

TARAZ UNIVERSITY NAMED AFTER M.KH.DULATY



APPROVED BY  
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**PROGRAM FOR THE SUSTAINABLE  
DEVELOPMENT OF THE TRANSPORT SYSTEM  
AND THE EFFICIENT USE OF  
TRANSPORTATION RESOURCES AT DULATY  
UNIVERSITY FOR 2026–2030**

Taraz 2026

## **INTRODUCTION**

Climate change is one of the most pressing global challenges of the 21st century, significantly affecting the environment, economic development, public health, and the quality of life of future generations. Rising average annual temperatures, the increasing frequency of extreme weather events, reduced availability of water resources, land degradation, and growing environmental pollution necessitate comprehensive measures aimed at both mitigating the impacts of climate change and adapting to new climatic conditions.

Higher education institutions play a crucial role in achieving the United Nations Sustainable Development Goals, as they serve as centers of education, research, innovation, and the development of environmental awareness among young people. M.Kh. Dulaty Taraz University recognizes its responsibility for environmental stewardship and seeks to contribute to addressing climate challenges through the integration of sustainable development principles across all areas of its activities.

This Program has been developed in accordance with Sustainable Development Goal 13: Climate Action and is aimed at reducing the negative environmental impact of the University's operations, decreasing greenhouse gas emissions, improving the energy efficiency of buildings and facilities, promoting the rational use of natural resources, and advancing environmental education and research in the field of sustainable development.

The implementation of this Program will facilitate the creation of a modern, environmentally sustainable campus capable of effectively responding to climate change challenges while providing favorable conditions for education, research activities, and student life.

## **2. PROGRAM OBJECTIVE**

The primary objective of the Program is to establish a climate-resilient university management system that ensures the reduction of the University's carbon footprint, the efficient use of energy and natural resources, the development of sustainable campus infrastructure, and the promotion of a culture of environmental responsibility among students and staff.

## **3. KEY OBJECTIVES OF THE PROGRAM**

To achieve the stated objective, the following tasks are envisaged:

- Improving the energy efficiency of University facilities;
- Reducing electricity and thermal energy consumption;
- Introducing renewable energy technologies;
- Reducing greenhouse gas emissions;
- Developing green campus infrastructure;
- Adapting University infrastructure to climate change;
- Enhancing the efficiency of water resource management;
- Developing a system for waste segregation and recycling;

- Promoting environmentally sustainable transportation;
- Conducting research in the field of climate change;
- Increasing environmental awareness and literacy among students and staff;
- Strengthening international cooperation in the field of sustainable development.

#### 4. KEY PERFORMANCE INDICATORS OF THE PROGRAM

<b>№</b>	<b>Indicator</b>	<b>2026</b>	<b>2027</b>	<b>2028</b>	<b>2029</b>	<b>2030</b>
1	Reduction in electricity consumption	5%	8%	12%	16%	20%
2	Reduction in water consumption	3%	6%	9%	12%	15%
3	Increase in green space area	5%	10%	15%	20%	25%
4	Waste recycling rate	5%	7%	10%	15%	20%
5	Share of renewable energy use	1%	2%	3%	4%	5%
6	Reduction in CO <sub>2</sub> emissions	1%	2%	3%	4%	5%

#### 5. MAIN AREAS OF PROGRAM IMPLEMENTATION

##### 5.1. Energy Efficiency Improvement and Energy Conservation

The energy sector is one of the primary sources of greenhouse gas emissions. Therefore, one of the University's priority areas will be the implementation of a comprehensive set of measures aimed at reducing energy consumption.

Within this area, the University will conduct regular energy audits of its buildings and facilities, modernize lighting, heating, and ventilation systems, introduce automated energy management systems, and utilize modern energy-efficient technologies and equipment.

Particular attention will be given to the gradual transition to LED lighting in all academic buildings, dormitories, administrative facilities, and throughout the campus. The installation of motion sensors and automated lighting control systems is planned to significantly reduce electricity consumption.

In addition, the University will continuously monitor energy consumption using digital technologies, enabling the timely identification of inefficient resource use and the implementation of corrective measures.

#### Action Plan

<b>№</b>	<b>Activity</b>	<b>Timeline</b>
1	Conducting energy audits	Annually
2	Replacement of lighting fixtures with LED systems	2026–2028
3	Installation of motion sensors	2026–2027
4	Automation of energy resource monitoring and accounting	2026–2030

5	Modernization of engineering systems	2027–2030
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## 5.2. Development of Renewable Energy Sources

One of the most important instruments for combating climate change is the use of environmentally friendly energy sources. Therefore, the University plans to expand the use of solar energy and other renewable energy sources.

Solar panels will be installed on the roofs of selected academic buildings and infrastructure facilities to generate electricity. Solar-powered lighting systems will also be used throughout the campus to illuminate pedestrian pathways and public spaces.

The University also intends to engage students and young researchers in research projects related to renewable energy and energy efficiency.

The use of renewable energy sources will reduce dependence on conventional electricity supplies and contribute to lowering carbon dioxide emissions.

