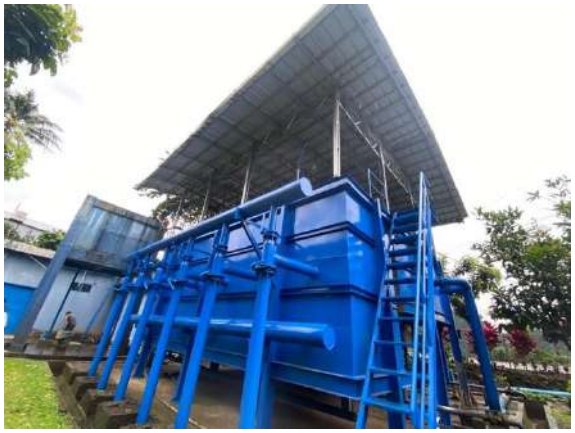
University : Universitas Pendidikan Indonesia
Country : Indonesia
Web Address : http://upi.edu

[4] Water (WR)

[4.1] Water Conservation Program Implementation

There are 3 water conservation programs at the University of Indonesia: technical or engineering water conservation, natural water conservation, and social and behavioral water conservation.

1. **Technical Water Conservation (Engineering)**
   Using technology or infrastructure engineering to conserve and utilize water efficiently.





Water Treatment Plant, Universitas Pendidikan Indonesia

Description:
UPI uses two water treatment plants for all buildings on the Bumi Siliwangi campus. The main source of water for the WTP is the Cilimus River, located in the northern part of the UPI site. For the installation, UPI collaborated with PT. Tirta Anugrah Utama. The water treatment plants can process 15,000 m3 per half day and can hold 450,000 m3 of water. By maintaining a continuous supply of clean water, the WTPs help prevent water scarcity at Universitas Pendidikan Indonesia.





Water Storage, Universitas Pendidikan Indonesia

Description:

Besides WTP, each buildings are equipped with water reservoir where the main resources is from deep well. The water from ground reservoir will be pumped to the tower reservoir and then distribute to each floor.









Automatic Faucet and low flush toilet, Universitas Pendidikan Indonesia

Description:

Water-saving sinks use less water per flush, low-flow faucets restrict flow without reducing pressure, and automatic faucets only flush when needed, preventing waste from forgetting to turn off the faucet.





Rain Water Harvesting, Universitas Pendidikan Indonesia

Description:
Rainwater harvesting collects and stores rainwater from building rooftops for future reuse. Rainwater harvesting reduces reliance on conventional water sources and supports sustainable development and water conservation.



Atmospheric Water Generator, Universitas Pendidikan Indonesia

Description:
An Atmospheric Water Generator (AWG) is a device used to extract water from humid air. The extracted water produces clean, drinkable water. This device works by cooling the air to its dew point, causing the water vapor to turn into water droplets. These water droplets are then collected and filtered to remove impurities, resulting in clean, drinkable water. AWGs are an effective solution during water shortages on campus.

2. Natural Water Conservation

Scientific water conservation, as an effort that utilizes natural processes to maintain water balance in the environment.



Biopore, Universitas Pendidikan Indonesia

Description:
Biopores are located across five campuses of the Indonesian University of Education. Biopores help rainwater infiltrate the ground, reduce flooding, and increase groundwater reserves, a practice of conserving and efficiently using natural water.





Infiltration wells, Universitas Pendidikan Indonesia

Description:

Taking advantage of the tropical climate, which allows year-round rainfall, UPI has built infiltration wells to conserve water by collecting rainwater and filtering it into infiltration wells. These infiltration wells can increase groundwater reserves.




Conservation of water catchment areas, Universitas Pendidikan Indonesia

Description :

Water catchment areas around the Indonesian University of Education campus are conserved through the management of green open spaces, planting various vegetation such as trees, shrubs, bushes, and grasses, thus making the soil more permeable and able to absorb water well. Furthermore, the selection of plant species that do not require much water for their maintenance is also implemented to support efficient water use and the sustainability of the campus environment. Furthermore, permeable pavement materials are used.

3. Water Conservation Based on Social and Behavior

Related to changes in the behavior of the academic community in daily water use on campus.





Water Saving Campaign, Universitas Pendidikan Indonesia

Description :

A water-saving campaign on the Indonesian University of Education campus, using posters, pamphlets, and social media posts, aims to raise awareness among the academic community about the importance of wise water use. This initiative encourages simple habits like turning off taps when not in use, as part of efforts to create a sustainable campus.





Water Flow Meter, Universitas Pendidikan Indonesia

Description :

Water flow meters for water conservation can include devices such as IoT-based digital flow meters and conventional water meters installed on campus water distribution pipes. These devices help monitor water usage in real time or in volume units, enabling users to identify waste and take action to reduce water consumption on the Universitas Pendidikan Indonesia campus.

Additional evidence link:

- **Water management monitoring form in the Indonesian education university environment**
  https://drive.google.com/drive/folders/11lEWxA_Vgnj-eYZyJ3hSL7MwW_-wee-Pi8FPvllmbVNGW1QyhjLUnJx0bFbbKDKqdgc_6vGE?usp=share_link

- **Biopore Area**
  https://drive.google.com/file/d/1J7RjjgvUs4ry9L6TUmOfVii8fZpldF_T/view?usp=share_link

- **Conservation of water catchment areas (Open Areas, Green Areas and Vegetation Points)**
  https://drive.google.com/file/d/1vpfCVCxJc5Y_P8NV7Nv7hr0-mSrYQAM5/view?usp=share_link