ALTAI
STATE
UNIVERSITY

Impacting the Global Goals by DEGREEs – 2023

KEY FACTS ABOUT THE ALTAI STATE UNIVERSITY

>80ha of academic buildings and dormitories

>1600 trees in university area

>18 000 students

>2300 foreign students

>2500 distant learning students

>2000 students live in dormitories

>550 lecturers

9 academic buildings

5 dormitories

>500 summer schools participants

>50 winners and awardees of All-Russian Student Olympiads

>1800 open access video lectures

>40 scientific journals

THE GLOBAL GOALS AT THE ALTAI STATE UNIVERSITY

THE ALTAI STATE UNIVERSITY SUSTAINABLE DEVELOPMENT MISSION

Located in the "heart" of the Siberia, the Altai State University is one of the leading universities, striving for international excellence, world-changing research and high-quality, inspiring teaching.

We support the national, gender, and racial equality among our staff and students, we respect various religions; we strive to increase our participation in higher education and join the consortia and research networks with leading world universities; we cooperate with local, national and international communities on development and equality issues. All of this is part of what we do and who we are.

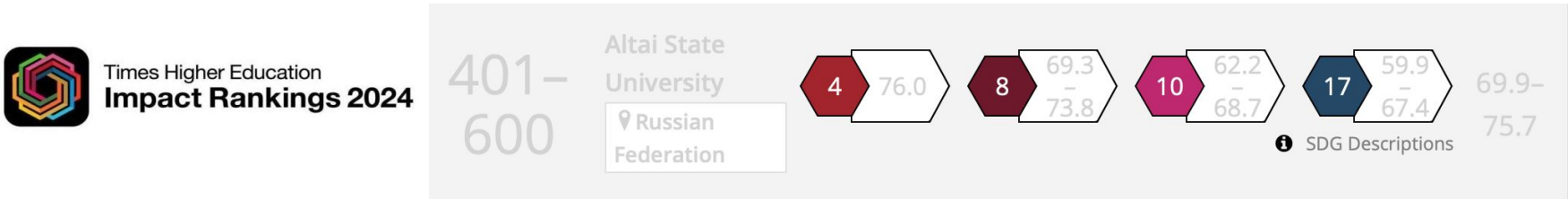
We have made a commitment to contribute to the UN's Sustainable Development Goals by incorporating them into our social responsibility strategy. We contribute to the UN's Sustainable Development Goals every year, step by step, through training programs, events and research aimed at achieving sustainable development in the world, Russian Federation, the Altai Krai, and the Altai State University.

THE UNIVERSITY IMPACT RANKINGS

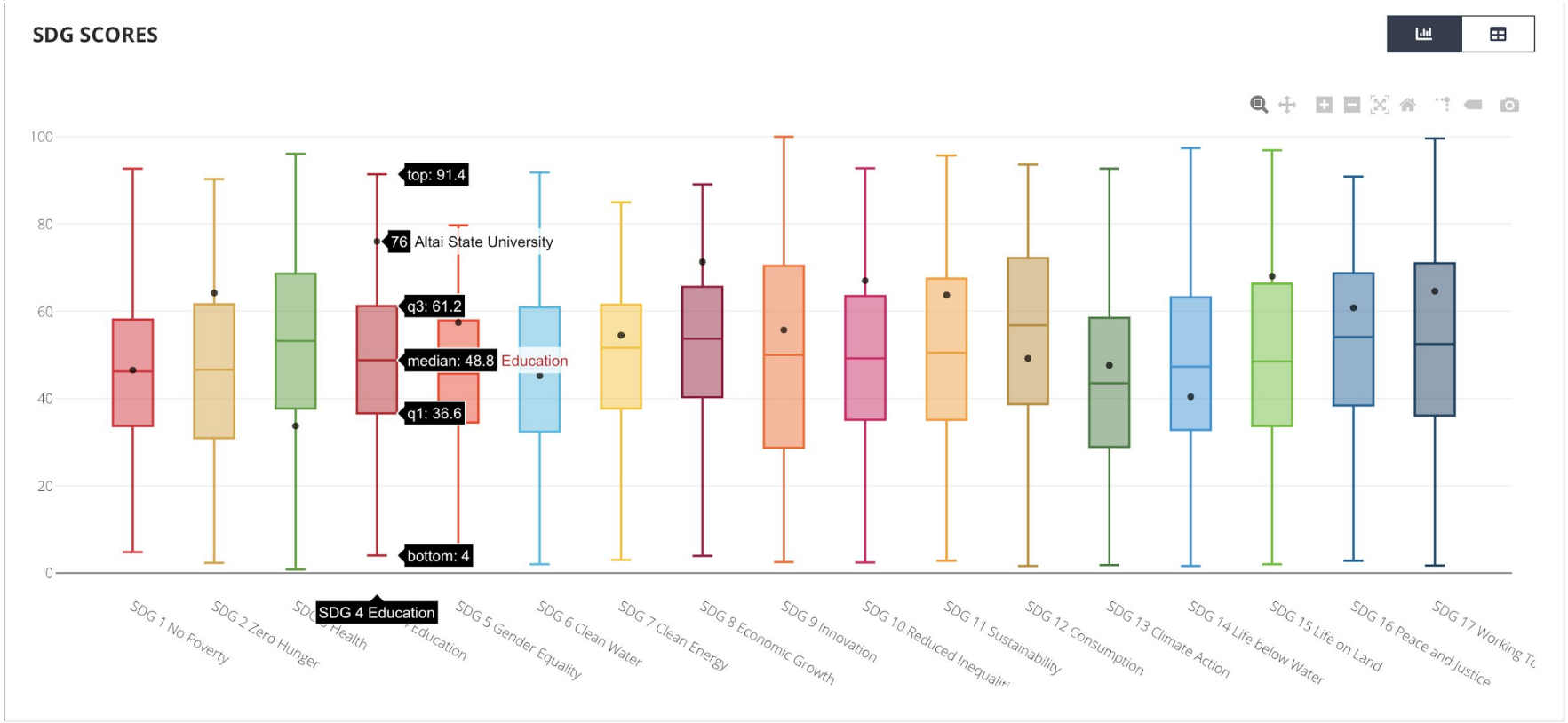
The overall rank of the Altai State University is 401-600 out of 1963 institutions in THE University Impact Rankings 2024. The AltSU is included in the TOP 100 world universities by 1 SDG and in the TOP 200 world universities by 3 SDGs.