### Action Plan

№	Activity	Timeline
1	Installation of solar panels	2026–2030
2	Installation of solar-powered lighting systems	2026–2028
3	Research projects on renewable energy sources	Ongoing
4	Monitoring the effectiveness of renewable energy systems	Annually

## 5.3. Development of a Green Campus and Climate Change Adaptation

Campus greening is one of the most effective ways to enhance resilience to climate change. Green spaces perform important environmental functions by absorbing carbon dioxide, reducing air pollution, mitigating heat impacts, and creating a favorable microclimate.

The University will annually implement large-scale landscaping initiatives, including the planting of trees, shrubs, and ornamental plants. Special attention will be paid to the use of native plant species adapted to the climatic conditions of the Zhambyl Region.

The Program also предусматривает the creation of additional recreational areas, green avenues, ecological sites, and educational ecosystems to support students' practical learning activities.

### Action Plan

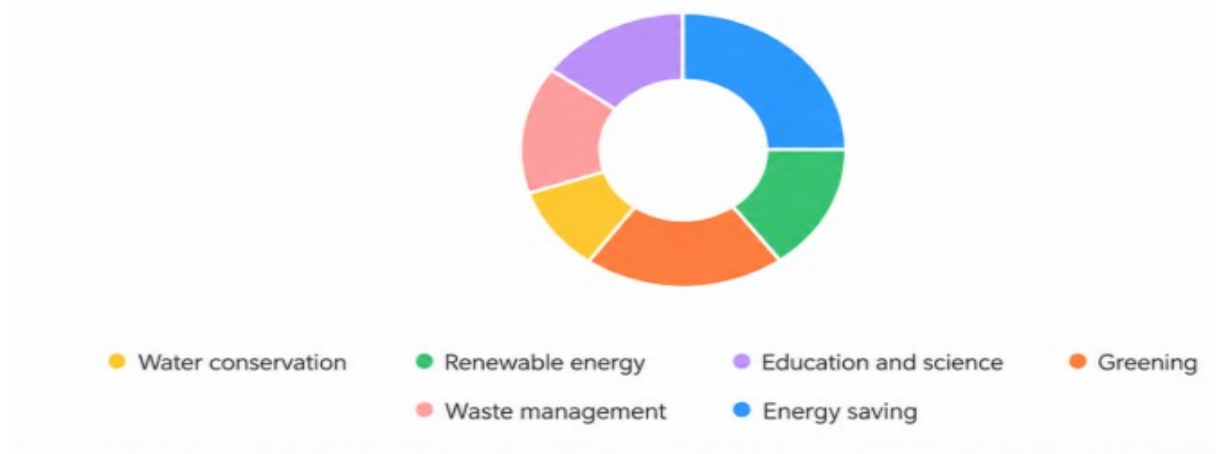
№	Activity	Timeline
1	Planting of trees and shrubs	Annually
2	Development of green recreational areas	Annually
3	Landscaping of dormitory areas	Annually

4	Environmental campaigns and awareness activities	Annually
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## Structure of the Climate Program

### Main directions of the program

Distribution of resources and activities of the university's climate program.



### 5.4. Sustainable Water Resource Management

In the context of climate change, the rational use of water resources has become an increasingly important priority. The University will implement measures aimed at reducing water consumption and improving water-use efficiency.

Planned activities include the installation of water-saving devices, automated water consumption monitoring systems, regular inspections of water supply networks, and the prompt detection and repair of leaks.

The University will also conduct educational and awareness-raising activities among students and staff to promote responsible and sustainable water use.

### 5.5. Waste Management and the Development of a Circular Economy

The University will continue to improve its waste management system through the introduction of waste segregation practices, expansion of recycling activities, and reduction of single-use materials.

Separate collection containers for paper, plastic, glass, and metal will be installed in all academic buildings and student residences. Regular campaigns for the collection of waste paper, plastic waste, and electronic waste will be organized.

In addition, the University will promote paperless document management and further digitalization of administrative processes.

