

SECTION

9

Water Education

9.1. Higher Education Institutions (HEIs) and Professional Development Centers

9.1.1. Kazakhstan

Kazakh National Agrarian Research University

The Kazakh National Agrarian Research University (KazNARU) was founded in 1929²⁵⁹.

In the 2024-2025 academic year, KazNARU opened the Faculty of [Water resources and IT technologies](#), which includes the Departments of IT Technologies and [Water resources and land reclamation](#); the branch of NRU "TIAME"; the International Water Center. The faculty's educational programs are available on <https://www.kaznaru.edu.kz/en/op>.

KazNARU hosts the [Dissertation Council](#) on 8D086 "Water resources and water use"; the [International Institute for Green and Sustainable Development](#). The [Green Campus](#)²⁶⁰ program is implemented.

Major events and activities in 2024

Research. The Department of Water Resources and Land Reclamation is [implementing the following research projects](#) for 2024-2026: "Improvement of water monitoring technologies based on digital innovations and development of a remote-control device for accounting of water in irrigation systems"; "Environmental standardization of the maximum permissible anthropogenic load on river catchments (case study of the Shu River Basin)".

Capacity building. The following activities were organized: (1) the XVI Republican Student Subject Olympiad (April 25-26); (2) professional development courses for lecturers of the Karakalpak Institute of Agriculture and Agrotechnologies (April 29); (3) International Summer School 2024, dedicated to water assessment, digitalization of water management, biotechnology, food security, agricultural technologies and methods for mitigating the effects of climate change.

15 students from KazNARU are studying at the Faculty of Hydraulic Engineering under the educational program "Water Resources and Water Use" at NRU "TIAME".

Events. KazNARU organized: (1) the international UN Model Conference on the theme "Implementation of SDGs and Global Challenges: Kazakhstan's Contribution"²⁶¹ (March 2); (2) the roundtable "How to Be a



True Hydraulic Engineer?" dedicated to the 90th anniversary of the prominent scholar and statesman in the field of water and agriculture, N. Kipshakbayev (June 12); (3) KazNARU GREEN WEEK - 2024 (November 11-15).

Screening of the documentary "Six Inches of Soil" was organized in cooperation with the British Embassy in Kazakhstan (October 31).

Cooperation. KazNARU signed: (1) a memorandum of cooperation in higher education and science with GKU (7 February); (2) a cooperation agreement on strategic partnership with Rubicon Global PTY LTD (Australia) for introduction of innovative irrigation technologies (June 14).

The following new institutions and initiatives were launched at KazNARU: (1) the Kazakhstan-China Center for Smart Agriculture, established within the framework of an agreement with Lanzhou University (12 July); (2) in cooperation with the China Agricultural University and partner companies: (a) the Kazakhstan-China International Laboratory for Water Use in Arid Regions was opened; digital water accounting technologies were implemented on the Shelek River (Almaty Region); various irrigation techniques were modeled; (b) the Kazakhstan-China Research and Training Center for Agricultural Drone Management was opened to train students and promote new technologies in monitoring, mapping and environmental studies (December 26).

²⁵⁹ [History of Establishment](#); University Development Program for 2024-2029

²⁶⁰ The University's "Roadmap" supporting the implementation of the SDGs, advancing green economy and the Global Climate Action Agenda

²⁶¹ Dedicated to the anniversary of Kazakhstan's accession to the UN and the country's role in implementing the SDGs



The Launch of the Kazakhstan-China Center for Smart Agriculture, July 12



The Launch of the Kazakhstan-China Research and Training Center for Agricultural Drone Management, December 26

In partnership with the University of Nebraska-Lincoln (USA), KazNARU established the Extension Services Center aimed at disseminating innovations among farmers. Students also gained access to dual-degree programs in Agronomy, Natural and Water Resources Management, Ecology and Biosystems Engineering.

Achievements and awards. KazNARU entered the following rankings: (1) the **Top 350** universities worldwide in the field of Agriculture and Forestry in the "QS World University Rankings by Subject 2024"; (2) 149th in the "QS Asia University Rankings 2025", taking 6th place among Central Asian universities.