The methodology of THE University Impact Rankings is based on three areas: research - creating the knowledge to solve the most challenging world problems; socially-oriented programs - the direct university activity in the society; management - resource management, the university's contribution to education in the broad sense. The ranking used Elsevier data and relevant quantitative and qualitative parameters.

The Altai State University has the highest scores in SDG 4 (76,0), SDG 8 (71,3), and SDG 15 (68,0).

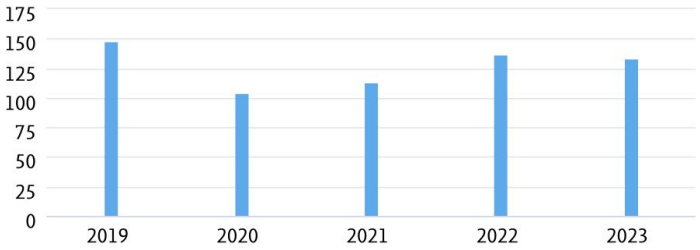


SUSTAINABLE DEVELOPMENT GOALS BREAKDOWNS AT THE ALTAI STATE UNIVERSITY



SDG RESEARCH OF THE ALTAI STATE UNIVERSITY IN 2019-2023 (by SciVal)

Scholarly Output



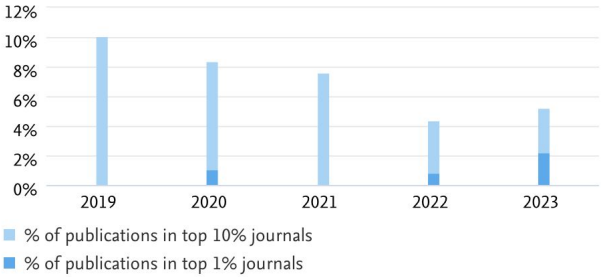
636

number of publications by authors at Altai State University

View list of publications

Publications in Top Journal Percentiles

Share of publications at Altai State University that are in the top journals by CiteScore Percentile



41 (7.1%)

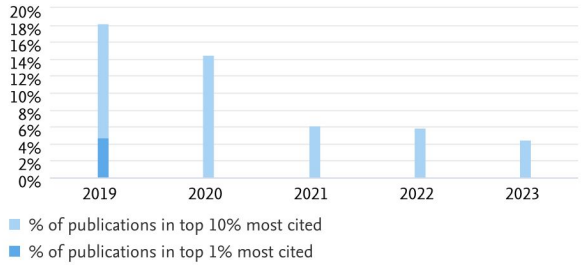
number of publications in the top 10% journals by CiteScore Percentile

View list of publications

Outputs in Top Citation Percentiles

Share of publications at Altai State University that are among the most cited publications worldwide

Show as field-weighted



63 (9.9%)

number of publications in the top 10% most cited publications worldwide

View list of publications

Thresholds

SDG RESEARCH OF THE ALTAI STATE UNIVERSITY IN 2019-2023 (by SciVal)

	1 NO POVERTY	2 ZERO HUNGER	3 GOOD HEALTH AND WELL-BEING	4 QUALITY EDUCATION	5 GENDER EQUALITY	6 CLEAN WATER AND SANITATION	7 AFFORDABLE AND CLEAN ENERGY	8 DECENT WORK AND ECONOMIC GROWTH	9 INDUSTRY, INNOVATION AND INFRASTRUCTURE	10 REDUCED INEQUALITIES	11 SUSTAINABLE CITIES AND COMMUNITIES	12 RESPONSIBLE CONSUMPTION AND PRODUCTION	13 CLIMATE ACTION	14 LIFE BELOW WATER	15 LIFE ON LAND	16 PEACE AND JUSTICE STRONG INSTITUTIONS
2019	4	22	12	18	2	5	8	49	29	12	6	12	8	1	18	9
2020	5	11	14	10	0	1	8	42	19	9	3	7	3	3	13	3
2021	4	19	22	11	1	5	6	26	20	3	9	10	6	0	23	4
2022	3	28	22	20	1	4	10	40	25	2	11	31	9	1	14	7
2023	8	8	21	11	2	4	9	37	18	24	7	12	2	0	19	18

SDG RESEARCH OF THE ALTAI STATE UNIVERSITY FOR THE IMPACT 2024 (by SciVal)

