



Sustainable Development Goals

Individual Report on SDG 15 - LIFE ON LAND



Aktau 2023

SUSTAINABLE DEVELOPMENT GOALS

Individual Report

15.2 Supporting land ecosystems through education

Yessenov university annually holds various events dedicated to the preservation of forest vegetation.

Total area on Campus Covered in Forest Vegetation: **2576 m²**

Total plant area: **11000 m²**.

1. The event was held in connection with the professional holiday of geologists. Students of the specialty " geology and exploration of mineral deposits " Begildinov Saat and Amankos Abyz took an active part in the planting of trees in the village of Kuryk.

<https://yu.edu.kz/en/geologtar-k-ni/>

2. The akimat of Mangistau region, Yessenov University and the western Kazakhstan branch of the international anti-nuclear movement "Nevada – Semey" held an international conference on the topic: "clean ecology-without nuclear weapons for the century". After the conference, all participants took part in the planting of trees on the territory of the main building of the University.

On April 21, students and staff of Yessenov University continued their work on landscaping, planting trees and cleaning as part of the "Yessenov – green Campus" campaign.

As part of the Subbotnik, the members of the external expert commission of the independent Kazakhstan agency for quality assurance in education, which carried out cleaning and assessment of compliance of educational services of the University with accreditation standards (requirements), also planted trees.

For the commercialization of the results of scientific and scientific-technical activities at the Caspian State University of Technology and Engineering named after. Sh. Esenov, a multifunctional greenhouse "YESSENOV JYLYJAY" was built. The

greenhouse was launched in the spring of 2019. The greenhouse was built using the latest technology for year-round operation. The cultivation of vegetables and berries is provided by full drip irrigation and a hydroponic system.

High-quality cucumbers and tomatoes, sweet peppers, Italian Alba strawberries are grown in the greenhouse. Currently, green vegetables (arugula, broccoli, lettuce, spinach, radishes, etc.), cucumbers, peppers and tomatoes, as well as flowers are grown in the greenhouse. The work of “YESSENOV JYLYJAY” covers three areas:

The first direction is the training of specialists who will develop the future agro-industrial complex in the Mangistau region, the development of research skills and culture among students. Biology students at Yessenov University spend a year doing research in the greenhouse for their dissertations. In 2019, at the faculty of “Pedagogy” of the Department of Natural Science, specializing in Biology, 9 students (bachelors) under the guidance of a candidate of biological sciences, professor Kozhamzharova L.S. defended their dissertations at a high level.

The second direction is “Practical issues of management and development of greenhouses in the climatic conditions of the Mangistau region” through the optimal use of innovative technologies and materials, the development of environmentally friendly products and profitability. Ecological innovations or “Green technologies” were used in a new direction aimed at solving environmental problems. And the development and implementation of business plans for students at the university.

The third direction – this year, in order to improve the skills of students and young professionals in the specialties “YESSENOV JYLYJAY”, “Young florist (designer)”, “Fundamentals of hydroponics”, “Greenhouse” and others, it is planned to open courses and grow micro-greens and exotic fruits.

Yesenov University Greenhouse is an experimental site for educational programs 6B01505-Biology, 7M01505-Biology, 7MΠ01505-Biology of the "Natural Sciences" department of the "Science and Technologies" faculty.

In the greenhouse, practical lessons on botany, biology teaching methodology, plant physiology and biochemistry, methodological bases of field research in biology, training and practical work at the school experimental site, and school biological experiments are conducted. Produces in 4 shifts per year. Productivity is

up to 10 kg per bush (cucumber, tomato, sweet pepper), herbs, lettuce, spinach - from 1 square meter to 1.5 kg. The profitability of the greenhouse reaches 100%. The greenhouse is drip-irrigated, top-fed, and fertilized.

The total area of the Yessenov greenhouse is 1690 m².

<https://yu.edu.kz/en/esenov-jylyjaj/>

Yessenov University offers the following programs related to the specifics of the region in courses for the 2023-2024 academic years:

Methodological foundations of field research of the flora of the Caspian region;
Methodological foundations of field research of the fauna of the Caspian region;
desert zone-plants and animals of the Caspian region;
Environmental problems of Mangystau region and safety of the Caspian Sea;
Flora of Mangystau

Content

Study of the features and types of vegetation in the Mangystau region. Formation of cognitive interest in the native land. The course develops a system of knowledge about biodiversity and Natural Resources, local flora, and examines the laws of individual development.

Training results

determines the incomplete study of the vegetation cover of the region; analyzes whether the preservation of biodiversity is an urgent problem; performs taxonomic and ecological-phytocenotic analysis of the flora of Mangystau, analyzes rare endangered species; evaluates the ecological-phytocenotic classification of Mangystau desert plants and its ways.

