



KHALEL DOSMUKHAMEDOV ATYRAU UNIVERSITY





Atyrau University named after H. Dosmukhamedova contributes to the achievement of the UN Sustainable Development Goal No. 15 "Conservation of terrestrial ecosystems" through scientific research, participation in environmental initiatives, the development of ecological culture and the implementation of projects aimed at preserving biodiversity, restoring degraded lands and the sustainable use of natural resources.

What does this mean for Atyrau University

The University considers the conservation of natural ecosystems as an important direction for the sustainable development of the region. Special attention is paid to the issues of biodiversity protection, restoration of degraded territories, sustainable management of pasture resources and the formation of environmental responsibility among students and society.

Conservation of biodiversity and natural ecosystems

One of the directions of the university's scientific activity is the study and preservation of the plant diversity of the region.

Atyrau University hosted a scientific round table "Scientific foundations and practical significance of rhubarb seed stratification", dedicated to the conservation and reproduction of plants in arid and saline ecosystems. During the event, modern methods of increasing seed germination, the results of scientific monitoring and issues of preserving the region's biodiversity were considered.

Additional attention is paid to nature protection issues through cooperation with the Akzhayik State Nature Reserve, aimed at preserving natural ecosystems and environmental education of young people.





Greening and ecosystem restoration



The University actively participates in landscaping and restoration of the natural environment.

As part of the republican campaign "Taza Kazakhstan", students of the educational program "Applied Ecology" took part in planting trees in the territory of the Akzhayk nature Reserve, as well as in environmental actions to green public spaces, including planting trees in a family park.

Students and teachers of the university also participated in environmental clean-up activities and actions to clean the banks of the Zhaiyk River, contributing to the preservation of the natural environment and the development of the ecological culture of the region.

Environmental initiatives and youth participation

Student environmental initiatives are actively developing at the university.

In 2025, the Eco-Alem Environmental Club was established, bringing together students, teachers and environmental activists to implement environmental projects and form an ecological culture. As part of the club's activities, innovative environmental projects were presented, including Phytotheri, based on the processing of reeds and food waste, as well as projects for the reuse of glass waste.

An additional contribution to the development of the environmental movement is made by the GreenWay eco-club, whose members organize environmental actions, tree planting, plastic recycling projects and environmental trainings.





Sustainable use of land resources



The Department of Economics implements research projects aimed at the rational use of natural resources and the preservation of regional ecosystems.

Among the supported projects:

- "Implementation of a rotary grazing system in the Zhylyoy district of Atyrau region";
- "Technology for the production of environmentally friendly mutton and lamb in the conditions of the Atyrau region desert zone."

The implementation of these projects contributes to reducing land degradation, increasing the efficiency of using pasture resources and developing environmentally sound agriculture.

Scientific research and restoration of pasture ecosystems

University scientists are conducting research aimed at restoring degraded lands and increasing the sustainability of ecosystems in arid regions.

Special attention is paid to the creation of irrigated pastures in the Caspian semi-desert regions, the study of fodder crops adapted to saline soils, as well as the assessment of their ecological and economic efficiency.

The research examines the adaptation features of *Kochia prostrata* and *Camphorosma monspeliaca* plants, and develops recommendations for restoring the biodiversity of degraded pastures and their sustainable use.





FUTURE STEPS TOWARDS ACHIEVING SDG 15

Atyrau University named after H. Dosmukhamedova will continue to implement initiatives aimed at preserving biodiversity, restoring degraded lands and increasing the environmental sustainability of the region.

Among the priority areas of development:

- expansion of scientific research on the conservation of biodiversity and restoration of natural ecosystems;
- development of landscaping projects and improvement of environmental sustainability of the region;
- support for environmental clubs and youth environmental initiatives;
- expansion of cooperation with environmental organizations and state natural reserves;
- implementation of innovative environmental solutions for the restoration of degraded lands;
- development of scientific projects on sustainable use of pasture resources and prevention of soil degradation;
- improving the environmental literacy of young people and involving students in practical environmental protection activities.

The implementation of these areas will allow the university to strengthen its contribution to the conservation of terrestrial ecosystems, the protection of biodiversity and the achievement of the UN Sustainable Development Goal No. 15 "Conservation of terrestrial ecosystems".