SDG 2024 ↑	SDG Rank (THE)	SDG Score (THE)	Scholarly Output (THE)	Field-Weighted Citation Impact 5 year (THE)	Output in Top 10% Journals (THE)
SDG 1: No Poverty	401–600	43.6–52.7	14	0.28	-
SDG 2: Zero Hunger	101–200	61.6–71.8	72	0.84	7
SDG 3: Good Health and Well-being	1001+	0.8–43.0	74	-	-
SDG 4: Quality Education	78	76.0	54	-	2
SDG 5: Gender Equality	301–400	55.3–59.1	3	-	-
SDG 6: Clean Water and Sanitation	401–600	36.2–48.3	13	1.09	1
SDG 7: Affordable and Clean Energy	401–600	46.4–55.2	36	0.85	4
SDG 8: Decent Work and Economic Growth	101–200	69.3–73.8	130	-	4
SDG 9: Industry, Innovation and Infrastructure	401–600	41.5–57.2	90	-	-
SDG 10: Reduced Inequality	201–300	62.2–68.7	21	0.48	1
SDG 11: Sustainable Cities and Communities	301–400	56.8–64.3	29	0.34	2
SDG 12: Responsible Consumption and Production	401–600	41.1–57.4	51	0.62	3
SDG 13: Climate Action	301–400	46.7–53.4	30	1.40	7
SDG 14: Life Below Water	301–400	39.8–48.2	6	1.43	-
SDG 15: Life on Land	101–200	64.7–76.3	65	0.81	6
SDG 16: Peace, Justice and Strong Institutions	401–600	51.3–61.8	21	0.66	1
SDG 17: Partnerships for the Goals	601–800	59.9–67.4	480	-	-

RESEARCH METRICS PER SDG
OF THE ALTAI STATE UNIVERSITY (by SciVal)

Research metric	Sustainable Development Goals (SDG)																
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17 [1]
Scholarly Output (THE)	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Field-Weighted Citation Impact - 5 Year (THE)	●	●				●	●			●	●	●	●	●	●	●	
Output in Top 10% Journals (THE)		●		●	●	●	●	●		●	●	●	●	●	●	●	
Views Count (THE)			●	●													
Female Co-authorship (THE) [2]					●												
Co-authorship with Low or Lower-middle Income Countries (THE) [2]	●																●
Patent-Citations (THE)									●								
Clinical Citations (THE)			●														

1 = SDG 17 is the deduplicated count of all publications from SDGs 1-16.
2 = Shown as a ratio of the Scholarly Output for the corresponding SDG.

SDG 1: END POVERTY IN ALL ITS FORMS EVERYWHERE

ENGAGEMENT EXAMPLE

Master's student at the Institute of History and International Relations of AltSU Mikhail Belov, together with the volunteer association "Good Deeds," helps homeless and low-income people by organizing free Sunday lunches for them.

This project has already been operating for more than 10 years; Mikhail joined it a year ago, when he joined the Barnaul Yoga Society. Their volunteer association "Good Deeds" works in several areas: supporting children in rehabilitation centers, the elderly, and people with addictions. The campaign to provide lunches to those in need is one of these areas.

INSTITUTION EXAMPLE

VTB Bank specialists gave a lecture to AltSU students about credit cards and bank loans to improve financial literacy.

The speakers revealed the "golden formula" of personal finance and the secret of the magic of compound interest, citing a quote from Albert Einstein: "Compound interest is the eighth wonder of the world. He who understands it earns it, he who does not understand it pays it."

Students learned about working conditions at the bank, vacancies, employment procedures, the possibility of remote work, career, vertical and horizontal career growth.

IMPACT EXAMPLE

AltSU received a grant from the Ministry of Education of the Russian Federation for the implementation of vocational training programs **on a free basis** for participants in student teams in the professions of workers and positions.

AltSU college students receive education under the programs. They are members of a service team in the Altai Territory. Professional training will allow them to acquire the necessary professional competencies to work with equipment, technologies, hardware, software and other professional tools.

In just two months, college specialists will train 40 professionals: 20 waiters of the 3rd category and 20 maids of the 1st category.

Upon completion of the training, graduates will receive a certificate of acquisition of a profession - a waiter or a maid. Such a document of the established form will allow you to find a job in the specialty you have mastered and qualify for a salary corresponding to the rank received.

SDG 2: END HUNGER, ACHIEVE FOOD SECURITY AND IMPROVED NUTRITION AND PROMOTE SUSTAINABLE AGRICULTURE

IMPACT EXAMPLE

Four projects of AltSU scientists received grants from the Governor of the Altai Krai for the development of qualitatively new technologies, the creation of innovative products and services in the areas of food processing and production, pharmaceutical production and biotechnology.

AltSU submitted 4 out of 10 applications for the competition (three universities of the Altai Krai participated in the competition).

In the coming year, AltSU scientists will carry out research on topics that will develop biotechnology for food production.

“Approbation of hop cloning technology on samples in demand in production”, project by Olga Mironenko, director of the Altai Center for Applied Biotechnology of AltSU.

“Development of an effective technology for obtaining biologically active substances from microorganisms with high biotechnological potential”, project by Alena Irkitova, director of the Prombiotech Research Center of AltSU.

“Development of technology for obtaining a biological product to combat phytopathogenic bacteria of the genus Agrobacterium, causative agents of crown gall,” project by Dmitry Shcherbakov, director of the Research Institute of Biomedicine of AltSU.

“Development of plant growth and development regulators based on a complex of mineral compounds in mixtures with compounds obtained by extraction from living objects,” a project by Mikhail Skaptsov, a researcher at the South Siberian Botanical Garden.

ENGAGEMENT EXAMPLE

The AltSU’s scientists participated in expeditions to study the habitat of wild hops in the Altai Republic, Altai Krai, Omsk, Tyumen, Tomsk, Novosibirsk, Kemerovo regions, where they found many interesting samples that were promising for breeding and transferring them to food industry enterprises.

As you know, the first settlers to Siberia collected hops for use as yeast in baking and preparing homemade drinks.

The goal of the expeditions of AltSU scientists is to create varieties that are promising for brewers, in particular the brewing company “Baltika”, because hops, depending on various factors, can differ in composition, aroma, cone size and other parameters.

