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University anti-poverty programs

For students of the S.Seifullin Kazakh Agrotechnical Research University, in addition to the state system of training grants, there is a system of grants and scholarships.

- Corporate Fund "Target Capital Management Company "Endowment Qazaqstan Halqyna" www.qazaqstanhalqyna.kz approved the List of organizations of higher and postgraduate education and the number of grants under the charitable program "Educational grants of Kazakhstan Khalkyna". 8 grants have been allocated for the KATRU. According to the Program, the following categories of applicants can participate: from low-income families in rural areas, small and single-industry towns; orphaned children, or those left without parental care until adulthood; those with disabilities; from families raising disabled children; children of deceased citizens of the Republic of Kazakhstan during the tragic January events of 2022; injured children during the tragic January events of 2022.

- The multidisciplinary project company "QazaqZher" provides an educational grant for applicants from single-parent families and children with disabilities who have not received a state or other grant to pay for higher education under bachelor's degree programs to one applicant; and payment for accommodation during the year in a dormitory provided by an educational institution to the second applicant.

- Ассоциация «KAZENERGY» выделяет средства на оплату обучения за счет средств, выделяемых подрядчиками www.grant.kazenergy.com.

Publications on SDG 1 for 2023

1	Social Investing as Tool to Improve the Quality of Life. Implications for the Sustainable	Journal of Environmental Management and Tourism Vol.14, № 3, P. 842 - 855 Summer 2023	Kamenova, Mazken Zhanteleuova, Gulden Maidankyzy, Bayan Lesbayeva, Gulnara Amirova, Maral	DOI 10.14505/jemt.14.3(67).22 SDG 1,4,8.17
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	Development and Environmental Vulnerability		Shulenbayeva,	
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The University's hunger eradication programs

For students of the S. Seifullin Kazakh Agrotechnical Research University who were left without parental care, hot meals are organized in the canteens of the university. Social assistance in the form of a food scholarship is allocated from the state fund.

On an ongoing basis, the university holds Agricultural fairs, where the products of local agricultural producers are presented at discounted prices. <https://kazatu.edu.kz/en/news/berekeli-zrmeke>

SDG 2 publications for 2023

1	Investigation of the pin-roller metering device and tube effect for wheat seeds and granular fertilizers based on DEM	International Journal of Agricultural and Biological Engineering Том 16, Выпуск 2, Страницы 103 - 1142023	Adilet, Sugirbay Zhao, Kaiyuan Liu, Guangyao Sayakhat, Nukeshev Chen, Jun Hu, Guangrui Bu, Lingxin Chen, Yu Jin, Hongling Zhang, Shuo Nikolay, Zagainov Marat, Muratkhan	DOI 10.25165/j.ijabe.20231602.7721 SDG 2
2	Knowledge, attitude and practice (KAP) of smallholder farmers on foot-and-mouth disease in Cattle in West Kazakhstan	Veterinary Medicine and Science Vol.9, № 3, P. 1417 - 1425May 2023	Bayantassova, Svetlana Kushaliyev, Kaissar Zhubantayev, Izimgali Zhanabayev, Assylbek Kenzhegaliyev, Zhauynbay Ussenbayev, Altay Paritova, Assel	DOI 10.1002/vms3.1097 SDG 2

			Baikadamova, Gulnara Bakishev, Temirlan Zukhra, Aitpayeva Terlikbayev, Askar Akhmetbekov, Nurbolat	
3	Population Structure of Modern Winter Wheat Accessions from Central Asia	Plants Vol.12, № 12 June 2023 Article № 2233	Amalova, Akerke Yermekbayev, Kanat Griffiths, Simon Winfield, Mark Owen Morgounov, Alexey Abugalieva, Saule Turuspekov, Yerlan	DOI 10.3390/plants12122233 SDG 2
4	Establishing the regularity of the emulsification process	BIO Web of Conferences Vol.6428 July 2023 Article № 010122023 Innovative Solutions for the Development of the Industry, Agro-Bio-Technologies 2023 Kaliningrad 5 May 2023 Код 194605	Bekturganova, Almira Mukanova, Kuralay Zhumanova, Umyt Tultabayev, Bakhtiyar	DOI 10.1051/bioconf/20236401012 SDG 2
5	Soil protection technologies on medium saline irrigated lands	BIO Web of Conferences Vol.668 September 2023 Article № 010022023 International Scientific and Practical Conference on Agrarian Science, AgriScience 2023 Moscow 25 April 2023 до 26 April 2023 Код 193867	Tagaev, Asanbai M. Daurenbek, Nurman M. Akshalov, Kanat A. Kostakov, Amandyk K. Makhmadjanov, Sabir P.	DOI 10.1051/bioconf/20236601002 SDG 2
6	Line laser based sensor for real-time seed counting and seed miss detection for precision planter	Optics and Laser Technology Vol.167 December 2023 Article № 109742	Zagainov, Nikolay Kostyuchenkov, Nikolay Huang, Yu Xiang Sugirbay, Adilet Xian, Jia	DOI 10.1016/j.optlastec.2023.109742 SDG 2
7	Application of Biosynthesized Silver Nanoparticles from Oak Fruit Exudates against Pectobacterium carotovorum subsp. carotovorum Causing Postharvest Soft Rot Disease in Vegetables	Agronomy Vol.13, № 6 June 2023 Article № 1624	Soltani Nejad, Meysam Samandari Najafabadi, Neda Najafabadi N.; Aghighi, Sonia Zargar, Meisam Stybayev, Gani Baitelenova, Aliya Kipshakbayeva, Gulden	DOI 10.3390/agronomy13061624 SDG 2, 3, 8, 12

8	Investments as a Factor of Sustainable Development of Rural Areas	Journal of Environmental Management and Tourism Vol.14, № 3, P. 729 - 738 Summer 2023	Kurmanova, Dana Ismailova, Aliya Ukibayeva, Gulim Abdildinova, Nailya Bakyei, Agipar	DOI 10.14505/jemt.14.3(67).12 SDG 2, 8, 9
9	Kazakhstan Tourism Industry in Promoting Sustainable Agriculture Development	Journal of Environmental Management and Tourism Том 14, Выпуск 2, Страницы 552 - 562 Spring 2023	Ainakanova, Bakytgul Nukesheva, Anar Sundetuly, Zhaskairat Kazkenova, Aigul Omarkhanova, Zhibek Yernazarova, Anar	DOI 10.14505/jemt.v14.2(66).24 SDG 2, 8, 9, 12
10	Socio-Economic Consequences of the Transition to Organic Agriculture and Its Impact on Ecotourism	Journal of Environmental Management and Tourism Том 14, Выпуск 2, Страницы 477 - 490 Spring 2023	Karabassov, Rassul Nurmaganbetov, Kairat Bodaukhan, Kairat Kulmaganbetova, Aisulu Orynbekova, Gulnar Omarkhanova, Zhibek	DOI 10.14505/jemt.v14.2(66).17 SDG 2, 8, 12, 17
11	Food safety and food security through predictive microbiology tools: a short review	Potravinarstvo Slovak Journal of Food Sciences Том 17, Страницы 324 - 342 2023	Meinert, Caroline Bertoli, Sávio Leandro Rebezov, Maksim Zhakupbekova, Shugyla Maizhanova, Aigul Spanova, Assem Bakhtybekkyzy, Sholpan Nurlanova, Saida Shariati, Mohammad Ali Hoffmann, Tuany Gabriela	https://potravinarstvo.com/journal1/index.php/potravinarstvo/article/view/1854 SDG 2, 12, 17
12	Mining novel genomic regions and candidate genes of heading and flowering dates in bread wheat by SNP- and haplotype-based GWAS	Molecular Breeding Vol.43, № 11 November 2023 Article № 76	Qiao, Pengfang Li, Xuan Liu, Dezheng Lu, Shan Zhi, Lei Rysbekova, Aiman Chen, Liang Hu, Yin-gang	DOI10.1007/s11032-023-01422-z SDG 2, 13, 15
13	Exploring the Agronomic Performance and Molecular Characterization of Diverse Spring Durum	Agronomy Vol.13, № 7 July 2023 Article № 1955	Tajibayev, Daniyar Mukin, Kadyrzhan Babkenov, Adylkhan Chudinov, Vladimir Dababat, Abdelfattah A.	DOI10.3390/agronomy13071955 SDG 2, 17

