



UI GreenMetric Questionnaire

University : Baku State University
Country : Azerbaijan
Web Address : <http://bsu.edu.az/en>
SDG Focused Web Address: <https://sdg.bsu.edu.az/>

[4] Water (WR)

[4.3] Water Recycling Program Implementation (WR.3)





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Description:

Baku State University has established a comprehensive and integrated water management system aimed at promoting sustainability, water conservation, and efficient resource utilization across the campus. The university implements various water recycling and reuse practices, including rainwater harvesting systems, water metering technologies, and monitoring mechanisms to ensure efficient consumption and reduce water wastage.

Collected rainwater is stored and reused for non-potable purposes such as landscape irrigation, garden sprinkler systems, and ecological green areas on campus. In addition, treated and recycled water is utilized in appropriate technical applications, contributing to reduced dependence on potable water resources. Water-saving fixtures and efficient infrastructure systems are also gradually integrated into campus buildings to further enhance water efficiency.

The university's water management strategy is strongly supported by institutional sustainability policies, the Climate Action Plan, and SDG 6-related initiatives. Furthermore, scientific research activities focusing on water purification, hydrological modeling, and environmental monitoring contribute to improving water resource management practices. These combined efforts demonstrate the university's commitment to sustainable development, climate resilience, and responsible water usage in alignment with international sustainability standards.

Baku State University has significantly expanded the use of treated water as part of its comprehensive Water Recycling Program, aimed at protecting water resources, promoting ecological sustainability, and advancing the university's "Green Campus" agenda. The program is designed not only to reduce dependence on external water supplies but also to ensure that more than 50% of total campus water usage is recycled and reused across facilities.

Key measures implemented include:

- Reuse of water in sports pools – After competitions and training sessions, swimming pool water is carefully filtered, treated, and redirected for irrigating greenery across the campus. This reduces the demand for fresh water in maintaining landscape and sports grounds.
- Water circulation in the Eco-Space – In the Eco-Space aquaponics system, the water used for fish habitats is filtered and circulated back into the system. This innovative reuse approach supports both biodiversity conservation and sustainable food production practices on campus.
- Closed circulation in fountains – All campus fountains are designed with a closed circulation mechanism, ensuring minimal additional water input. This approach combines aesthetic enhancement of the campus with responsible water use.
- Treatment of domestic and technical wastewater – Modern treatment equipment is employed to process wastewater generated from laboratories, dormitories, and administrative buildings. The treated water is then reused in line with ecological standards, particularly for irrigation, technical processes, and cleaning purposes.

Through these efforts, Baku State University successfully recycles and reuses more than 50% of its total water consumption, positioning itself as a leader in sustainable water management in higher education



institutions across the region. The university’s practices directly contribute to the United Nations Sustainable Development Goals (SDG 6: Clean Water and Sanitation, SDG 12: Responsible Consumption and Production, and SDG 13: Climate Action), while also setting an example for other universities in Azerbaijan and beyond.

<i>University and Location</i>	<i>Average Rainfall (mm/hour)</i>	<i>Water Flow Rate (liters/hour)</i>	<i>Number of Reservoirs</i>	<i>Capacity of Reservoirs (liters)</i>	<i>Capacity of Lakes (liters)</i>	<i>Number of Recharging Pits</i>	<i>Capacity of Recharging Pits (liters)</i>	<i>Water Recycling Systems</i>
<i>Baku State University; Main Campus</i>	45	4,800	4	250,000	120,000	6	80,000	Swimming Pool Water Reuse + Wastewater Treatment
<i>Baku State University; Eco-Space & Green Zones</i>	50	5,200	3	180,000	140,000	5	70,000	Eco-Space Circular Water System + Irrigation Reuse
<i>Baku State University; Research & Training Facilities</i>	40	4,300	2	150,000	90,000	4	60,000	Closed Fountain Water Circulation + Recycled Utility Water

<i>Indicator</i>	<i>Value (Approx.)</i>
<i>Total Annual Rainwater Capture Capacity</i>	1,140,000 liters
<i>Estimated Annual Surface Runoff Generated</i>	2,000,000 liters
<i>Total Water Conserved / Groundwater Recharged</i>	1,140,000 liters
<i>Total Water Recycled Through Reuse Systems</i>	1,050,000 liters
<i>Percentage of Water Conserved</i>	57%
<i>Percentage of Water Recycled / Reused</i>	52%



Combined Water Sustainability Performance | **More than 50% of total campus water resources conserved and recycled**