INSTITUTION EXAMPLE

Pavel Stepanenko, a student at the Institute of Chemistry and Chemical-Pharmaceutical Technologies at Altai State University, has developed a fertilizer project that will help plants grow better and become more resilient. The preparation is based on fungi. The innovative project won one million rubles from the state competition "Student Startup" for implementation.
The action of biofertilizer is based on the introduction of mycorrhiza into the soil, which is a symbiosis between a plant and a fungus. The fungus, due to its hyphae, significantly increases the area of nutrient absorption and strengthens the plant in the soil.

SDG 3: ENSURE HEALTHY LIVES AND PROMOTE WELL-BEING FOR ALL AT ALL AGES

IMPACT EXAMPLE

Third-year students of the Department of Clinical Psychology undergo internship at the Regional Clinical Emergency Hospital of Barnaul.

During practice, students study the job responsibilities of a medical psychologist and identify the psychological characteristics of patients in each department. Trainees also conduct diagnostics of the emotional state, perception of the disease situation, and adaptive capabilities of patients. They interpret the results obtained during the study and give a conclusion.

AltSU students work in many medical organizations in Barnaul. This is an invaluable experience in communicating with patients.

INSTITUTION EXAMPLE

Junior researcher of the South Siberian Botanical Garden Anastasia Koltunova, with the support of a grant from Altai State University, is implementing the project “Study of biochemical, morphological and molecular genetic aspects of the genus Sanguisorba in Russia.” The specialist is faced with a large-scale task - to conduct a comprehensive analysis of the Burnet genus.

Pharmacological effects have been identified against atherosclerosis, vascular diseases, Alzheimer's disease, bronchial asthma, alopecia, for the treatment of water and fire burns as a prevention and treatment of breast cancer.

The research will form the basis of a PhD thesis.

ENGAGEMENT EXAMPLE

In September and October, students took part in a preventive event. It was organized and conducted by the Altai Regional AIDS Center.

Epidemiologist Victoria Karpova spoke in detail about measures to prevent HIV infection and viral hepatitis, and tested students’ knowledge about their own health.

Students increased their knowledge about the methods of infection with HIV and viral hepatitis B and C, understood the difference between HIV and AIDS, and also debunked myths about how one cannot actually become infected with these terrible diseases, and learned to treat sick people with tolerance.

SDG 4: ENSURE INCLUSIVE AND EQUITABLE QUALITY EDUCATION AND PROMOTE LIFELONG LEARNING OPPORTUNITIES FOR ALL

INSTITUTION EXAMPLE

Rector Sergey Bocharov took part in the IV Russian-Uzbek Educational Forum in Vladivostok. The central theme of the forum was the educational space of the future: new competencies, innovations, technologies. The participants discussed the most promising areas of personnel training for the two countries - creative industries and information technologies.

At the forum, on behalf of Altai State University, a new agreement on bilateral cooperation was signed with Uktam Salomov, the rector of the Fergana Polytechnic Institute (Uzbekistan).

IMPACT EXAMPLE

On October 26, Altai State University hosted a large-scale All-Russian festival NAUKA 0+. Schoolchildren from all over the region were able to visit 50 sites in various areas: from science to creativity.

One of the main sites was the laboratory “Museum of Nature”. The schoolchildren went on a fascinating excursion about the museum's exhibits. The museum's holdings consist of educational, scientific and exhibition sections, which present more than 1,200 specimens of vertebrate animals.

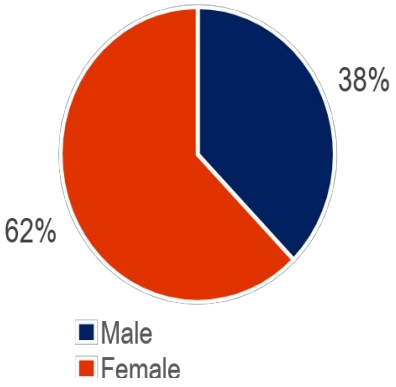
ENGAGEMENT EXAMPLE

As part of the career guidance course “Russia – My Horizons,” Altai State University is implementing the “Professional Environment from AltSU” project for high school students which offers the opportunity to visit leading enterprises in Barnaul.

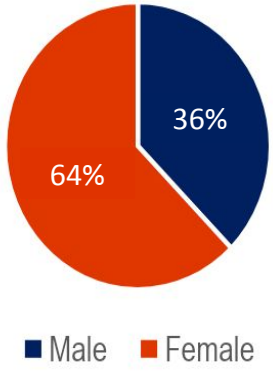
During April, students of the 10th and 11th grades of gymnasium No. 166 in Novoaltaisk, the Altai Regional Pedagogical Boarding Lyceum and school No. 118 visited several enterprises: Barnaultransmash, Altai instrument-making plant “Rotor” and “Renaissance Cosmetic.” These excursions provided students with a firsthand look at the history of the enterprises, allowed them to observe production facilities in action, the operation of machinery, and gain insights into the modern technologies. However, the most significant aspect of these visits was the opportunity to talk to representatives of the enterprises about what kind of specialists the company requires, what career prospects they are ready to offer the children and how they can support them already at the stage of studying at the university.

SDG 5: ACHIEVE GENDER EQUALITY AND EMPOWER ALL WOMEN AND GIRLS

Gender ratio among faculty in 2024



Gender ratio among 1st year students in 2024



IMPACT EXAMPLE

A young geographer and scientist, Anastasia Volkova, won an intra-university grant competition with the project “Development of a geographic information service to maintain a sustainable land use structure.” The idea of the project is to systematize the available data on agricultural enterprises operating in the Altai Krai.

The result of the work will be an interactive map of the region indicating the enterprises in the region, the relationships between them, the crops they grow, and other characteristics.

The service will be useful to agricultural users who are looking for the most profitable partnership options, in other words, points and ways of processing or marketing their products.