	Wheat Germplasm in Kazakhstan		Jiyenbayeva, Karlyga Kenenbayev, Serik Savin, Timur Shamanin, Vladimir Tagayev, Kuttymurat Rsymbetov, Askhat Yessimbekova, Minura	
17	Impact of different types of green manure on pests and disease incidence and severity as well as growth and yield parameters of maize	Heliyon Vol.9, № 6 June 2023 Article № e17294	Saquee, Franciss Sia Norman, Prince Emmanuel Saffa, Musa Decius Kavhiza, Nyasha John Pakina, Elena Zargar, Meisam Diakite, Simbo Stybayev, Gani Baitelenova, Aliya Kipshakbayeva, Gulden	DOI10.1016/j.heliyon.2023.e17294 SDG 2, 17
18	Spring-Planted Cover Crop Impact on Weed Suppression, Productivity, and Feed Quality of Forage Crops in Northern Kazakhstan	Agronomy Vol.13, № 5 May 2023 Article № 1278	Stybayev, Gani Zargar, Meisam Serekpayev, Nurlan Zharlygassov, Zhenis Baitelenova, Aliya Nogaev, Adilbek Mukhanov, Nurbolat Elsargani, Mohamed Ibrahim Mohamed Abdiee, Aldaibe Ahmed Abdalbare	DOI10.3390/agronomy13051278 SDG 2, 17
19	Features of growth of agricultural crops and factors negatively affecting their growth	Indonesian Journal of Electrical Engineering and Computer Science Том 30, Выпуск 1, Страницы 625 - 632 April 2023	Yessenova, Moldir Abdikerimova, Gulzira Sadimekova, Zhanna Glazyrina, Natalya Adikanova, Saltanat Tanirbergenov, Adilbek Karipola, Mukhamedrakhimov Mukhamedrakhimova, Galiya	DOI 10.11591/ijeecs.v30.i1.pp625-632 SDG 2, 17



Taking care of health and well-being

Health is the foundation of a prosperous and happy life. Therefore, our university attaches great importance to maintaining a healthy lifestyle and the health of students and staff.



To provide primary pre-medical care to students and staff of S. Seifullin KATRU, there are Medical Centers equipped with all necessary medical equipment and medicines.

According to the results of voting, Astana Clinic LLP (license No. 22003395) was recognized as the winner of an open competition of medical institutions in order to provide better medical care to students and staff of the S. Seifullin Kazakh Agrotechnical Research University. The competition was held within the framework of the National Fund for Medical Care and Compulsory Medical Insurance.

Also, our university constantly holds events with students about the dangers of drug addiction, ludomania, and destructive religious movements (<https://kazatu.edu.kz/ru/news/esirtkisiz-elorda-deni-sau-rpak>; <https://kazatu.edu.kz/ru/news/kogamdagy-dini-mseleler-takrybynda-kezdesuler-tti>, <https://kazatu.edu.kz/ru/news/destruktivti-dini-agymdardy-belgileri>)

The University has 5 student sports leagues and 20 sports sections <https://kazatu.edu.kz/en/pages/universitet/studenceskaa-zizn/sportivnyj-klub>. Sports rooms are organized in each

dormitory. In winter, a ski base is open on weekends for students and university staff. Mass competitions for passing Presidential tests have been organized.

Sports evenings, meetings with graduates-winners of international competitions, master classes, friendly meetings in sports with other universities of the city are held. All sports and mass events held at the university are widely covered in the media.

As part of the implementation of the Healthy Universities project, the university has established a commission for the formation of students' healthy lifestyle and the development of mass sports. It includes representatives of the educational department, the Department of Physical Education and the sports club.

Students of 1-2 courses are given lectures on the formation of healthy lifestyle and the study of wellness practices. Meetings with medical professionals on the prevention of diseases of students, theoretical classes with students exempt from physical activity are organized. Medical examinations of 1st year students are carried out.

Spartakiads among faculties, student leagues in playing sports, university championship among various sports, spartakiads among dormitories, health days, etc. are held annually.

The most trained athletes adequately represent our university at National and international competitions.

1. Flash mob "Healthy youth – healthy society" with KATRU students

<https://kazatu.edu.kz/en/news/salauatty-zastar-salauatty-kogam-atty-flesmob-tti>

2. Mini-football competition "SU football league"

<https://kazatu.edu.kz/en/news/su-football-league-mini-futboldan-zarysy>

3. A chess tournament was held among veterans and students of Seifullin University

<https://kazatu.edu.kz/en/news/prosel-turnir-po-sahmatam-sredi-veteranov-i-studentov-seifullin-universiteta>

4. We invite to the chess tournament

<https://kazatu.edu.kz/en/news/sahmattan-turnirge-sakyramyz>

5. Ali Rasileoglu became the jiu-jitsu champion

<https://kazatu.edu.kz/en/news/dziu-dzitsudan-bizdi-cempion>

6. A master class in table tennis was held at the University

<https://kazatu.edu.kz/en/news/stel-tennis-seberlik-synyby-tti>

7. At the chess master class, young people learned to use a new approach

<https://kazatu.edu.kz/en/news/sahmattan-seberlik-synybynda-zastar-ty-tsil-jrendi>

8. Master class on belt wrestling

<https://kazatu.edu.kz/en/news/belbeu-kresinen-seberlik-sagaty>

9. At the European Judo cup Abeuova Tolganay took the 2nd place

<https://kazatu.edu.kz/en/news/dzudodan-europa-kubogynda-bizdi-beuova-tolganaj-2-orynga-ie-boldy>

10. A solemn meeting dedicated to the Day of Science Workers

<https://kazatu.edu.kz/en/news/torzestvennoe-sobranie-posvasennoe-dnu-rabotnikov-nauki>

11. Boxing Master class

<https://kazatu.edu.kz/en/news/boks-bojynsa-seberlik-sagaty>

12. A basketball master class was held at Seifulin University

https://kazatu.edu.kz/en/news/master-klass-po-basketbolu_20230412102035

13. We took the honorable 2nd place in Kazakh kuresi

<https://kazatu.edu.kz/en/news/my-zanali-pocetnoe-2-mesto-po-kazak-kresi>

14. Table tennis champions: congratulations to our athletes!

<https://kazatu.edu.kz/en/news/stel-tennisenen-studenttik-sporttyk-ligada-universitet-studentteri-top-zardy>

