Azerbaijan TECHNICAL University

12 RESPONSIBLE CONSUMPTION AND PRODUCTION

Report on Sustainable Development Goal 12

Responsible Consumption and Production

2025



Foreword

This report presents a comprehensive overview of Azerbaijan Technical University's (AzTU) ongoing dedication to Sustainable Development Goal 12 (SDG 12) in 2025, emphasizing sustainable consumption and production patterns. It highlights the latest initiatives, policies, and practices aimed at ethical sourcing, effective waste management, resource efficiency, and increased recycling across campus operations.

Introduction

SDG 12 emphasizes sustainable management and efficient utilization of natural resources, reduction of waste generation, and the adoption of environmentally friendly technologies.

AzTU's sustainability vision is built around reducing its ecological footprint while developing innovative solutions for clean production and responsible consumption.

During 2025, AzTU implemented several actions aligned with SDG 12 priorities:

- Integration of sustainability and circular economy principles into academic curricula and student projects;
- Deployment of green energy practices and awareness programs through the Green Mission initiative;
- Launch of bioplastic production workshops to promote waste reduction and alternative materials;
- Establishment of partnerships with international institutions focused on environmental engineering and eco-innovation.

The Quality Assurance Department monitors all university activities under the SDG framework to ensure transparency, efficiency, and measurable outcomes.

References

National İnformation Portal on Sustainable Development Goals of the Republic of Azerbaijan AzTU Sustainability

AzTU SDG 12 Report / November 2023

AzTU SDG 12 Report 2024

Ecological Thinking Begins at School – Another Group of Students Joined the Green Mission at AzTU

Training on Plastic Pollution Awareness and Bioplastic Production Held as Part of Sustainability Workshops

A Digital Transformation Strategy Will Be Developed for AzTU

Collaboration Agreement Signed Between AzTU and Malatya Turgut Özal University Students of AzTU Presented the Tələbə360 Project

SDG 12 keywords - Responsible consumption and production			
Responsible Consumption and Production	Sustainable Consumption	Sustainable Production	Circular Economy
Sustainable Resource Management	Resource Efficiency	Waste Reduction	Waste Recycling
Zero-Waste Management	Sustainable Waste Management	Plastic Waste Reduction	Plastic Pollution Prevention
Bioplastic Production	Biodegradable Materials	Sustainable Materials Innovation	Green Procurement
Ethical Sourcing	Sustainable Supply Chains	Hazardous Waste Management	Landfill Waste Reduction
Waste Segregation	Renewable Energy Integration	Energy Efficiency	Sustainable Infrastructure
Environmental Awareness	Sustainability Education	Green Mission Initiative	Sustainable Campus Operations
Life-Cycle Assessment	Clean Production Technologies	Green Innovation	Sustainable Product Development
Digital Waste Monitoring	Sustainable Procurement Policies	Circular Economy Research	Interdisciplinary Sustainability Education
Student-Led Sustainability Projects	Environmental Engineering	International Sustainability Partnerships	Sustainable Materials Research

SDG 12 Targets

AzTU actively works towards several targets set by SDG 12: Ethical Sourcing of Food and Supplies, Waste Disposal Policies (Hazardous Materials), Waste Disposal Measurement (Landfill and Recycling), Use Minimization of Plastic, Use Minimization of Disposable Items, Extension of Policies to Outsourced Services and Supply Chain, Proportion of Recycled Waste, Publication of Sustainability Report.

1. **Awareness and Education:**

- Conduct at least two major sustainability awareness campaigns each academic year.
- Engage 50% of the campus community in sustainability workshops or events annually.

2. **Collaboration and Partnerships:**

- Establish partnerships with at least five external organizations focused on sustainability.
- Initiate joint projects or initiatives with these partners within six months of establishing partnerships.

3. **Integration into Curriculum:**

- Integrate sustainability principles into at least 20% of academic programs.
- Develop interdisciplinary programs and offer courses related to sustainability within the next two years.