INSTITUTION EXAMPLE

Three students of Altai State University became winners of the “Student Startup” competition of the federal project “University Technological Entrepreneurship Platform”. Each of them will receive a grant of 1 million rubles for the implementation of their business project.

There are two girls among the winners. The first girl is Anastasia Sokolovskaya with the project “Peltier bandage for people suffering from headaches and muscle pain.” The second winner is Ekaterina Voroshilina with the project “Creating a Russian brand for sewing clothes from organic fabrics.”

ENGAGEMENT EXAMPLE

Women leaders are part of AltSU's top management. Vice-rectors for educational activities, extracurricular activities and additional education are women. Women are the directors of the Institute of Social Sciences, the Institute of Art and Design, the Institute of Geography and the Institute of Chemical Technology.

SDG 6: ENSURE AVAILABILITY AND SUSTAINABLE MANAGEMENT OF WATER AND SANITATION FOR ALL

IMPACT EXAMPLE

On April 21, a large environmental initiative took place in Barnaul aimed at cleaning up the banks of the Pivovarka River. Volunteers, social activists, and students from different universities took part in it. Altai State University was represented by members of different unions, including service brigade "Gorky", union "Perron 22", pedagogical union "Sigma", and construction brigade "Spectrum".

They gathered household waste, last year's leaves, and dry branches, amounting to more than 200 bags of garbage of various sizes.

INSTITUTION EXAMPLE

Canteens' sewer systems of AltSU are equipped with local treatment facilities for waste fats.

Disposal of waste is carried out on a contractual basis by a specialized organization with a license for the collection, transportation, processing, recycling and disposal of waste of I–IV classes of danger.

At all inlets of the water supply to the buildings, filters for mechanical water treatment are installed. In the event of an accident or incident on water supply systems, the emergency site is quickly isolated from the general water supply system. After eliminating the accident, the repaired area is thoroughly flushed and only after that it is included in the general water supply system. The University is constantly working to modernize the water supply system (replacing pipelines, valves, etc.) using modern chemically neutral, corrosion-resistant materials.

ENGAGEMENT EXAMPLE

The Ecological and Chemical Center of Altai State University carries out examinations of the quality of tap water for its use as drinking water.
In this way, chemists increase the technical and chemical awareness of the population of the Altai Krai about water quality.

SDG 7: ENSURE ACCESS TO AFFORDABLE, RELIABLE, SUSTAINABLE AND MODERN ENERGY FOR ALL

INSTITUTION EXAMPLE

Altai State University and the Altai cluster of power engineering and energy efficient technologies entered into a cooperation agreement.

Representatives of one of the largest energy enterprises in the Altai Krai showed interest in the developments of scientists in the field of physics and computer science. Altai State University will train personnel in the field of energy technologies for the Altai cluster of power engineering and energy efficient technologies.

ENGAGEMENT EXAMPLE

Altai State University presented and defended a program for creating a carbon test site at the Ministry of Education and Science of the Russian Federation.

Global trends show that by 2100 the average atmospheric temperature will increase by 1–2 degrees. The global climate agenda and the resulting need to limit greenhouse gas emissions worry scientists and environmentalists also from the Altai Krai. One of the solutions to the global problem is the development of methods for monitoring the balance of greenhouse gases in the region through the creation of carbon polygons.

Development strategies are now being implemented, containing an action plan for the transition of enterprises to low-carbon production and, consequently, reducing technological emissions. This includes modernization and the creation of specialized directories of available technologies.

And the creation of a carbon polygon is a significant step towards reducing the negative impact of enterprises of various levels on the environment.

SDG 8: PROMOTE SUSTAINED, INCLUSIVE AND SUSTAINABLE ECONOMIC GROWTH, FULL AND PRODUCTIVE EMPLOYMENT AND DECENT WORK FOR ALL

IMPACT EXAMPLE

Scientists and students of Altai State University have created an interactive audio guide along the Chuya Tract for tourists. The map in the mobile application covers the section of the route from Novosibirsk to the village of Tashanta in the Altai Republic.

The list includes 125 interesting objects, all of them are marked on an interactive map, equipped with photographs and short historical information. To take actual photographs, the scientists independently drove along the route and visited each of the marked places.

The audio guide will attract even more tourists to the Altai Krai, which means the service will develop and new jobs will appear in the region.

INSTITUTION EXAMPLE

Students of AltSU participated in the all-Russian career marathon “Tasty - period”. The career marathon is based on educational videos and game tasks, where students spent 5 weeks improving key soft skills applicable in any field. Every week brings a new task and new challenges, the answer to which allows the student to decide on a career choice and navigate the labor market.

The winners received prizes of 50 thousand rubles and the opportunity to find employment in high positions in the company “Tasty - period”.

ENGAGEMENT EXAMPLE

In the 2024/2025 academic year, Altai State University is a co-organizer of the All-Russian Olympiad for students “I am a Professional” in the areas of “Geography” and “History and Culture of Russia”.

In the new season, access to the career portal has expanded - a platform where each participant can find a vacancy in the profile of interest. Previously, this opportunity was provided only for project winners and participants in the final stage who showed a non-zero result.

SDG 9: BUILD RESILIENT INFRASTRUCTURE, PROMOTE INCLUSIVE AND SUSTAINABLE INDUSTRIALIZATION AND FOSTER INNOVATION

INSTITUTION EXAMPLE

The first coordination meeting of the participants of the International Scientific and Implementation Consortium "Interaquatech", created in early 2024, was held at Altai State University.

The Consortium united two universities – Altai State University and Stellenbosch University of South Africa, as well as two industrial companies Arsal LLC (Russia) and GK Aqua (Malaysia).

