



**UI GREENMETRIC
REPORT**

2024

**AZERBAIJAN TECHNICAL
UNIVERSITY**

REPORT ON WASTE

Introduction

Effective waste management is a critical component of sustainable development, particularly within educational institutions where environmental awareness and responsible behavior are actively fostered. Azerbaijan Technical University (AzTU), recognizing its role in shaping environmentally conscious future professionals, has adopted comprehensive waste management strategies aligned with the United Nations Sustainable Development Goals (SDGs), particularly Goal 12: Responsible Consumption and Production.

This report provides an overview of the university's initiatives and achievements in managing various types of waste, including toxic, organic, and inorganic waste. It highlights data on the volumes of waste produced and treated, as well as programs implemented to reduce, reuse, and recycle materials across the campus. Special attention is given to initiatives such as the 3R program, sustainable procurement practices, and awareness campaigns involving students and staff.

Furthermore, the report outlines efforts to minimize the use of paper and plastic, improve sewage and wastewater treatment, and ensure the safe disposal of hazardous materials. Through partnerships with local waste management organizations and active student participation, AzTU aims to promote a circular economy, reduce its ecological footprint, and serve as a model for other higher education institutions in Azerbaijan and beyond.

References

[UI GreenMetric](#)

[National Information Portal on Sustainable Development](#)

[AzTU Sustainability](#)

Objectives

- To minimize the generation of toxic, organic, and inorganic waste on campus through awareness programs, sustainable procurement, and waste reduction initiatives.
- To implement effective waste management systems including segregation, recycling, reuse, and environmentally sound disposal in line with national and international regulations.
- To promote the principles of the circular economy by encouraging up-cycling, down-cycling, and reuse of waste materials within university operations.

- To engage students, faculty, and staff in sustainability education, volunteering, and practical projects related to waste reduction and environmental protection.
- To support research and innovation in waste treatment technologies and sustainable environmental practices through collaboration with academic and industrial partners.
- To align university policies with national and international sustainable development goals (SDGs), including compliance with Azerbaijani laws and global environmental agreements.
- To increase transparency and accountability in monitoring waste production, treatment, and sustainability progress on campus.

Keywords

KEYWORDS Waste				
Total volume toxic waste produced	Type of toxic waste	Electronics waste	Laboratory chemical waste	Toxic waste treatment
Waste reduction	Waste reuse	Waste recycling	Down-cycling	Up-cycling
3R program (Reduce, Reuse, Recycle)	University waste management	Paper saving initiatives	Electronic communication	Paperless office
Waste paper collection	Sustainable waste management policy	Separate waste collection (paper, plastic, glass)	Partnership with recycling companies	Composting initiatives
Organic waste management	Food waste management	Sustainable procurement policy (SPP)	Plastic waste reduction	Single-use plastic ban
Plastic-free campus	Digitization and paper consumption reduction	Environmental education	Circular economy principles	Waste audit program
Hazardous waste management	Basel Convention compliance	Wastewater treatment	Sewage disposal	Environmental safety

Current Situation

Azerbaijan Technical University (AzTU) has made significant strides in managing waste and promoting sustainability on its campus. The university produces various types of waste, including toxic, organic, and inorganic waste, and has initiated multiple programs and policies to reduce environmental impact in line with national regulations and global Sustainable Development Goals (SDGs).

- **Toxic Waste: Production and Treatment**

Azerbaijan Technical University generated a total of 2.5 tons of toxic waste, including 0.5 tons of electronic waste and 2 tons of laboratory chemicals. From this amount, only 0.1 tons were reduced, showing the need for improved waste minimization strategies. While reduction and reuse activities are currently limited, AzTU is planning further initiatives in partnership with waste treatment organizations to safely manage and recycle toxic substances.

Type of waste	amount (ton)				
	total	reduced	reused	down-cycled	up-cycled
toxic	2.5	0.1			
- electronics	0.5	0.01			
- lab. Chemicals	2	0.09			
- etc					
Type of toxic waste					Total Produced (ton)
- electronics					0.5
- lab. Chemicals					2
- etc					

- **3R Waste Management Program**

AzTU has adopted a comprehensive 3R (Reduce, Reuse, Recycle) strategy across its campus. This includes reducing paper use through digital communication, collecting recyclable materials (paper, plastic, glass), and organizing partnerships with city services for sustainable disposal. Special waste bins, educational campaigns, and the

promotion of composting practices support the university's goal to reduce landfill dependency and promote circular economy principles.



3R Program for University Waste (Azerbaijan Technical University, Baku, Azerbaijan)

- **Reducing Use of Paper and Plastic**

To support sustainable procurement, AzTU has prohibited the use of plastic bottles in canteens and encourages digital exchange of information to reduce paper consumption. Students are educated through courses and outreach programs on minimizing plastic use. Participation in campaigns such as “Plastic-Free July”, in collaboration with the British Embassy and IDEA, further reinforces behavioral change among students and staff.



Program to Reduce the Use of Paper and Plastic in Campus

Azerbaijan Technical University (Baku, Azerbaijan)

Program to Reduce the Use of Paper and Plastic in Campus

Azerbaijan Technical University (Baku, Azerbaijan)

- **Organic Waste Management**

Currently, food and organic waste at AzTU is not formally monitored, but steps are being taken to integrate tracking and reduction policies. Future goals include addressing food safety, providing sustainable food choices, and implementing composting systems. The university emphasizes a multidisciplinary approach, involving both research and student engagement in tackling issues of hunger, food waste, and agricultural sustainability.