Publications. Scientific journal "Research, results", Almaty, 2024, on <https://journal.kaznaru.edu.kz/index.php/research/issue/archive>

Sources: <https://www.kaznaru.edu.kz/>, <https://www.facebook.com/profile.php?id=100043580851461>

Nazarbayev University

Nazarbayev University (NU) was established in 2010. The university is comprised of 8 schools, including the

Graduate School of Public Policy (GSPP) and the **School of Mining and Geosciences (SMG)**. The long-term mission of the NU is to create a wide range of engineering and applied science programs in land, water, energy and ecology. NU serves as the national country branch of the Sustainable Development Solutions Network (SDSN)²⁶². The university hosts a Sustainability Living Lab Program aimed at supporting student-led green research and innovation projects in areas such as water conservation, energy efficiency and related fields.

Major events and activities in 2024

Research. The German-Kazakh project TERESA "Urban Water Management: German Expertise for Kazakh Cities"²⁶³ was completed. The project aimed to develop a model for natural retention and infiltration of surface water to mitigate the impacts of climate change on the water cycle. A pilot test of the system is planned in Astana.

Researchers from the National Laboratory Astana (NLA) at NU developed photocatalysts that accelerate the decomposition of water pollutants into harmless elements under light exposure.

New projects were launched: (1) "Ecopark Nu"²⁶⁴ aimed at creating an experimental platform for conducting environmental research; (2) "Building the Capacity to Improve Air Quality in Central Asia Through Source and Source Region Identification with Stakeholder Engagement" (2024-2027).

Capacity Building. NU students participated in the 2024 SIGS²⁶⁵ Global Summer School, exploring the programs of the Institute of Data and Information (iDI), the Institute of Environment and Ecology (iEE) and the Open Faculty for Innovation, Education, Science, Technology and Art (Open FIESTA) (June 25-July 4, Shenzhen, China).



The 2024 Tsinghua SIGS Global Summer School began with an opening ceremony held on the morning of June 25

²⁶² The UN Sustainable Development Solutions Network in Kazakhstan

²⁶³ BMBF grant

²⁶⁴ With the support of the Corporate Fund "Social Development Fund" and LLP "Astana Business Campus"

²⁶⁵ Tsinghua Shenzhen International Graduate School

NU Office in Almaty, as part of its initiative to enhance environmental monitoring and raise environmental awareness of the public, installed modern air-quality monitoring sensors on its premises.

Events. NU hosted: (1) the 2nd Sustainable Development Solutions Network (SDSN)²⁶⁶ Conference, dedicated to localizing the SDGs in Central Asian sectors and expanding cooperation with European organizations in the field of sustainable development and green energy (May 13-14); (2) the Republican Youth Festival Climate Week, aimed at promoting the concept of sustainable development (July 26-27); (3) the Local Youth Climate Change Conference – LCOY Kazakhstan 2024 (September 13); (4) the Sixth International Energy Saving Forum (November 7); (5) the conference “International Cooperation for Kazakhstan's Energy Transition”²⁶⁷, which included thematic sessions “Green Hydrogen in Kazakhstan: Progress and Plans (Importance for Decarbonization)” and “Development of Renewable Energy in Central Asia” (November 25).



The "Clean Games" Campaign as part of the Republican Youth Festival Climate Week, July 26



The Sixth International Energy Saving Forum, November 7

The NLA Renewable Energy Lab and the Engineered Science Society (ESS) organized the II Symposium on Emerging Materials and Devices (June 25-27, Astana).

Achievements and awards. According to the Times Higher Education (THE) World University Rankings 2025, Nazarbayev University was recognized as the best university in Central Asia and the Caucasus.

See the list of NU Science Award recipients on: <https://nu.edu.kz/en/news/nu-uchredil-premii-zavydayushchiesya-nauchnye-issledovaniya-i-otmetil-dostizheniya-prepodavatelei>.

Publications. See Research Newsletter No.42-45 on: <https://nu.edu.kz/en/research/provostoffice/research-newsletter>.

Source: <https://nu.edu.kz/ru/>

Non-profit joint-stock company “Al-Farabi Kazakh National University”

In 2024, the leading multidisciplinary research²⁶⁸ university, Al-Farabi Kazakh National University (Al-Farabi KazNU), celebrated its 90th anniversary²⁶⁹. University branches have been opened in Bishkek and Istanbul, as well as at Dostoevsky Omsk State University (2024). The University has 17 faculties, the Institute for Advanced Studies and Additional Education.