15. We took 1st place in the pankration competition

<https://kazatu.edu.kz/en/news/my-oderzali-pobedu-v-sorevnovaniah-po-pankrationu>

16. Student of KATU-bronze medalist of Asian Championship!

<https://kazatu.edu.kz/en/news/kazatu-studenti-azia-cempionatyny-kola-zldegeri>

SDG 3 publications for 2023

1	Principal component analysis in the epidemiology of diarrhoea in calves	Indonesian Journal of Electrical Engineering and Computer Science Vol.30, № 3, P. 1762 - 1770 June 2023	Kadyrov, Ablaihan Ussenbayev, Altay Kurenkeyeva, Dariyash Kurenkey, Berdaly Abdrakhmanov, Sarsenbay Tashatov, Nurlan	DOI 10.11591/ijeecs.v30.i3.pp1762-1770 SDG 3
2	Detection of heart pathology using deep learning methods	International Journal of Electrical and Computer Engineering Vol.13, № 6, P. 6673 – 6680, 2023	Naizagarayeva, Akgul Abdikerimova, Gulzira Shaikhanova, Aigul Glazyrina, Natalya Bekmagambetova, Gulmira Mutovina, Natalya	DOI 10.11591/ijece.v13i6.pp6673-6680 SDG 3

			Yerzhan, Assel Tanirbergenov, Adilbek	
3	Detection of chest pathologies using autocorrelation functions	International Journal of Electrical and Computer Engineering Vol.13, № 4, P. 4526 - 4534 August 2023	Abdikerimova, Gulzira Shekerbek, Ainur Tulenbayev, Murat Beglerova, Svetlana Zakharevich, Elena Bekmagambetova, Gulmira Manbetova, Zhanat Baibulova, Makbal	DOI 10.11591/ijece.v13i4.pp4526-4534 SDG 3
4	Digitization and social response of SMEs to the COVID-19 pandemic	E3S Web of Conferences Vol.3956 June 2023 Article № 050022023 International Scientific and Practical Conference on Ensuring the Technological Sovereignty of the Agro-Industrial Complex: Approaches, Problems, Solutions, ETSAIC 2023 Yekaterinburg City 16 February 2023 Код 189216	Dyussebayeva, Lazzat Urazmagambetova, Eleanora Rakisheva, Zura	DOI 10.1051/e3sconf/202339505002 SDG 3,8, 17
5	Dynamic variations in COVID-19 with the SARS-CoV-2 Omicron variant in Kazakhstan and Pakistan	Infectious Diseases of Poverty Открытый доступ Vol.12, № 1 December 2023 Article № 18	Cui, Qianqian Shi, Zhengli Yimamaidi, Duman Hu, Ben Zhang, Zhuo Saqib, Muhammad Zohaib, Ali Gulnara, Baikadamova Yersyn, Mukhanbetkaliyev Hu, Zengyun Li, Shizhu	DOI 10.1186/s40249-023-01072-5 SDG 3, 17
6	Molecular epidemiological study of animal rabies in Kazakhstan	Journal of Integrative Agriculture Vol. 22, № 4, P. 1266 - 1275 April 2023	YESSEMBEKOVA, Gulzhan N. XIAO, Shuang ABENOV, Assem KARIBAEV, Talgat SHEVTSOV, Alexandr ASYLULAN, Amirgazin MUKHANBETKALIYEV, Yersyn Y. SHUAI, Lei BU, Zhi-gao ABDRAKHMANOV, Sarsenbay K.	DOI 10.1016/j.jia.2022.11.011 SDG 3, 17

7	Insights into the Molecular Epidemiology of Foot-and-Mouth Disease Virus in Russia, Kazakhstan, and Mongolia in Terms of O/ME-SA/Ind-2001e Sublineage Expansion	Viruses Vol. 15, № 3 March 2023 Номер статьи 598	Nikiforov, Viktor Shcherbakov, Alexey Chvala, Ilya Kremenchugskaya, Svetlana Mayorova, Tamara Timina, Anna Tyulegenov, Samat Abdrakhmanov, Sarsenbay Berdikulov, Maksat Sainnokhoi, Tserenchimed Gombo-Ochir, Delgerzul	DOI 10.3390/v15030598 SDG 3, 17
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SDG 4 "Quality education" considers education as the main way to overcome inequality and considers the education of people throughout their lives.

S.Seifullin Kazakh Agrotechnical Research University offers 141 training programs (OP) to students, including 4 conscientious OP, 6 double-degree OP, 3 innovative, 1 interdisciplinary. 57 OP – bachelor's degree, 51 OP – Master's degree, 33 OP – doctoral degree. Our students study 75 disciplines in production conditions. The bases for production practice are more than 200 companies of various industries, large agricultural enterprises.

SDG 4 publications for 2023

1	Research on the Development of a Proctoring System for Conducting Online Exams in Kazakhstan	Computation Vol. 11, № 6 June 2023 Article № 120	Nurpeisova, Ardak Shaushenova, Anargul Mutalova, Zhazira Ongarbayeva, Maral Niyazbekova, Shakizada Bekenova, Anargul Zhumaliyeva, Lyazzat Zhumasseitova, Samal	DOI 10.3390/computation11060120 SDG 4
2	Technology of Interaction Between School and Family in	American Behavioral Scientist 2023	Ansabayeva, Ainur Mailybaeva, Gulmira Utegulov, Daniyar	https://doi.org/10.1177/00027642231192019 SDG 4

	the Education of Primary School Age Children		Temerbayeva, Zhanna Nugmanova, Farida	
3	The role of Green Media in solving environmental problems in the Republic of Kazakhstan	Rivista di Studi sulla Sostenibilita Vol. 13, № 1, P. 183 – 1972023	Khamzina, Sholpan Sh. Satybaldiyeva, Gulmira K. Boribay, Elmira S. Ussubaliyeva, Saltanat D. Kildibekova, Bibigul E. Esengaraeva, Gulmira E.	DOI 10.3280/RISS2023-001-S1012 SDG 4,8, 12,17
4	The Educational Use of YouTube Videos in Communication Fluency Development in English: Digital Learning and Oral Skills in Secondary Education	International Journal of Education in Mathematics, Science and Technology Vol. 11, № 1, P. 198 - 2212023	Toleuzhan, Akbota Sarzhanova, Galiya Romanenko, Svetlana Uteubayeva, Elmira Karbozova, Gulnara	DOI 10.46328/ijemst.2983 SDG 4,9, 17
5	Directions and prospects of the development of educational services in conditions of energy transformation: The aspect of the coal industry	Polityka Energetyczna Vol. 26, № 2, P. 195 - 2162023	Polyanska, Alla Pazynich, Yuliya Sabyrova, Madina Verbovska, Lesya	DOI 10.33223/epj/162054 SDG 4, 17
6	Developing Educational Content for Distance Learning Purposes Using Mobile Technologies and Optimized Filmmaking Models	Lecture Notes on Data Engineering and Communications Technologies Vol. 158, P. 964 - 9732023	Aidarbekov, Aidiye Murzabekova, Gulden Abdyrov, Aitzhan Tashkenbayeva, Zhuldyz Shalkar, Alnur	DOI 10.1007/978-3-031-24475-9_79 SDG 4, 17



Gender equality is not only one of the basic human rights, but also a necessary foundation for achieving peace, prosperity and sustainable development. It has been proven that the involvement of women in society ensures increased productivity and economic growth.