In this partnership, Altai State University is prioritizing the development of alternatives for activating Artemia cysts. This includes selecting new classes of activators derived from various microbial conglomerates and testing proposals from a qualified customer, GK Aqua.

IMPACT EXAMPLE

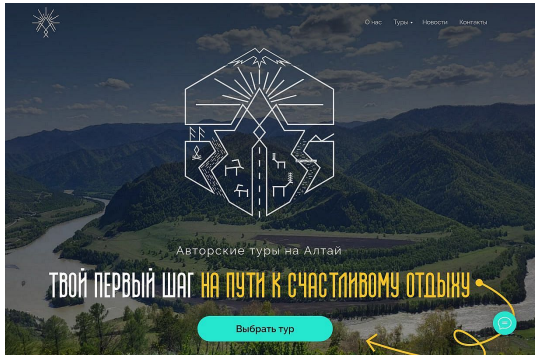
The team named “Mint Perplexy”, led by Petr Kolosov, Acting Director of the Center for Recombinant Technologies of Altai State University, became the winner at the 9th Barnaul Hackathon.

The team developed the EnzymeGen web application, a platform designed to generate enzyme datasets using AI, which aims to speed up the process of developing enzymes with specified characteristics. According to the participants’ idea, AI would predict mutations that enhance the enzyme activity, specificity, thermal stability, and other significant parameters.

ENGAGEMENT EXAMPLE

In 2024, 60 people completed the Bachelor's program "Applied Informatics in Design" and the Master's program "Digital Design", among them the first graduates of the bachelor's degree through distance learning.

Bachelor's and master's students mastered a wide range of skills, including UI and UX design, interface design, working in Figma, the basics of layout and web programming, design competencies and the ability to work in a team. To demonstrate their qualifications, many students created websites for real companies and organizations, as well as concepts for their own business projects. These projects included the development of websites for a law firm, a beauty salon, a sports club, travel companies and educational institutions, and non-profit organizations. Several graduates focused on creating online stores.



SDG 11: MAKE CITIES AND HUMAN SETTLEMENTS INCLUSIVE, SAFE, RESILIENT AND SUSTAINABLE

IMPACT EXAMPLE

Altai State University college students always participate in and support various environmental events and campaigns:

“No More Garbage” campaign – monthly promotions for separate collection of recyclable materials;

citywide cleanup days on Kulagina Street and near the college on Komsomolsky Avenue;

educational environmental project "Ecosled".

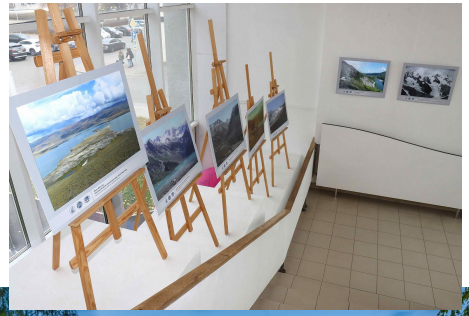
These events were not only an opportunity to make the environment around the city of Barnaul cleaner, but also a great way to unite for a common goal.

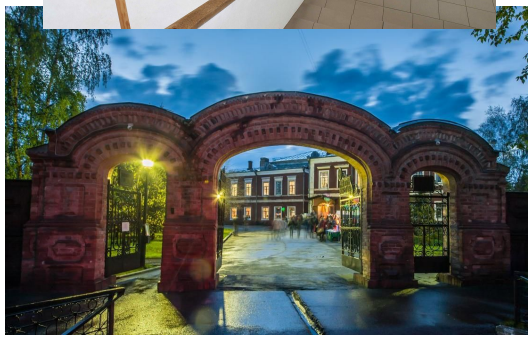
After local contamination was discovered with household waste, empty bottles, tax returns and other documents, the guys cleared the forest and took 20 bags of garbage to a landfill.

INSTITUTION EXAMPLE

Victoria Grazhdankina, a student at the Institute of History and International Relations of AltSU, has been awarded one million rubles for her project titled "Creation of a website-guide to Altai museums" as the winner of the project "Student Startup". The student came up with the idea of creating a website that would provide complete information about Altai museums.

This platform will serve as a comprehensive resource, providing detailed about each museum, contacts, location, historical background, and exhibits presented there. Additionally, the website will mark nearby accommodation and dining options for visitors.





ENGAGEMENT EXAMPLE

A unique photo exhibition on the centuries-old history of Altai exploration opened in the Universum Gallery.

The exhibition features 42 pairs of photographs of natural landmarks of the Altai Mountains, showcasing certain territories, objects, and settlements which were photographed 130 years ago and in our time. At this exhibition, visitors can enjoy variopanels, or varioimages, which are displays that alternate between based on the view’s angle. From one angle you can see ancient Altai, and from another how it looks today, allowing the guests to visualize the changes over 130 years, such as the retreat of mountain glaciers, alterations in the river courses, and an expansion of forest ecosystems.

SDG 10: REDUCE INEQUALITY WITHIN AND AMONG COUNTRIES

IMPACT EXAMPLE

AltSU implements a program of financial assistance to those in need. Scholarships are paid to orphans, disabled people, and persons exposed to radiation due to radiation disasters. Financial assistance is paid to foreign and nonresident students twice a year for travel to their place of residence.

ENGAGEMENT EXAMPLE

Sociologists from AltSU launched a project on the adaptation of migrants in the educational environment.

The organizers of the courses implemented within the framework of the project "Inclusive technologies for the integration and adaptation of migrants in the educational environment".