Al-Farabi KazNU became a part of One Water Vision initiative, actively participating in global efforts on water use and the preservation of the North Aral Sea. A new academic program in Water Diplomacy and an SDG Alley have been launched.

Training of specialist for the water management industries is offered at the Faculty of Geography and Environmental Management, the Department of Meteorology and Hydrology. The faculty hosts the UNESCO Chair on Sustainable Development. The Center for Sustainable Development and Rational Environmental Management²⁷⁰ has been established, along with its specialized laboratories²⁷¹ for modeling the dynamics of water quality, geo-information analysis of land degradation, and atmospheric research (GlobalSky); “Remote Sensing Technology”.

Major events and activities in 2024

Research. In 2024, university scientists were implementing 329 research projects, including on water and agriculture, environmental protection and

²⁶⁶ Thematic priorities: land, water and communities (SDGs 9, 12); energy and climate (SDGs 7, 13); education and partnership (SDGs 4, 10, 17)

²⁶⁷ Organized by the German Federal Foreign Office

²⁶⁸ Resolution of the Government of the Republic of Kazakhstan No.516 of 25 July 2022

²⁶⁹ <https://farabi.university/news/93098?lang=en>

²⁷⁰ Carries out environmental monitoring of the West Kazakhstan region using remote sensing (RS)

²⁷¹ Includes 10 innovation laboratories implementing the SDGs <https://farabi.university/news/86885?lang=en>, <https://farabi.university/news/93121?lang=en>

sustainable development. Those included: (1) BR18574227 "Scientific and applied justification for managing the NAS²⁷² to prevent desertification processes in the southern regions of Kazakhstan, to ensure sustainable development of rural areas"²⁷³; (2) BR18574168 "The role of Kazakhstan in deepening the regional integration of CA countries and national sustainable development goals in the context of modern global trends"; (3) IRN AP14869740 "Biotesting of water and bottom sediments of the Ile River and the Kapshagay reservoir, forecasting the environmental risk for biodiversity of the studied ecosystems"; (4) AP14871838 "Study of the wave climate of water bodies in Kazakhstan using the satellite alltime-trity data"; (5) IRN AP14872548 "Modern ecological law and order: Kazakhstan case study"; (6) AP14870596 "Problems of legal regulation of rational use and protection of pasture ecosystems"; (7) AP19680487 "Monitoring and management of pasture lands of the Moyinkum sandy massif under the climate change, using the remote sensing data"; (8) BR21882122 "Sustainable development of natural-industrial and socio-economic systems of the West Kazakhstan region in the context of green growth: a comprehensive analysis, concept, forecast estimates and scenarios"; (9) AP14871372 "Geospatial approach to assessing the risks of climate disasters (drought and erosion) and their impact on agriculture in the Western region of Kazakhstan"; (10) "Introduction of environmentally "clean" technologies of energy production at Kazakhstani TPPs"; (11) "Transformation of ESG²⁷⁴ financial instruments in the context of the development of the green economy of the Republic of Kazakhstan".

Capacity building. The Faculty of Geography and Environmental Management organized: (1) the 1st International Summer School "Environmental Protection-2024" on the topic "Methods of assessing the anthropogenic impact on the environment: geosys-



tems, society, education, culture and worldview" for students from Xinjiang University (PRC) (from June 20); (2) WMO-CIMSS forecaster training on satellite meteorology data and applications²⁷⁵ (September 18-19); (3) guest lecture "Interdisciplinary studies of the Water-Energy-Food-Ecosystems (WEFE) Nexus in the sustainable development paradigm"²⁷⁶ (October 1).

Events. The international project "Climate does not wait" was launched at KazNU, accompanied by a scientific and practical conference (May 20).