S.Seifullin Kazakh Agrotechnical Research University believes that it is extremely important to end gender-based violence in all its manifestations, ensure equal access for women and girls, men and boys to education, health care, economic resources and create equal opportunities for all citizens, regardless of gender. Our University provides equal rights to all employees and students, regardless of gender. This applies to all spheres of life, from wages to the provision of any social benefits.



Our University is training personnel under the program "Aquaculture and aquatic bioresources". This is also a sought-after specialty, because aquaculture and large-scale production of commercial fish are being revived in the country.

Together with the Warsaw University of Natural Sciences, the Swedish University of Agricultural Sciences and Lund University, we have launched a unique educational program on rational water resources management. «The Water Diplomacy» program has already been included in the list of educational programs in Kazakhstan.

1	Responses of soil fauna community under changing environmental conditions	Journal of Arid Land Vol.15, № 5, P. 620 – 636 May 2023	Kudureti, Ayijiamali Zhao, Shuai Zhakyp, Dina Tian, Changyan	https://link.springer.com/article/10.1007/s40333-023-0009-4 SDG 6, 13,15
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The SDG 7 is aimed at solving the problems of energy poverty, economic accessibility of energy resources, as well as ensuring sustainable energy development. Fossil fuels emit carbon dioxide, nitrogen dioxide, sulfur dioxide and carbon monoxide, which can have a very negative impact on our environment and exacerbate climate change. In 2018, the Department of Electrical Equipment Operation of the Faculty of Energy of the S.Seifullin Kazakh Agrotechnical Research University installed a 2 kW wind generator and an autonomous solar power plant on the territory of the main campus in Astana. There is a wind and solar power plant on the territory of the subsidiary in the village of Baraev.

The profitability of our investments in solar panels amounted to 16.03% per annum, taking into account our electricity tariff.

As part of the grant funding, the University carried out the following projects:

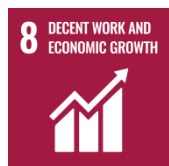
1. Introduction of a resource-saving heat supply system for the energy-efficient functioning of decentralized objects.
2. Development of innovative technologies to improve the efficiency of power supply of electric receivers with a voltage of up to 1000 V for mining enterprises
3. Development of innovative technologies to improve the efficiency of work of own needs with a voltage of 6 kV for power plants
4. Improving the quality of the wool processing process on multi-process carding machines with a deeply adjustable, resource- and energy-saving asynchronous electric drive



SDG 7 publications for 2023

1	Application of generating units based on renewable energy sources for damping oscillations in the power system	Energy Reports Vol.9, P. 302 - 311 September 2023	Ufa, Ruslan A. Rudnik, Vladimir E. Sarsikeyev, Yermek Zh. Malkova, Yana Yu. Ansabekova, Gulbakyt N.	DOI 10.1016/j.egy.2023.05.269 SDG 7
2	Research of the parameters of a solar battery of composition materials for spacecraft	Proceedings - 2023 17th International Conference on Electronics Computer and Computation, ICECCO 2023 2023 17th International Conference on Electronics Computer and Computation, ICECCO 2023 Kaskelen 1 June 2023 до 2 June 2023 Код 189431	Zhakupova A. Ramazanova, Zh. Zamalitinova M. Kovalenko M. Turekhan D.	DOI 10.1109/ICECCO58239.2023.10147132 SDG 7
3	Shaping Energy-Saving Behavior in Education System: A Systematic Review	International Journal of Energy Economics and Policy Vol.13, № 4, P. 46 - 609 July 2023	Irmak, Alettin Kurmanov, Nurlan Zhadigerova, Onaikhan Turdiyeva, Zukhra Bakirbekova, Aigul Saimagambetova, Gaukhar Baidakov, Assilbek Mukhamejanova, Aigul Tolysbayeva, Madina Seitzhanov, Sagyngali	DOI 10.32479/ijeep.14366 SDG 7
4	Variable-speed drive with series-excited motors in dynamic braking mode	Eksploatacja i Niezawodnosc Vol. 25, № 12023	Kenessova, Perizat Kaverin, Vladimir Tatkeyeva, Galiya	DOI 10.17531/ein.2023.1.9 SDG 7
5	DEVELOPMENT OF A VORTEX WIND DEVICE	Eastern-European Journal of Enterprise Technologies Vol. 1, № 8(121), P. 22 - 29 2023	Koshumbaev, Marat Issenov, Sultanbek Iskakov, Ruslan Bulatbayeva, Yuliya	DOI 10.15587/1729-4061.2023.274199 SDG 7
6	Technologies for the Rational Use of Animal Waste: A Review	Sustainability (Switzerland) Vol. 15, № 3 February 2023 Номер статьи 2278	Iskakov, Ruslan Sugirbay, Adilet	DOI 10.3390/su15032278 SDG 7, 12
7	Harnessing	International Journal of Design and Nature and	Oshergina, Irina	DOI

	Heterogeneity: Clustering Kazakh Spring Rapeseed for Breeding Value	Ecodynamics Vol.18, № 5, P. 1087 - 1095October 2023	Ten, Evgeniy	10.18280/ijdne.180509 SDG 7, 17
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S.Seifullin Kazakh Agrotechnical Research University promotes progressive, inclusive and sustainable economic growth, full and productive employment and decent work for all.

According to the Legislation of the Republic of Kazakhstan ("Labor Code of the Republic of Kazakhstan", <https://adilet.zan.kz/rus/docs/K1500000414>) minimum labor standards have been approved, such as: - minimum monthly wage,

- duration of daily work (work shift),
- paid annual work leave.

In accordance with the legislation of the Republic of Kazakhstan, KATRU ensures compliance with minimum social standards at the expense of its own funds and other sources that do not contradict the legislation of the Republic of Kazakhstan.

The minimum monthly salary is set annually for the corresponding financial year by the Law of the Republic of Kazakhstan on the republican budget.

There is a trade union committee in KATRU (<https://kazatu.edu.kz/en/pages/universitet/profsouz>), who represents and protects the labor, as well as other socio-economic rights and interests of the team members.

Every year, a fair of local agricultural producers is held in KATRU. Our university provides an opportunity for farmers to present their organic products to employees of KATRU and residents of the surrounding areas.