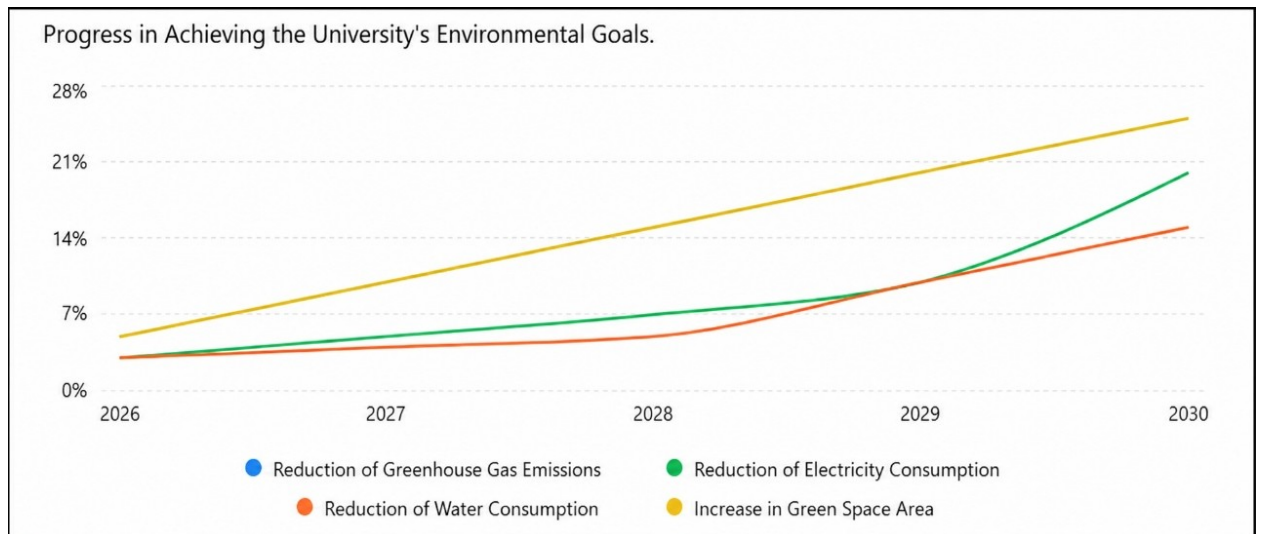
## 5.6. Sustainable Transportation

To reduce emissions from the transportation sector, the University will create favorable conditions for the use of environmentally friendly modes of transport.

Planned measures include expanding bicycle parking facilities, improving pedestrian infrastructure, promoting public transportation, and encouraging the use of shared mobility services among students and staff.

The University will continue its efforts to establish a safe, accessible, and sustainable transportation environment across the campus.

## Projected Reduction of Greenhouse Gas Emissions



## 6. EXPECTED OUTCOMES

Upon completion of the Program in 2030, the University aims to:

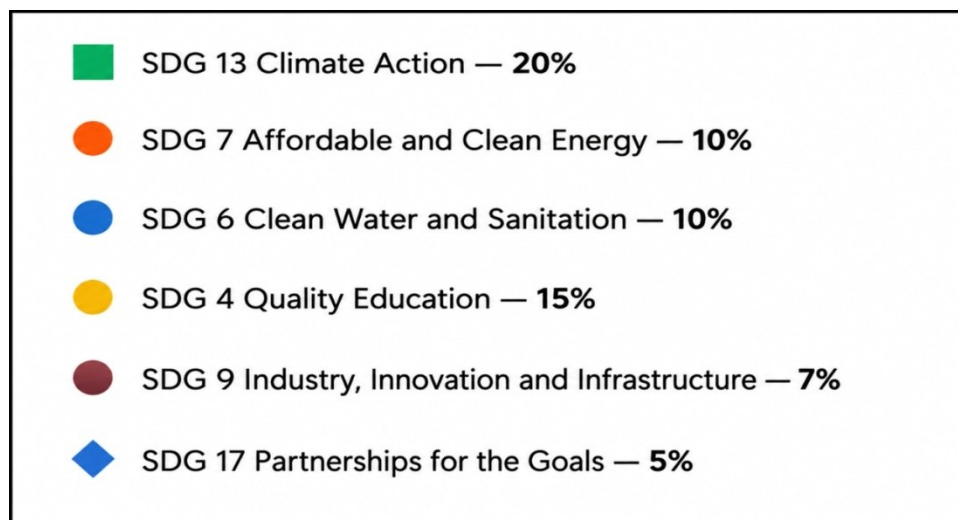
- Reduce greenhouse gas emissions by at least 25%;
- Decrease electricity consumption by 20%;
- Reduce water consumption by 15%;
- Increase the area of green spaces by 25%;
- Ensure that at least 80% of generated waste is recycled;
- Increase the share of renewable energy use to 25%;
- Organize at least 40 environmental events annually;
- Ensure active participation of students and staff in climate-related initiatives;
- Strengthen the University's position in the GreenMetric international ranking;
- Establish a model of a sustainable and environmentally responsible university campus.

## 7. CONCLUSION

The implementation of this Program will enable M.Kh. Dulaty Taraz University to become one of the leading universities in Kazakhstan in the fields of sustainable development and climate responsibility. A comprehensive approach to addressing environmental challenges, the adoption of innovative technologies, and the advancement of environmental education and research will generate long-term positive impacts for both the University and the wider region. The Program will serve as an important instrument for achieving the United Nations Sustainable Development Goals and strengthening environmental sustainability and climate resilience for future generations.

## **8. CONTRIBUTION OF THE PROGRAM TO THE ACHIEVEMENT OF THE UNITED NATIONS SUSTAINABLE DEVELOPMENT GOALS (SDGs)**

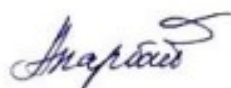
### **Visual Distribution of the Program's Contribution to the SDGs**



The Department of Strategic Development has developed a program on sustainable development of the transport system and efficient use of vehicles for 2026-2030 at Dulaty University.

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*The program was discussed at a meeting of the Committee on Strategic,  
International Development and Quality of Dumaty University (minutes No. 4 from  
18 06 2026)*