<i>Water Management Area</i>	<i>System / Practice Implemented</i>	<i>Description of Implementation</i>	<i>Estimated Annual Water Reused / Saved (Liters)</i>
<i>Rainwater Harvesting</i>	Rainwater Collection & Storage System	Rainwater collected and stored for non-potable campus operations	320,000
	<i>Landscape Irrigation</i>	Reuse of Harvested Rainwater	Stored rainwater used for gardens, ecological zones, and sprinkler systems
<i>Sports Facilities</i>	Swimming Pool Water Recycling	Pool water filtered after use and redirected for irrigation of green areas	300,000
<i>Eco-Space System</i>	Aquaponics Circular Water Reuse	Water supporting fish habitats filtered and continuously recirculated	220,000
<i>Campus Fountains</i>	Closed Water Circulation System	Fountain systems operate in closed-loop recycling mechanism	150,000
<i>Wastewater Treatment</i>	Domestic & Technical Wastewater Processing	Wastewater treated through modern ecological treatment equipment	420,000
<i>Technical Operations</i>	Reuse of Treated Water	Treated water used for technical systems, cleaning, and maintenance	250,000
<i>Building Infrastructure</i>	Water-Saving Fixtures	Efficient faucets, restroom systems, and low-flow infrastructure installed	130,000
<i>Monitoring Technologies</i>	Water Metering and Consumption Monitoring	Digital systems monitor usage and prevent unnecessary water loss	90,000

Additional evidence link (i.e., for videos, more images, or other files that are not included in this file):

1. The SDG reports demonstrate the university’s commitment to sustainability, environmental management, and efficient use of natural resources across the campus. Institutional progress toward sustainable campus infrastructure and water-related goals is clearly presented.

For more information please click link:

<https://sdg.bsu.edu.az/sdg-reports>

2. The Climate Action Plan outlines strategies for sustainable campus development, climate resilience, and environmentally responsible resource management. Measures supporting water conservation and ecological infrastructure are emphasized.

For more information please click link:



<https://sdg.bsu.edu.az/climate-action-plan-action>

3. The governance framework reflects the university's commitment to sustainability-oriented management and environmental planning. Policies supporting efficient infrastructure and resource management are integrated into institutional governance.

For more information please click link:

<https://sdg.bsu.edu.az/governance>

4. The university sustainability platform presents initiatives, policies, and projects related to environmental protection and sustainable campus development. Institutional efforts toward efficient resource use and ecological responsibility are highlighted.

For more information please click link:

<https://sdg.bsu.edu.az/>

5. Research activities related to SDG 6 demonstrate the university's contribution to sustainable water management and clean water solutions. Scientific studies addressing water conservation and environmental sustainability are actively supported.

For more information please click link:

<https://sdg.bsu.edu.az/research-on-sdg-6>

6. The research platform highlights scientific studies and innovation activities focused on sustainability and environmental challenges. Contributions to sustainable resource management and ecological development are demonstrated through academic research.

For more information please click link:

<https://sdg.bsu.edu.az/research>

7. The SDG 6 report evaluates the university's initiatives and achievements related to clean water and sanitation. Progress in sustainable water management and efficient water use practices is clearly illustrated.

For more information please click link:

<https://sdg.bsu.edu.az/report-on-sdg-6-clean-water-and-sanitation>

8. The news platform presents sustainability-related projects, environmental initiatives, and campus development activities implemented by the university. Efforts supporting ecological awareness and sustainable resource management are regularly highlighted.

For more information please click link:

<https://sdg.bsu.edu.az/allnews>

9. The platform outlines sustainability-focused policies and governance mechanisms at the university. Institutional commitments to environmental protection and efficient resource management are clearly demonstrated.

For more information please click link:

<https://sdg.bsu.edu.az/university-policies>

10. The Climate Action Plan outlines strategies for sustainable campus development, climate resilience, and environmentally responsible resource management. Measures supporting water conservation and ecological infrastructure are emphasized.

For more information please click link:

<https://sdg.bsu.edu.az/climate-action-plan-action>



- 11.**The document provides detailed guidelines for sustainable water management practices within the university. Measures for reducing water consumption and increasing efficiency are included.
For more information please click link:
<https://sdg.bsu.edu.az/uploads/files/Clean%20Water%20Policy.pdf>
- 12.**The policy presents approaches to water conservation, efficient usage, and protection of water resources. Alignment with international sustainability standards is emphasized.
For more information please click link:
<https://sdg.bsu.edu.az/clean-water-policy>
- 13.**Research on innovative methods for purifying oil-contaminated water using advanced materials is described. Contributions to improving water quality and environmental sustainability are emphasized.
For more information please click link:
<https://sdg.bsu.edu.az/news/bsu-conducts-research-on-purification-of-oil-contaminated-water-using-bio-nano-adsorbents>
- 14.**The ecological condition of the Hekerichay reservoir is evaluated through scientific analysis. Insights into water quality and environmental sustainability challenges are provided.
For more information please click link:
<https://sdg.bsu.edu.az/news/an-assessment-of-the-ecological-situation-in-the-hekerichay-reservoir-was-conducted-at-bsu>
- 15.**River system modeling is used to better understand water flow and environmental dynamics. Support for sustainable water resource management is demonstrated.
For more information please click link:
<https://sdg.bsu.edu.az/news/scientific-seminar-on-modeling-the-hakari-river-at-bsu>