<https://kazatu.edu.kz/en/news/berekeli-zrmeke>

SDG 8 publications for 2023

1	Organic and biofertilizers effects on the Rhizosphere	Sabrao Journal of Breeding and Genetics Vol.55, № 3, P. 972 – 983, 2023	Makenova M. Nauanova A. Aidarkhanova G.	DOI 10.54910/sabrao2023.55.3.31 SDG 8
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	microbiome and spring barley productivity in Northern Kazakhstan		Ospanova S. Bostubayeva M. Sultangazina G. Turgut B.	
2	Organization of an Architectural Environment Based on Spatial and Constructive Modules in a Severely Continental Climate	Civil Engineering and Architecture Vol. 11, № 2, P. 733 - 740Mar, 2023	Kornilova, Alla, Mamedov, Seimur Etibar Ogly Karabayev, Gani Khorovetskaya, Yevgeniya Shlyakhtich, Yelena	https://www.hrpub.org/journals/article_info.php?aid=12854 SDG 8,11,15, 17
3	Land Areas Management for Development of Tourism Different Types	Journal of Environmental Management and Tourism Vol.14, № 4, P. 1962 - 1971Summer 2023	Shaimerdenova, Aigul Nurpeissov, Madi Akhmetova, Kamshat Garkushina, Valentina	DOI 10.14505/jemt.v14.4(68).08 SDG 8,12,15
4	Assessment of Forest Ecosystem Services in Burabay National Park, Kazakhstan: A Case Study	Sustainability (Switzerland) Vol. 15, № 5March 2023 Номер статьи 4123	Kitaibekova, Sara Toktassynov, Zhailau Sarsekova, Dani Mohammadi Limaei, Soleiman Zhilkibayeva, Elmira	DOI 10.3390/su15054123 SDG 8,12,15,17
5	Competitiveness of Milk Production. New Perspectives for Developing a New Direction in Tourism: Dairy Tourism	Journal of Environmental Management and Tourism Vol. 14, № 2, P. 369 - 378Spring 2023	Yernazarova, Anar Alyonova, Karlygash Anafiyayeva, Zhibek Nukesheva, Anar Daribayeva, Adaskhan Kizimbayeva, Azhar	DOI 10.14505/jemt.v14.2(66).07 SDG 8,12,17
6	Effectiveness of Microbial Biofertilisers in Oilseed Flax Cultivation Technologies in the Conditions of Northern Kazakhstan	International Journal of Design and Nature and Ecodynamics Vol. 18, № 2, P. 385 - 393April 2023	Shumenova, Nazymgul Nauanova, Ainash Tleppayeva, Aigul Ospanova, Saule Beknova, Sholpan	DOI 10.18280/ijdne.180216 SDG 8,17

7	Digitization and social response of SMEs to the COVID-19 pandemic	E3S Web of Conferences Vol.3956 June 2023 Article № 050022023 International Scientific and Practical Conference on Ensuring the Technological Sovereignty of the Agro-Industrial Complex: Approaches, Problems, Solutions, ETSAIC 2023 Yekaterinburg City 16 February 2023 Код 189216	Dyussebayeva, Lazzat Urazmagambetova, Eleanora Rakisheva, Zura	DOI 10.1051/e3sconf/202339505002 SDG 3,8, 17
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Industrialization is an important engine of economic growth and a creator of new jobs. In addition to a stable infrastructure, it should be based on research, innovation and technological progress.

Our university is guided by the principle of practice-oriented education. KATRU uses an interdisciplinary approach in the development of educational programs, and takes into account the current requirements of employers.

During the academic year, 75 disciplines with elements of dual education were organized. Depending on the capabilities of enterprises, the topics of educational programs, practical classes were completely transferred to the base of enterprises, with the involvement of specialists from production, or classes were conducted by university teachers using the equipment of enterprises. Practical classes were also organized at enterprises in accordance with syllabus topics (6-10 hours). The leading enterprises of Astana were involved in the framework of dual training. Field classes on the university's motor transport to the university's subsidiary were organized for the students of the Faculty of Agronomy - Baraev Subsidiary. The University has concluded 38 contracts with large enterprises and organizations for the use of their bases for conducting classes within the framework of dual education.

Special attention is paid to the organization of professional practices. Types of professional practices provided for by the university's educational programs: academic, industrial and pre-graduate.

The bases of practices are enterprises (organizations) of various branches of production, various forms of ownership and organizational and legal forms, structural divisions of the University, laboratories, research centers with the necessary qualification personnel and scientific and technical potential, corresponding to their material, technical and

information base and other conditions for the implementation of the internship program for students, who have concluded agreements with the university (including contracts of strategic partnerships).

In 2023, 1154 agreements were concluded, of which 490 were collective agreements.

The number of foreign practice programs is -2 ("Logo e.v", "Deula-Nienburg").

When concluding contracts for professional practices, the university prioritizes large enterprises with modern equipment and technologies. The departments are also working on expanding their practice bases. The department pays great attention to the employment of students during their internships. The number of jobs provided to students during the internship in 2023 amounted to 112. The number of employed graduates at the practice bases is 150 people.

The following laboratories are equipped for conducting educational practices at the University <https://kazatu.edu.kz/en/pages/nauka/naucnye-centry-i-instituty>:

- GIS Center
- Laboratory of Soil Research
- System research
- Information technology
- Laboratory of technical measurements
- Laboratory for assessing the quality of agricultural products
- Laboratory of Standardization, Metrology and Certification
- Scientific and experimental platform "Processing of agricultural products".
- Research platform for agricultural biotechnology;

Educational practices for students of 1-2 courses are also organized on the basis of BIO-KATU LLP.



SDG 9 publications for 2023

1	Features of the Social Infrastructure Formation of Astana City	Civil Engineering and Architecture Vol.11, № 3, P. 1234 - 1244 May 2023	Sarsembayeva Dinara Kornilova Alla Zhaksylykova Lailya Kiseleva Tatyana	DOI 10.13189/cea.2023.110309 SDG 9
2	Manufacture of Lightweight Stamped Ball Plugs with Surface Hardening	Russian Engineering Research Vol. 43, № 1, P. 60 - 64 January 2023	Gulyarenko A.A. Smakovskiy M.S. Lobov V.A. Remshev, E. Yu. Frolova E.O.	DOI 10.3103/S1068798X23020144 SDG 9
3	Optimization of the protein product formulation based on safflower production waste	BIO Web of Conferences Vol.6428 July 2023 Article № 010182023 Innovative Solutions for the Development of the Industry, Agro-Bio-Technologies 2023 Kaliningrad 5 May 2023 Код 194605	Tultabayev, Mukhtar Zhumanova, Dametken	DOI 10.1051/bioconf/20236401018 SDG 9, 12



The sustainable future we want for everyone presupposes the availability of urban infrastructure designed for all segments of the population, adequate energy supply, an efficient transport system and many other aspects of urbanization. At the same time, it is extremely important to increase the resilience and safety of cities in order to avoid human, social and economic losses.

Main Campus: The total area of the territory $S= 9.45$ hectares. The area of all land plots is represented according to the cadastral number. The main building is located in the old center of the capital of Kazakhstan

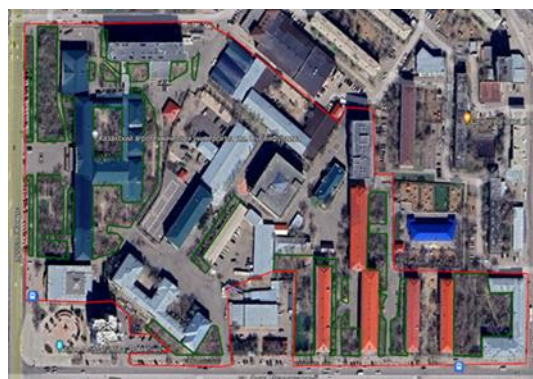
- Astana. The address is 62, Zhenis Avenue. The University campus includes the main building, the biological building, the building of the Faculty of Agronomy, the building of the military department, the building of the Faculty of Land Management, Architecture and Design, student dormitories, a sports complex

Subsidiary - Scientific and production center of grain economy named after A.Barayev: The total area of the territory $S=5,601$ hectares. The area of all land plots is represented according to the cadastral number. The territory of the village of Nauchny entered. The A.I. Barayev Scientific and Production Center of grain Farming is a major scientific center of the Republic of Kazakhstan in the field of agriculture and crop production. The Center has long-term hospitals for crop rotations, tillage, fertilizers, plant protection, conducts research on agricultural techniques for cultivating various crops, which allows monitoring changes in soil fertility, yield formation and product quality, and offering new more advanced cultivation technologies. Research is also being conducted in the direction of the development of organic farming.