The lectures and practical lessons of the course will cover the following topics: features of interpersonal and intergroup communications in interethnic and interethnic interactions; features of the formation of the image of the "other", "ethical other", methods and techniques of working with young people with different experience of migration; ethno-cultural competence and tolerance, practical forms of effective inter-ethnic interaction of subjects of a multi-ethnic environment; ethnic tolerance; factors determining ethnic tolerance; psychosocial practices in working with young people with different experience of migration.

INSTITUTION EXAMPLE

Students of the Institute of Humanities organized an interethnic dialogue for the Day of National Unity.

One of the key objectives of the interethnic dialogue “On a United Land” is to strengthen friendly relations between students from different countries and create an atmosphere of cooperation at the institute.

As part of the dialogue, Altai State University students, representing countries such as Russia, Kazakhstan, China and Angola, performed creative performances, reading poetry and prose, performing musical compositions in their native language.

SDG 12: ENSURE SUSTAINABLE CONSUMPTION AND PRODUCTION PATTERNS

IMPACT EXAMPLE

Director of the student business incubator for innovative projects at AltSU, Ekaterina Makeeva, is implementing a startup project to develop a biodegradable covering material - BioMulch.

Unlike the different types of polyethylene mulch film produced, the reinforcing filler of BioMulch is the biopolymer lignin, which is common in nature.The variety of covering film currently being created is based on hydrolyzed lignin obtained as waste from the Tatneft pilot plant for the production of non-edible sugars.

Biopolymer material can be used for growing strawberries, grapes, and vegetables in greenhouses. Using BioMulch will control soil temperature, improve water and fertilizer absorption, and minimize the use of pesticides due to reduced weed growth by reducing UV radiation from sunlight. The film will decompose on its own without additional disposal efforts before the next agricultural season.

INSTITUTION EXAMPLE

Master's student at the Law Institute Daniil Egorov is the author and director of the project “Ecology is behind us!” As part of the project, universities, schools and kindergartens in the Altai Krai hand over recyclable materials for recycling. The project is aimed primarily at collecting batteries. Batteries are the most toxic to the environment.

Over the course of several years, we collected more than five tons of batteries, more than a ton of plastic caps and 43 tons of waste paper.

ENGAGEMENT EXAMPLE

The AltSU’s student Ekaterina Vedishcheva, a participant in the “Your Move” project, is implementing the “Eco-footprint” environmental project. Within its framework, volunteers tell schoolchildren and students of Barnaul, Biysk, Novoaltaisk, Rubtsovsk, and Kamen-on-Ob how everyday actions can reduce the negative impact on the environment.
Volunteers give lectures to children and youth, where they talk about ecology, existing eco-initiatives, and environmental technologies. But lectures give not only theoretical information, they provide tips on how to change your lifestyle, introduce useful environmental practices: how to properly and easily sort garbage, where to dispose of unnecessary clothes, how to reduce electricity and water consumption, etc.

SDG 13: TAKE URGENT ACTION TO COMBAT CLIMATE CHANGE AND ITS IMPACTS

IMPACT EXAMPLE

In July, a group of geography students, graduate students and scientists went on a long-distance educational field work to the highest point of the South Chuya Range – Mount Irbistu. The object of their study was the glacier, whose unofficial name is Left Irbistu.

Firstly, the surface of the glacier was photographed using a drone; as a result, valuable images were obtained, which will later be compared with last year's ones, this will make it possible to estimate the amount of glacier melting over the year. Secondly, most of the glacier was surveyed using ground penetrating radar. It "visualizes" the glacier in the depths and provides information about the thickness of the ice underneath. Scientists and students will compare these results with the data obtained by Tomsk glaciologists in the 2000s – then the first and only studies of this glacier were carried out. According to preliminary data, in just over 20 years the thickness of the glacier has decreased by 30 meters – this is the height of a nine-story building.

INSTITUTION EXAMPLE

From July 22 to 28, scientists from Altai and Yugra State Universities conducted an expedition to the steppe specially protected natural areas of Altai Krai.

The goal of our expedition was to directly measure CO2 flows using a chamber method with gas analyzers. The measurements were taken during the day, when plants are actively photosynthesising and absorbing CO2, and at night, when photosynthesis stops and they emit CO2 into the atmosphere. It is important to emphasize that these measurements are quantitative, exceeding various calculation methods in accuracy.

These works are of crucial importance for the formation of a "national cadastre" of greenhouse gases.

ENGAGEMENT EXAMPLE

At the Institute of Geography of Altai State University, Anna Egorina, a visiting foreign professor, presented the monograph "The Mongol-Siberian Anticyclone in the Fate of Nomadic Civilizations of Eurasia". The monograph summarizes the results of a 20-year study of the influence of the powerful seasonal center of action of the atmosphere of the Mongol-Siberian anticyclone on the weather regimes of the steppe geosystems of the Altai-Sayan mountainous country. Changes and rhythms of climate directly affected the fate of nomadic ethnic groups, and climatic transformations had a significant impact on the nature of the economic and cultural activities of nomads and required them to correspondingly restructure the entire system of life activity.

SDG 14: CONSERVE AND SUSTAINABLY USE THE OCEANS, SEAS AND MARINE RESOURCES FOR SUSTAINABLE DEVELOPMENT

ENGAGEMENT EXAMPLE

Prof. Sergey Snigirev commented on the anomaly of fish with two mouths caught in Rubtsovsk.

This is a fairly rare anomaly; such mutations occur in one in one hundred thousand cases.

The causes of such mutations can be either the impact of unfavorable factors on the body or a simple accident, damage to the egg at the blastomere stage, when cell division occurs. This case is isolated, so it is premature to say that the cause was pollution of the reservoir. Eating such fish is not dangerous.

But if we observed repeated or multiple cases of such manifestations in representatives of local populations, then we could assume the presence of unfavorable external factors provoking mutagenesis.