Organic Waste Treatment (Azerbaijan Technical University, Baku, Azerbaijan)

- **Plastic Waste Policy and National Regulations**

In alignment with the National Strategy for Solid Waste Management (2018–2022) and amendments to environmental law, AzTU has restricted single-use plastics and installed recycling bins across campus. The university complies with national policies banning the import, production, and sale of plastic bags, and takes part in broader

governmental recycling campaigns. These efforts are complemented by AzTU students participating in city-wide plastic collection initiatives.

- **Inorganic Waste**

The university promotes the separation and recycling of inorganic waste like paper, cardboard, and glass. Through the Department of Chemical Technology, Recycling and Ecology, AzTU engages in international academic partnerships and research. The ECO-Technology Club offers students hands-on experience in sustainability projects. In 2023, the department published over 20 research papers and educational materials focused on environmental technologies and safe waste practices. AzTU ensures the proper treatment of industrial and household waste in accordance with the Law of the Republic of Azerbaijan. While the university excels in ethical sourcing and paper recycling, it still faces challenges in measuring recycled waste across all streams. The SDG 12 report acknowledges these achievements and calls for a more robust waste management policy for hazardous and inorganic waste types.



Inorganic Waste Treatment (Azerbaijan Technical University, Baku)

- **Hazardous Waste and Battery Recycling**

In collaboration with IDEA and the Ministry of Agriculture, AzTU supports the safe disposal of hazardous waste and participates in battery recycling programs. As part of the UN Basel Convention, Azerbaijan has established strategies and landfill infrastructure for hazardous waste control. These policies extend to educational institutions like AzTU, where toxic material handling is subject to strict government regulations.

- **Innovation Labs and Student Involvement**

AzTU's Cezeri Lab, established with TIKa's support, and the xPON Lab equipped by Nokia, provide students with advanced tools to design prototypes and compete internationally. These laboratories are used for sustainability-themed projects, including participation in events like Teknofest. Such platforms empower students to apply theoretical knowledge to real-world challenges related to waste and environmental protection.

- **Sewage Disposal and Water Management**

AzTU teaches subjects like Sewage Water Treatment and Integrated Water Resource Management to students of ecological engineering. The university has joined AzerSu State Company to ensure wastewater is filtered and treated before entering public systems. Wastewater flows through a common sewerage network and is treated using microfiltration techniques. These efforts support sustainable water use both on campus and in the wider community.



Sewage Disposal (Azerbaijan Technical University, Baku, Azerbaijan)

Future goals

Azerbaijan Technical University (AzTU) sets ambitious objectives to further improve its waste management system and strengthen its role in achieving the Sustainable Development Goals (SDGs). In the coming years, the university plans to focus on the following areas:

- **Improving Waste Monitoring and Accounting**

Implement a comprehensive system to accurately track all types of waste, including organic, inorganic, and toxic waste. Special attention will be given to adopting modern methods for measuring and auditing food waste to reduce its volume and enhance recycling efficiency.

- **Expanding the 3R Program (Reduce, Reuse, Recycle)**

Enhance the implementation of separate waste collection throughout the campus,

increase recycling rates, and promote composting initiatives. Introduce new measures to reduce the use of single-use plastics and paper, with an emphasis on digitizing academic and administrative processes.

- **Developing and Implementing Comprehensive Hazardous Waste Management Policies**

Improve procedures for the collection, storage, and disposal of toxic materials and laboratory chemicals in line with international standards and national legislation. Strengthen collaboration with specialized companies for safe recycling and disposal of hazardous waste.

- **Raising Environmental Awareness and Community Engagement**

Expand educational programs and awareness campaigns targeting students, faculty, and staff. Actively involve students in volunteer initiatives and research projects focused on sustainable resource management and waste reduction.

- **Developing Infrastructure and Technological Solutions**

Invest in modern laboratories and equipment, such as the “Cezeri lab” and the new xPON laboratory, to conduct scientific research and develop innovative waste reduction and recycling methods. Continue partnerships with international institutions to exchange expertise and implement advanced technologies.

- **Supporting and Advancing Sustainable Procurement**

Continue developing and implementing the Sustainable Procurement Policy (SPP) aimed at minimizing negative social and environmental impacts. Promote the use of eco-friendly materials and eliminate single-use plastics across all university departments.

- **Collaborating with Governmental and Public Organizations**

Strengthen partnerships with local authorities, government bodies, and public organizations (e.g., IDEA) to ensure effective waste collection, recycling, and disposal at the regional level.

These goals reflect Azerbaijan Technical University’s commitment not only to meet current sustainability requirements but also to become a leader in environmental responsibility and innovation in waste management.

Conclusion

Azerbaijan Technical University demonstrates a strong commitment to sustainability through its comprehensive waste management strategies and environmental

initiatives. By actively implementing the 3R principles, promoting sustainable procurement, and engaging the university community, AzTU contributes significantly to reducing environmental impact and advancing the Sustainable Development Goals. Despite current achievements, there remains room for improvement, especially in hazardous waste management, food waste monitoring, and expanding recycling efforts. Moving forward, the university's focus on education, infrastructure development, and partnerships will be essential to foster a culture of environmental responsibility. Through continuous innovation and collaboration, AzTU aims to set a benchmark for sustainable practices within academic institutions and beyond.