Subsidiary - North Kazakhstan agricultural experimental station: The total area of the territory $S= 25,698$ hectares. The area of all land plots is represented according to the cadastral number. The territories of the settlements of Shagalaly, Yuzhny, and Steppe were included. North Kazakhstan Agricultural Research Center conducts scientific research in the field of agriculture in relation to the conditions of the North Kazakhstan region for the selection and seed production of agricultural crops and introduces them into production. The station has the status of an elite seed farm.

KATRU Educational and laboratory building, 40-bed Dormitory in Shchuchinsk city. The total area of the territory $S=320000 \text{ m}^2$. The area of all land plots is represented according to the cadastral number. The territory includes an arboretum, in which more than 800 species of plants grow.

Educational facilities of the Faculty of Veterinary Medicine and Animal Husbandry Technology. The educational facility of the Faculty of Veterinary Medicine and Animal Husbandry Technology is located in the residential area "International" of Astana city. Total area of 61300 m^2 . The equestrian section "Aktanger" is organized on the basis of this educational facility.



Main campus, planted vegetation area= $21\,195 \text{ m}^2$



Subsidiary, planted vegetation area = $256\,935.292 \text{ m}^2$

SDG 11 publications for 2023

1	Assessment of the degree of landscaping in Astana, Kazakhstan and recommendations for its development	Caspian Journal of Environmental Sciences Vol.21, № 3, P. 585 - 594 July 2023	Ospangaliyev, Askhat Sarsekova, Dani Mazarzhanova, Kuralay Dosmanbetov, Daniyar Kopabayeva, Arailym Obezinskaya, Evelina Nurlabi, Ainur Mukanov, Bolat	DOI 10.22124/CJES.2023.6937 SDG 11, 17
2	Factors Limiting Radial Growth of Conifers on Their Semiarid Borders	Biology Vol. 12, № 4 April 2023 Номер статьи 604	Mapitov, Nariman B. Belokopytova, Liliانا V. Zhirnova, Dina F. Abilova, Sholpan B.	DOI 10.3390/biology12040604 SDG 11, 17

	across Kazakhstan		Ualiyeva, Rimma M. Bitkeyeva, Aliya A. Babushkina, Elena A. Vaganov, Eugene A.	
3	Prospects for the Development of University Campuses Integrated into Urban Environment in Russia and Kazakhstan	Civil Engineering and Architecture Vol.11, № 6, P. 3347 - 3354 Nov 2023	Gladilina, Irina Sergeeva, Svetlana Deputatova, Nataly Skvortsova, Marina Bereznyakovskiy, Vladimir Silaeva, Anna Karabayev, Gani Mamedov, Seimur	DOI 10.13189/cea.2023.110610 SDG 11, 17
4	Identification of promising types of shrubs suitable for introduction in Astana, Kazakhstan	Caspian Journal of Environmental Sciences Vol.21, № 4, P. 955 - 963 October 2023	Sarsekova D. Mukhtubayeva S. Shaldybayeva A.	DOI 10.22124/cjes.2023.7154 SDG 11, 17
5	Modern Classification of Mixed-use Residential Complexes	Civil Engineering and Architecture Открытый доступ Vol.11, № 5, P. 2533 - 2542 Sep, 2023	Baidrakhmanova, Meruyert Mamedov, Seimur Karabayev, Gani	DOI 10.13189/cea.2023.110521 SDG 11, 17
6	Architecture and Planning of Residential Complexes in Kazakhstan	ISVS e-journal Vol.10, № 8, P. 213 - 222 August 2023	Amirbekova, Aidana Karabayev, Gani Mamedov, Seimur	DOI 10.61275/ISVSej-2023-10-08-15 SDG 11, 17
7	Innovative Use of Household Plastic Waste in the Production of Paving Slabs: Results of An Experiment	ISVS e-journal Vol.10, № 8, P. 331 - 344 August 2023	Zhaparova, Sayagul B. Bayazitova, Zulfiya E. Bekpergenova, Zhuldyzay B. Zhanshuakova, Raushan M. Zhanienov, Didar B.	DOI 10.61275/ISVSej-2023-10-08-22 SDG 11, 12, 17
8	The driving forces of changes in land use of a Peri-urban area:	E3S Web of Conferences Vol. 38612 May 2023 Номер статьи 050132022 Annual International Scientific	Alipbeki O. Alipbekova Ch. Mussaif G.	DOI 10.1051/e3sconf/202338605013

	the case of Tselinograd district, Kazakhstan	Conferences: GIS in Central Asia, GISCA 2022 and Geoinformatics, GI 2022, "Designing the Geospatial Ecosystem" Tashkent 23 May 2022 до 27 May 2022 Код 188641	Mineyev N. Aliyev M. Akhmetov B. Turegeldiyeva R.	SDG 11, 15, 17
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SDG 12 publications for 2023

	Use of Acidithiobacillus ferrooxidans for Decontamination of Explosive Waste from Oil Refineries	Journal of Ecological Engineering Vol. 24, № 7, P. 19 - 242023	Issayeva, Akmaral Syzdykova, Marzhan Akhmet, Ainagul Bakhov, Zhumabek Ospanova, Zhanna Chingisbayev, Bakhytzhan Kamalova, Manzura Karimova, Saulet	DOI 10.12911/22998993/163250 SDG 12
	Use of Acidithiobacillus ferrooxidans for Decontamination of Explosive Waste from Oil Refineries	Journal of Ecological Engineering Vol. 24, № 7, P. 19 - 242023	Issayeva, Akmaral Syzdykova, Marzhan Akhmet, Ainagul Bakhov, Zhumabek Ospanova, Zhanna Chingisbayev, Bakhytzhan Kamalova, Manzura Karimova, Saulet	DOI 10.12911/22998993/163250 SDG 12



In 2023, a number of events were held within the framework of SDG 13.

<https://kazatu.edu.kz/en/news/kazatzu-bdb-fao-zne-lybritaniany-kazakstandagy-elsiligi-klimatty-zgeru-kaupi-mselesimen-kresu-sin-ks-biriktiredi> - KATRU, UNDP, FAO, and the British Embassy host: "Kazakhstan Student Dialogue: Nurturing SDG Solutions" (<https://kazatu.edu.kz/en/news/1>, <https://kazatu.edu.kz/en/news/komanda-ekosistemnyj-renessans-studentov-kazatiu-razrabotala-idei-ob-innovacionnoj-gorodskoj-srede-k-meropriatiu-28-noabra> , <https://kazatu.edu.kz/en/news/28-karasada-klimtty-zgerisi-turaly-sejfullin-universitetini-studentteri-sz-alady>, <https://kazatu.edu.kz/en/news/katru-hosts-students-dialogue-on-climate-with-the-support-of-undp-fao-and-british-embassy>



KATRU implements programs in the field of ecology, as well as studies of the terrestrial ecosystem in order to further protect and restore it.