The Al-Farabi KazNU hosted: (1) the international scientific and practical conference "Improving the legislation of the Republic of Kazakhstan in the field of environmental law enforcement" (February 29); (2) the international youth conference UN Mode" – "New Silk Road – 2024" on the theme: "The role of youth in the implementation of the 17 SDGs" (June 10); (3) 10th Anniversary International Youth Forum "Green bridge through generations" (April 25-27); (4) the roundtable "International scientific and academic co-operation



²⁷² Natural-agricultural systems

²⁷³ <https://farabi.university/news/89267?lang=en>

²⁷⁴ Environmental, social, managerial

²⁷⁵ In cooperation with the WMO and the Cooperative Institute for Meteorological Satellite Studies

²⁷⁶ In cooperation with the Ban Ki-moon Institute for Sustainable Development within the framework of the USAID Regional Water and Environment Project

in solving urgent problems of natural sciences and humanities to achieve the UN Sustainable Development Goals" (September 12); (5) the seminar on the GreenTech Horizons project (November 28-29).

International cooperation. The Al-Farabi KazNU signed the memoranda of understanding with the: (1) Finnish Meteorological Institute and RSE "Kazhydromet" (September 18); (2) German scientific and educational institution NetSCI on the establishment of the Institute for the protection and conservation of biodiversity in Central Asia (December 6).

Achievements and awards²⁷⁷. The Al-Farabi KazNU: (1) entered the [Top 500 universities worldwide](#) in the QS Sustainability Ranking for achievements in the field of SDGs; (2) ranked [29th](#) in the QS Asia University Rankings 2025; (3) recognized by IAAR EUR as the No.1 and best university among Central Asian and European universities; (4) [advanced](#) in the QS World University Rankings 2025 (QS WUR) from 230th to 163rd position; (5) ranked within the [Top 401-600](#) in the Times Higher Education University Impact Rankings (THE IR).

Publications. The Al-Farabi KazNU publications are available on: <https://journal.kaznu.kz/>.

Source: <https://farabi.university/>

German-Kazakh University

The German-Kazakh University (GKU) was founded in 1999 with the aim of training students in line with the German standards and is the only German university in Kazakhstan and Central Asia. The [Center for Natural Resources and Sustainability](#) (CRS) was established on the base of the GKU; the "[Central Asian Journal of Water Resources](#)"/CAJWR and the "[Central Asian Journal of Sustainability and Climate Research](#)"/CAJSCR have been published by GKU. The [World Politics](#) Faculty of the GKU has developed and carries out the master's program "Integrated Water Resources Management". Since 2022 the [Kazakhstan Climate Accelerator](#) is implemented in partnership with EIT Climate-KIC.

Major events and activities in 2024

In 2024, GKU celebrated its 25th anniversary.

Research. The following projects are under implementation by CRS: (1) "[Strengthening Higher Education in the Water Sector for Climate Resilience and Security in Central Asia](#) (HWCA) Erasmus+" (European Education and Culture Executive Agency (EACEA), May 2023-April 2026); (2) "[Empowering Central Asian](#)

[women in the energy sector](#)" (OSCE, 2021-2024); (3) "[Global Opportunities for Sustainable Development Goals in Central Asia and the Caucasus](#)" (GO4SDGs in Central Asia)" (UNEP, 2022-2024); (4) "[Green Education and Science for Central Asia](#)"²⁷⁸ (German Foreign Ministry, 2020-2024); (5) "[Climate Change and Resilience in Central Asia](#)" (UNDP), under which a series of online webinars were organized: 4th webinar "Climate risks in the agriculture sector" (January 16); 5th webinar "Energy and climate risks" (February 13); final webinar "Climate Change Impacts: Applying the NEXUS approach to sustainable development and risk assessment" (February 27).

Capacity building. The following events were held: (1) Student Olympiad "Sustainable Development Goals in Central Asia, Afghanistan, and Mongolia", including national stages (April 16, K.I. Skryabin KNAU; April 24, Sh. Shotemur TAU; April 30, NRU "TIAME"; May 2, GKU; May 10, S.A. Niyazov TAU; May 15, Kabul Polytechnic University; May 22, German-Mongolian Institute for Resources and Technology and the regional one (May 30); (2) the educational trip "Renewable Energy Trip 2024" (May 20-26, Almaty-Taraz-Karaganda-Astana); (3) 6th Summer School on the Aral Sea (August 15-20); (4) the Summer School on Water Diplomacy for young researchers from Central Asia (August 5-16, Tashkent); (5) the webinar "Green Incentives for Sustainable Mobility"²⁷⁹ (November 25, Almaty).

