plants. The ratio of hard floors is kept low and permeable surfaces are used as much as possible to minimize the burden of the construction on the infrastructure and especially to the rainwater network. It is also planned that rainwater is collected and used again. Grey water collected from the faucets is purified and recycled in the siphon. In addition, water fixtures are used in the building and water saving properties in vitrification are sought. These selections are based on EPA (Environmental Protection Agency) standards.

### 3. Network Design for Collecting Household Waste Cooking Oil

The improper disposal of waste cooking oil (WCO) (e.g., by pouring it down the drain) causes serious ecological contamination. An WCO environmentally friendly WCO disposal method is collecting the oil from the businesses (such as hotels, restaurants) and households, and using it as raw material in biodiesel production. While in the private sector proper WCO disposal is enforced by existing laws, the large amount of WCO produced by households mostly remains uncollected.

OzU professors [Burcu Balçık](#), [Ali Ekici](#), and [Okan Orsan Ozener](#), [Omer Berk Olmez](#) and [Ceren Gultekin](#) focused on designing an efficient WCO collection network, in which households deposit their WCO into the bins to be placed at several collection centers, which are then regularly collected by [capacitated vehicles to be used in biodiesel production](#). The authors formulated mathematical models and developed heuristic algorithms to solve the problem. A case study based on network data from Umraniye, Istanbul, is presented. This study can be a building block for further studies in WCO collection practices through households.



### 4. There Is No Planet B!

In March 2021, Community Engagement Projects unit organized a [4-day a self-challenge event](#). This event aimed to inform the students about the water crisis and create awareness on the changes they can make in their daily life considering the urgency of the situation. The event included the screening of [the documentary “25 Liters”](#), [students’ calculating their water footprint](#), shooting a Reels video and joining to the live event and chat with [Duyarlı ÖZÜ Volunteers](#) about the crisis.



### 5. The Finalist of the “Tomorrow of the Water” Project Competition

[Burak Asker](#), a sophomore Industrial Engineering student at OzU, has been named as a finalist for the [“Tomorrow of the Water”](#) organized jointly by the [Presidential Human Resources Office of the Republic of Turkey](#), and [ASELSAN](#). In the competition aiming to mobilize technology for a livable world, the six teams that made it to the finals among 125 teams competed with the projects to protect the water resources in Turkey and to manage them in the most efficient way.