<https://kazatu.edu.kz/en/edu-program/landsaftnyj-dizajn-i-ozelenenie>

<https://kazatu.edu.kz/en/edu-program/agroekologia>

<https://kazatu.edu.kz/en/edu-program/ekologia>

<https://kazatu.edu.kz/en/edu-program/lesnye-resursy-i-lesovodstvo>

<https://kazatu.edu.kz/en/edu-program/racionalnoe-ispolzovanie-prirodnih-bioresursov>

<https://kazatu.edu.kz/en/edu-program/ustojcivoe-upravlenie-lesnymi-resursami>

<https://kazatu.edu.kz/en/edu-program/ustojcivoe-upravlenie-prirodnymi-resursami>

Our University carries out joint research and pilot projects aimed at developing new technologies and methods to achieve the SDGs. Here are some of the university's projects and programs: "Development of new technologies for organic production and processing of agricultural products", "Study of the impact of state policy in the agricultural sector on the development of cooperative processes in the agro-industrial complex, sustainable rural development and food security", "formation of the necessary reference database for training farm and peasant farm workers and transfer of digital knowledge to students", "Technology development, ensuring the preservation and improvement of

the quality of agricultural raw materials and products of its processing in order to reduce losses in various storage methods" <https://kazatu.edu.kz/en/pages/nauka/naucnye-proekty-i-programmy>

A number of events have also been held:

- On 26-27.12.2023 a meeting with FAO expert PhD Dr. Galerius Pašakarnis was held.
- Presentation of FAO project in Kazakhstan by land tenure specialist with Mr. Maxim Gorgan (FAO Regional Representation for Europe and Central Asia) was held.
- On 23-24.11.2023 Makenova S.K., Toleubekova J.Z., Tursynbaev N.A., Kurmanova G.K. were participants of the national seminar within the framework of FAO project “Promotion of agricultural land markets and support to the development of small family farms”.
- The project “Molecular SNP marking of soft wheat for TaGW, TaGS and Rht genes for large grain size and lodging resistance” is being implemented, related to the sustainable development of the agro-industrial complex, in particular, increasing the productivity of spring soft wheat varieties, within the framework of which bioinformatics analysis and primer design are carried out using the following programs: UniproUGENE, CLCSequenceViewer 8 and NCBI and CerealsDB databases. The results of the scientific project are published in the journal “International Journal of Design & Nature and Ecodynamics Vol. 19, No. 3, June, 2024, pp. 859-873, <https://www.iieta.org/journals/ijdne/paper/10.18280/ijdne.190316>

SDG 15 publications for 2023

	Generalized Dermatophytosis of Combined Etiology in a Circus Tiger (<i>Panthera Tigris Altaica</i>)	International Journal of Veterinary Science Vol.12, № 1, P. 139 - 1431 November 2023	Kukhar, Yelena Smagulova, Ainura Kiyani, Vladimir	DOI 10.47278/journal.ijvs/2022.159a SDG 15
	Grazing-induced cattle behaviour modulates the secondary production in a Eurasian steppe ecosystem	Science of the Total Environment Vol.8891 September 2023 Article № 164191	Hou, Lulu Xin, Xiaoping Sun, Haixia Tao, Yi Chen, Jiquan Yan, Ruirui Zhang, Xiang Shen, Beibei Altome, Ahmed Ibrahim Ahmed	https://doi.org/10.1016/j.scitotenv.2023.164191 SDG 15

			Hamed, Yousif Mohamed Zainelabdeen Wang, Xu Nurlan, Serekpaev	
	In Vitro Fertilization in Kazakh Whiteheaded Cattle: A Comparative Study	Life Vol.13, № 8 August 2023 Article № 1632	Seisenov, Bolat Duimbayev, Dulat Kazhgaliyev, Nurlybay Abdrakhmanov, Talgat Tegza, Alexandra Abeldinov, Rustem Burambayeva, Nadezhda Temirzhanova, Alma Tegza, Ivan Kemeshev, Zhomart Zhanabayev, Assylbek Akhmetbekov, Nurbolat	DOI 10.3390/life13081632 SDG 15
	Assessing Pine Forest Restoration Post-Fire Using NDVI and GIS Technologies	International Journal of Design and Nature and Ecodynamics Vol.18, № 6, P. 1459 – 1467 December 2023	Sagynbayeva, Ainur Mambetov, Bulkair Kalachev, Andrey Boranbay, Zhumagul Borissenko, Yelena Baigazakova, Zhadyra Turlybekov, Karshyga	https://www.iieta.org/journals/ijdne/paper/10.18280/ijdne.180620 SDG 15
	Use of Remote Sensing Data for Environmental Monitoring of Desertification	Evergreen Vol. 10, № 1, P. 300 - 307 March 2023	Yussupov, Alibek Suleimenova, Raya Z.	DOI 10.5109/6781080 SDG 15
	Relationship between Laboratory Germination and Biometric Parameters of Betula jarmolenkoana Golosk. Aglets	OnLine Journal of Biological Sciences Vol. 23, № 1, P. 117 - 123 2023	Rakymbekov, Zhandos Abayeva, Kurmankul Dosmanbetov, Daniyar Akhmetov, Ruslan Shynybekov, Murat	DOI 10.3844/ojbsci.2023.117.123 SDG 15,17



S.Seifullin Kazakh Agrotechnical Research University actively supports global initiatives aimed at achieving Sustainable Development Goals.

Sustainable development is the responsibility of every part of society around the world. It cannot be achieved without interconnections between goals, as well as between institutions, Governments, organizations, regional non-governmental organizations and people. The Sustainable Development Goals can be achieved only if all partners work together to implement them.

KATRU has a Research Center for Environmental Sustainability, which is a structural scientific unit that organizes and coordinates the development of fundamental and applied research in the field of green technologies, environmentally sustainable and low-carbon development, including in the agricultural sector.

<https://kazatu.edu.kz/en/pages/universitet/ustojcivoe-razvitie-katiu>

Cooperation within the framework of sustainable development:

- In February 2023, the delegation of KATRU paid an official visit to the Peoples' Friendship University of Russia, in particular the Agrarian and Technological Institute, which is a structural unit of the Peoples' Friendship University of Russia. The parties reached an agreement on the establishment and opening of the International Competence Center "Green Technologies for Sustainable Development" for the purpose of conducting scientific research, transfer and exchange of knowledge on green technologies for sustainable development and other important projects.

<https://kazatu.edu.kz/en/news/rudn-men-kazatzu-arasynnda-bajlanys-o-ntizelerge-zetelejdi>

- In March 2023, a Memorandum of cooperation was signed between KATRU and Tashkent State Agrarian University. The purpose of the Memorandum is to strengthen cooperation and establish partnerships between universities in the field of higher education, science and sustainable development.