INSTITUTION EXAMPLE

Altai State University biologists are helping in the environmental rehabilitation of Lake Manzherokskoye.The best ecologists, botanists, and hydrogeologists work closely together.

To study the flora of Lake Manzherokskoye, the water area was explored using a quadcopter. Scientists have counted over 400 thousand rosettes. This is more than 101 thousand specimens of chilims, which refuted the myth about the extinction of the lake and the disruption of the self-purification ecosystem.

IMPACT EXAMPLE

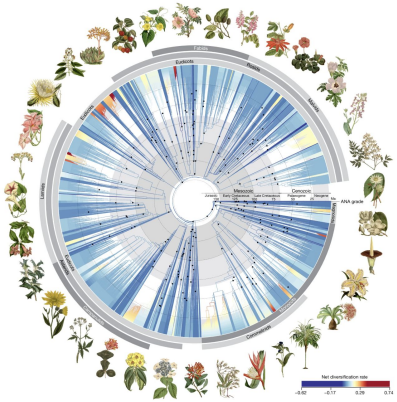
Scientists from Altai State University and East Kazakhstan University named after. S. Amanzholova (Kazakhstan) developed a plan to save the Irtysh River.

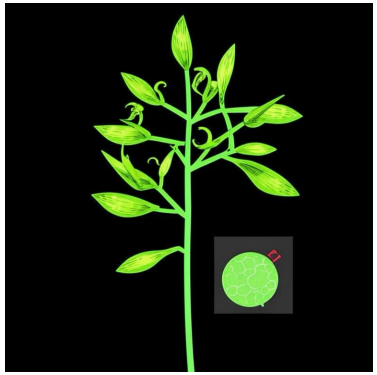
The Irtysh is a transboundary river that begins its journey from China, goes through Kazakhstan to the territory of Russia and flows into the Ob River.

To find answers to the question “Why is the Irtysh shallowing?” several research groups have been created: a group of mathematicians to model processes, chemists to develop water purification technologies, as well as materials scientists and alternative energy specialists.

The program of joint action by scientists from the two universities involves solving problems of water security, developing technologies for water purification and preserving the aquatic ecosystem. Scientists need to prevent further water loss, as well as monitor the level of pollution in the river and develop an environmental treatment system.

SDG 15: PROTECT, RESTORE AND PROMOTE SUSTAINABLE USE OF TERRESTRIAL ECOSYSTEMS, SUSTAINABLY MANAGE FORESTS, COMBAT DESERTIFICATION, AND HALT AND REVERSE LAND DEGRADATION AND HALT BIODIVERSITY LOSS





IMPACT EXAMPLE

The AltSU's students took part in the restoration of the park area of the Emerald Park in Barnaul as part of the project “Forest Map. Monitoring". Located in the city center, the park with a large number of green spaces and attractions is a popular place for leisure and walks for Barnaul residents.

By cleaning the area and planting tree seedlings - apple trees and bladderwort, the students made their small contribution to maintaining the cleanliness and beauty of the park and creating a comfortable environment for all residents of Barnaul.

INSTITUTION EXAMPLE

The AltSU’s scientist Dmitry German is co-author an article “Phylogenomics and the rise of the angiosperms” in the journal Nature.

This research is the result of large-scale international cooperation between scientists from about 50 countries, including Russia. Its essence is an attempt to shed light on the key stages in the evolution of the angiosperms, or flowering plants, that dominate our planet. The main result of the work was the construction, based on a comprehensive analysis of the genomes of almost 8,000 genera, of a new family tree of a division of the plant kingdom.

ENGAGEMENT EXAMPLE

Scientists from the AltSU have developed the first standards in Russia for assessing the absolute DNA content in plants. Development of methods for the development of cytometry in domestic genetics and selection.

This library of standards contains information about the reference organisms that scientists use to study genome size. The AltSU scientists have developed a line of standards for the study of medicinal, food, feed, vitamin-containing and other economically valuable plants

SDG 16: PROMOTE PEACEFUL AND INCLUSIVE SOCIETIES FOR SUSTAINABLE DEVELOPMENT, PROVIDE ACCESS TO JUSTICE FOR ALL, ACCOUNTABLE AND INCLUSIVE INSTITUTIONS AT ALL LEVELS

ENGAGEMENT EXAMPLE

The “Student Guard” team from the Altai State University won the “StopDrug” game.
“StopDrug” is a preventative game for painting over inscriptions and removing leaflets advertising the sale of narcotic and psychotropic substances. Through the efforts of students, 312 inscriptions were painted over and 1,374 advertisements were cleared.

IMPACT EXAMPLE

On August 1, an international scientific symposium on world heritage and cross-border cooperation took place at the Chinese Academy of Sciences in Beijing. The event was held at the Institute of Geographical Sciences and Natural Resources Research of the Chinese Academy of Science.

Experts from four Greater Altai countries signed an agreement on international cross-border cooperation. The Altai State University was represented at the symposium by Professor of the Department of Economic Geography and Cartography Alexander Dunets and an associate professor of the Department of Physical Geography and GIS Irina Rotanova.

INSTITUTION EXAMPLE

From October 29 to October 30, 2024, the Forum of the Association of Law Universities of the SCO Countries was held in Shanghai, in which the director of the Law Institute of AltSU Evgenii Anichkin took part. More than 100 delegates from Russia, China, Kazakhstan, Kyrgyzstan, Tajikistan and Uzbekistan took part in the Forum.

Evgenii Anichkin made a report “The Law Institute of Altai State University: the potential of educational and scientific cooperation with universities of the SCO countries.”

Proposals were voiced about the possibility of training graduates of Chinese law colleges at AltSU under an accelerated undergraduate program (3 years) and about cooperation in the scientific field.

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