Statistics and Their Indicators

Indicator	2023	2024	2025	Change (2023–2025)
Waste Recycling Rate on Campus	22 %	28 %	36 %	+14 pp
Campus Energy Intensity (kWh/m²)	148	136	121	−18.2 %
Share of Renewable Energy in Campus Operations	12 %	16 %	23 %	+11 pp
Number of Sustainability Workshops Conducted	11	17	23	+109 %
Participation in Green Mission & Eco Events	480 students	730 students	1,050 students	+119 %
Academic Papers/Projects on Circular Economy	24	37	46	+92 %
Annual Waste Reduction (tons)	19 t	24 t	31 t	+63 %

For the 2025 reporting period, Azerbaijan Technical University (AzTU) estimated total campus waste generation at 400 metric tonnes for planning purposes. Applying the 36% campus recycling rate published in the revised 2025 SDG 12 Report gives an estimated 144 metric tonnes recycled, leaving 256

metric tonnes outside the estimated recycling total. This remaining quantity would represent waste sent to landfill only if disposal records confirm that it all went to landfill. Final figures for waste generated, recycled and sent to landfill should be verified against waste collection registers, weighbridge tickets and contractor or receiving-facility records covering the same campus facilities and reporting period.

SDG 12's Positive Impact on Other SDGs

SDG 6 (Clean Water and Sanitation): Reducing waste and improving resource efficiency lowers water pollution and helps protect freshwater sources, making clean water more accessible.

SDG 7 (Affordable and Clean Energy): Encouraging efficient energy use and sustainable consumption patterns supports the transition to cleaner energy and reduces overall energy demand.

SDG 13 (Climate Action): Sustainable production practices reduce greenhouse gas emissions and help mitigate climate change through lower carbon footprints and waste reduction.

SDG 15 (Life on Land): Minimizing land degradation, reducing deforestation, and protecting ecosystems are supported when production processes use fewer raw materials and promote recycling.

Current situation

1. **Green Mission Expansion:**

The *Ecological Thinking Begins at School* initiative grew significantly, involving high school and university students in sustainable activities such as plastic recycling, green energy projects, and ecological awareness sessions.

Source: Ecological Thinking Begins at School – Another Group of Students Joined the Green Mission at AzTU.

2. **Workshops on Plastic Pollution and Bioplastics:**

The *Sustainability Workshop Series* introduced practical training on **plastic pollution awareness and bioplastic production**, educating students about the life-cycle of materials and the potential of biodegradable alternatives.

Source: Training on Plastic Pollution Awareness and Bioplastic Production Held as Part of Sustainability Workshops.

3. **Sustainable Infrastructure Development:**

Continuous modernization of AzTU's laboratories and facilities aimed to reduce waste and energy consumption through digitalization and resource optimization.

Source: A Digital Transformation Strategy Will Be Developed for AzTU.

4. **International Collaboration on Green Innovation:**

New cooperation agreements with universities in Türkiye, Pakistan, and Germany enabled joint research on clean energy and resource efficiency. Source: Collaboration Agreement Signed Between AzTU and Malatya Turgut Özal University

5. **Student-Led Sustainability Projects:**

Student initiatives under the *Talaba360* project and *Startup Innovation Challenges* encouraged entrepreneurial solutions for responsible resource use and sustainable production systems.

Source: Students of AzTU Presented the Tələbə360 Project

Future Goals

1. **Implement Zero-Waste Policy:** Establish a full zero-waste management system by 2030, including digital monitoring of waste streams and composting practices**.**
2. **Increase Renewable Energy Usage:** Expand photovoltaic installations and pilot renewable microgrids to reach **35 % renewable share by 2027**.
3. **Enhance Research on Sustainable Materials:** Launch a *Sustainable Materials Innovation Lab* focusing on bioplastics, renewable composites, and green construction technologies.
4. **Strengthen Cross-Sector Partnerships:** Build strategic cooperation with governmental and private entities to develop joint sustainability projects and knowledge-sharing platforms.
5. **Integrate Sustainability into Procurement:** Introduce green procurement policies, prioritizing eco-friendly materials and suppliers.

Conclusion

In 2025, Azerbaijan Technical University reaffirmed its commitment to advancing SDG 12 through structured, data-driven initiatives that promote responsible resource use and circular economy principles.

By fostering innovation, awareness, and collaboration, AzTU continues to model how educational institutions can contribute to **sustainable production, consumption, and environmental responsibility** across Azerbaijan and beyond.