<https://kazatu.edu.kz/en/news/podpisan-memorandum-o-sotrudnicestve>

- In April 2023, an official delegation from the Northwestern University of Agriculture and Forestry (NWA&F University) visited our university. The delegation included Deputy Director of the International Department of NWA&F University Zou Yufeng, Professor of the Faculty of Agronomy of NWA&F University Zhang Zhengmao, Professor Hu Yinggang,

Dean of the Faculty of Agronomy of NWA&F University Shang Weixin, Dean of the Faculty of Soils and Water Conservation of NWA&F University, Professor Feng Hao and Dean of the Faculty of Food Sciences and Engineering of NWA&F University, Professor Lu Xin. <https://kazatu.edu.kz/en/news/sejfullin-universitetine-kytajdy-soltstik-batys-auyl-saruasylygy-zne-orman-saruasylygy-universitetini-nwa-f-university-resmi-delegaciasy-keldi>

- Friendly visit of the Chinese delegation from Shandong Province. As a result of the visit of the delegation of the government of Shandong Province, the S.Seifullin Kazakh Agrotechnical Research University solemnly signed a memorandum of cooperation with the Shisen Corporation in the field of potato growing.

<https://kazatu.edu.kz/en/news/kytajdy-san-dun-provinciasy-kimeti-delegaciasyny-sejfullin-universitetine-dostyk-sapary>

- In November 2023, KATRU, UNDP, FAO and the British Embassy held the "Kazakhstan Student Dialogue: Finding solutions to the SDGs". Among those present were British Ambassador to Kazakhstan Katie Leach and Portuguese Ambassador to Kazakhstan Maria de Fatima Mendes, as well as representatives of the United Nations Development Programme (UNDP), the Food and Agriculture Organization of the United Nations (FAO), the European Bank for Reconstruction and Development EBRD, the Ministry of Ecology of Kazakhstan, a network of organizations for developing solutions that contribute to sustainable development SDSN Kazakhstan, and other organizations. Representatives of various NGOs, climate experts, as well as hundreds of students, researchers and families attended the event and watched the presentation of the students' work. Three student teams of KATRU shared the results of their research and conclusions about the various effects of climate change on the economy and society. They presented the results of their fundamental research in this area in the form of statistical data and infographics. According to the results, the first place was taken by the Food Fighters team, the second place was taken by the Ecosystem Renaissance, and the third place was taken by the Guardians of Nature. <https://kazatu.edu.kz/en/news/kazatzu-bdb-fao-zne-lybritaniany-kazakstandagy-elsiligi-klimatty-zgeru-kaupi-mselesimen-kresu-sin-ks-biriktiredi>

Conferences:

- On August 25, 2023, together with the National Academy of Sciences of the Republic of Kazakhstan, a forum of young scientists on priority areas of science development "Sustainable development of the agro-industrial complex and safety of agricultural products", "Rational use of water resources, flora and fauna, ecology" and "Scientific research in the field of natural sciences" was held at our University.

- Jointly with the Peoples' Friendship University of Russia. Patrice Lumumba (Russia) the international conference "Food Safety and Quality" was held, where world-famous scientists, professors, experts, ministers and parliamentarians spoke (September, 2023) <https://kazatu.edu.kz/en/news/a-warm-welcome-to-the-katru-rdun-food-conference-participants>; <https://kazatu.edu.kz/en/news/kazirgi-lem-zagdajyndagy-azyk-tlik-kauipsizdigi>

Interaction with Government Organizations:

In the past 2023, the University hosted three visiting meetings of the Agrarian Committee of the Mazhilis and the Senate of the Parliament of the Republic of Kazakhstan:

- The round table "Agricultural science to agricultural production", which was held on October 19, where Deputies of the Mazhilis of the Parliament, foreign and Kazakhstani scientists, experts in the field of agriculture and business representatives exchanged views on the development of agricultural science. An exhibition dedicated to the achievements of agricultural sciences was organized as part of the round table. https://kazatu.edu.kz/en/news/strengthening-cooperation-between-katru-and-turkish-higher-education-institutions-discussed_20231019095940

- On November 6, a visiting session of the Parliament of the Republic of Kazakhstan on veterinary and phytosanitary safety was held on the basis of KATRU. Deputies of the Mazhilis of the Parliament of the Republic of Kazakhstan, representatives of the Ministry of Agriculture of the Republic of Kazakhstan, university scientists and specialists in the field of agriculture took part in the meeting. <https://kazatu.edu.kz/en/news/kr-parlamenti-mzilisini-veterinarialyk-zne-fitosanitarialyk-kauipsizdik-mseleleri-bojynsa-komitetti-kspeli-otyrysy-kazatzu-da-tti>

- On December 14, 2023, the University hosted a meeting of the Committee on Agrarian Issues, Environmental Management and Rural Development of the Senate of the Parliament of the Republic of Kazakhstan on the topic "The main problems of agricultural processing and staff training". Key issues were raised on measures to support farmers by the state, on the adoption of systematic measures to diversify agriculture, on the introduction of new technologies and innovations in agricultural production. Issues in the field of processing agricultural products were also discussed. https://kazatu.edu.kz/en/news/12345_20231214132447

SDG 17 publications for 2023

1	The Supply of Macro- and	Agronomy , Vol.13, #12, 2023 article number 3063	Litvinovich, Andrey Lavrishchev, Anton	DOI 10.3390/agronomy13123063
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	Microelements to Cotton Plants at Different Distances from a Fertilizer Production Factory		Bure, Vladimir M. Turebayeva, Sagadat Kenzhegulova, Sayagul Dutbayev, Ayan Slyamova, Nazira Zhapparova, Aigul Saljnikov, Elmira	SDG 17
2	Relationship between the state of the country's logistics and perishable goods' output: dairy industry	TQM Journal Vol.35, № 7, P. 1799 - 18145 September 2023	Bauer, Maira Mukhametov, Almas Mukhametov A.; Trifonov, Pavel	DOI 10.1108/TQM-04-2022-0131 SDG 17
3	Development of a small-size processing line for production of safflower oil	Journal of Food Process Engineering Vol.46, № 9 September 2023 Article № e14394	Mursalykova, Maigul Iskakov, Bauyrzhan Kakimov, Mukhtarbek Zhumadilova, Gulmira Shulnova, Assem	DOI 10.1111/jfpe.14394 SDG 17
4	Development of a technology for the production of hydrogen-enriched synthesis gas with waste-free processing of Ekibastuz coal	Energy Vol.2781 September 2023 Article № 127817	Ybray, Sultan Dikhanbaev, Arystan Dikhanbaev, Bayandy Mergalimova, Almagul Georgiev, Aleksandar	DOI 10.1016/j.energy.2023.127817 SDG 17
5	Automatic cattle weighing on pastures with behavioral analysis during drinking	Journal of Animal Behaviour and Biometeorology Vol.11, № 3 July 2023 Article № e2023020	Uskenov, Rashit Mirmanov, Arman Tretyakov, Igor Bostanova, Saule	DOI 10.31893/jabb.23020 SDG 17
6	Perceptions of Life Success and Moral Qualities of a Modern Person of Generation Z: A Study of Economics and Humanities Students	Academic Journal of Interdisciplinary Studies Vol.12, № 4, P. 193 - 202 July 2023	Yunissov, Yersin Imankul, Aizhan Urunbassarova, Eleonora Rakimzhanova, Sayana de Velasco, Judith Josefina Hernández García Seisekenova, Ainash Tursynbaeva, Aigul	DOI 10.36941/ajis-2023-0105 SDG 17
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