<https://yu.edu.kz/en/course/B-07-044%20-%20Flora%20Mangistau/>

Yessenov University offers the following programs related to the specifics of the region in courses for the 2023-2024 academic years:

Monuments of ancient Turkic writing;
Sacral texts of Mangystau;
Mangystau toponymy ;
Hospitality industry;
Basics of Kazakh hospitality;
Modern political systems and political processes of the Caspian countries ;
Promising types of tourism in Mangystau region;
Regional political analysis of the countries of the Caspian region (in English);

Local history;

Virtual museums: preservation and representation of historical and cultural heritage;

Sacral Mangystau;

Archeology of Mangystau;

Environmental problems of Mangystau region and safety of the Caspian Sea;

Wastewater treatment and Water Resources Management.

<https://yu.edu.kz/en/page/2/?s=%D0%BF%D3%99%D0%BD%D0%B4%D0%B5%D1%80>

<https://docs.google.com/document/d/1xKkb5Qy0zwcUByzucem5pWztUGsrJkoJ/e/dit>

15.3 Supporting land ecosystems through action

The 3rd stage of the International Complex expedition "material and intangible historical and cultural heritage of Mangistau", conducted under the scientific guidance of Professor of the Department of "Kazakh Philology" of the University B. I. Nurdauletova, has been completed. The expedition was attended by the famous architect S. Agytaev, the famous theologian D. Kenzhetai and local researchers, local historians, students and teachers of the University. The 1st visit of the 3rd stage was dedicated to the underground mosques of Mangystau and Ustyurt. At the 1st stage of the expedition, such well-known underground mosques as Sultan Üpi, Shepherd Ata, Shakpak Ata, Beket Ata, Karaman Ata, Masat Ata were examined, and this time small underground mosques such as Bura Ata, Seidishan, Eightazhi, Tolegen Ishan, Borly-Torim, roof hole, Akkorgan, etc. were taken into account and described for the first time. Underground mosques made of caves and rounded small hills are called "zauyya" in religious studies. They all have a common feature: it consists of one or two rooms, inside there is a prayer room (mihrab), dhirkhana, shilkhana (hiluet), on the roof of which there is a night light. These underground mosques performed several functions, such as places of worship, lecture halls, overnight stays for pilgrims, and shelters to protect passengers from cold and heat.

<https://yu.edu.kz/keshendi-ekspeditsiyanyi-shinshi-keze-i/>

The Department of Biology of Yessenov University cooperates with the Aktau city Botanical Garden. Scientists of the Botanical Garden will jointly work on the research work of the Greenhouse of the Yessenov University.

15.4 Land sensitive waste disposal

Sanitary and epidemiological requirements for water sources, catchment areas for economic and drinking water purposes, economic and drinking water supply and cultural and domestic use of water and safety of water bodies have been approved at the Yessenov University. In accordance with this standard, monitoring is carried out. Approved by the decision of the production Department of the University on November 13, 2017.

The university has approved a waste reuse policy. All university buildings have separate storage containers for paper, plastic, cans.

Yessenov University has core principles of sustainable waste management and environmental conservation. Thus, YU encourages its students and staff to use products with minimal packaging. Additionally, it organizes a company among its staff and students to organize an action on “Donating or selling items you no longer need” sharing items to prevent them from becoming waste. In order to accomplish it, YU collaborates with Aktau City Department of Employment and Social Programs which has a reception and delivery point for used items, shoes, dishes, bags and children's toys.

Moreover, Yessenov University uses a recycling company, a local Aktau Eco Waste, which has implemented a Recycling system, allowing students and faculty to easily determine what they can and cannot recycle. Additionally, this waste program for a university is an excellent way to promote sustainability and reduce the environmental impact of the campus.

Yessenov University promotes actions in minimizing environmental impact from the use of paper and plastic. Both paper and plastic production have significant environmental consequences, from resource extraction and manufacturing to waste disposal. Thus, YU has a 5-year contract with a local company which gathers paper and plastic waste coming out from Yessenov University. This action works quarterly, and every 3 months there is a delivery service from YU.

It is also important to note that the idea of collecting paper and plastic came from a graduate student of Yessenov University. YU has always been proud to have innovative students.

1. Yessenov University has a responsible attitude for collecting lab chemicals and electronics. It has a department of chemical waste from the oil industry, so it is a regular process to collect lab chemicals remaining after some certain experiments. YU has a take-away service collaborating with a local waste collector.
2. Yessenov University is a high educational institution which has automated management and educational processes. So, it regularly changes its electronic equipment. Besides, teaching and research staff often carry out lab experiments which require the use of both chemicals and equipment.
3. Yessenov University treats toxic waste very critically, and it contributes to the environment and human health to protect its waste. Toxic waste from Yessenov University includes hazardous materials like chemicals, heavy metals, radioactive substances, and other pollutants. The University has proper treatment and disposal which are essential. All this waste is taken away by a special track and in special clothes.