GKU: (1) with the support of the OSCE, launched an [E-learning course](#) "Renewable Energy, Energy Transition, and Energy Efficiency in Central Asia"; (2) in cooperation with the MEWR RT, organized²⁸⁰ a series of "Training of Trainers" (ToT) sessions, covering on the key areas of water management (February-April, 8 modules). CRS together with partners developed the following [online courses](#): "Strategic Water Resources Management" (Water Governance); "Water Diplomacy"; "Networking on Water and Climate Data in Central Asia" (NWCD_CA).

Events. GKU organized the international conference "The Silk Road of Knowledge: Science Meets Green Policy" (February 22-23, online); a forum on sustainable use of water resources in Central Asia jointly with KazNARU (September 4).

Publications. For CAJWR²⁸¹ publications (14 articles in 2024), see the link – <https://water-ca.org/issues>; CAJSCR²⁸² (14 articles) – <https://cajscr.com/>; CRS – <https://ks.dku.kz/en/>.

Source: GKU – <https://crs.dku.kz/ru/>

²⁷⁷ <https://farabi.university/university/rating>

²⁷⁸ Within the framework of "Green Central Asia", a regional initiative on climate and security in Central Asia and Afghanistan

²⁷⁹ GKU/UNEP under the GO4SDG initiative

²⁸⁰ With the support of the "Integrated Rural Development Project"/TRIGGER

²⁸¹ Thematic areas: climate and environment, socio-economic aspects, water law and governance, water infrastructure and management systems

²⁸² Thematic areas: climate, energy, land/agriculture, sustainable mobility

South Kazakhstan State University named after M. Auezov

The South Kazakhstan State University named after M. Auezov (M. Auezov SKSU) is a state multidisciplinary higher education institution. The University is comprised of 9 faculties, five higher schools and a college; the "New Climate Economy Center named after Rae Kwon Chung"²⁸³ is operational as well. The Department of Water Resources, Land Use and Agricultural Engineering of the Faculty of Agriculture teaches specialists in such disciplines as "Water resources and water use" and "Water supply, sewage and water protection".

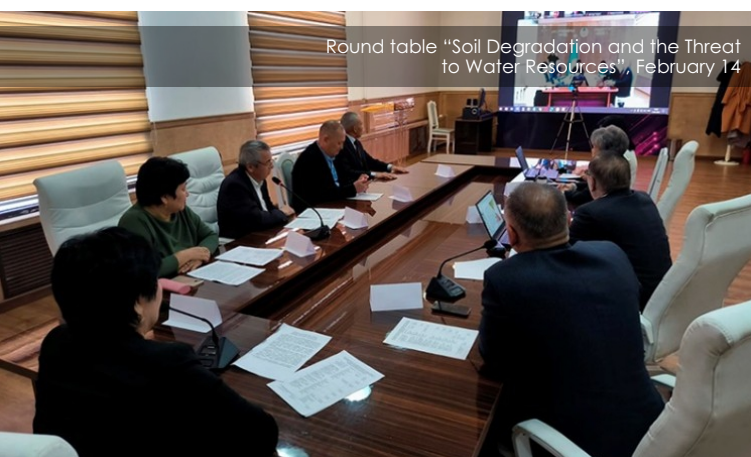
For the University's 2021-2025 Strategic Development Plan, see <https://auezov.edu.kz/media/attachments/2023/05/23/strategic-development-plan-2021-202523.05.2023.pdf>.

Research. The following projects, among others, were implemented in the course of the year: "Development of an economic-mathematical model for improving the efficiency of natural resource use in agriculture of Turkistan province to prevent climate change"; "Development of effective technologies for the sound use of degraded rural pastures in the desert zone of Turkistan province".

Capacity building. Winter schools were organized on the themes "Green Economy and Sustainable Regional Development" (January 15-25) and "Innovative Development of Agriculture under Modern Conditions" (January 15-27).

Students of M. Auezov SKSU won prizes at the XVI Republican Subject Olympiad²⁸⁴, including 2nd place in the specialty "Water Resources and Water Use" (April 25-26).

Events. The University hosted: a round table "Soil Degradation and the Threat to Water Resources"



(February 14); an international forum "Sustainable Water Resources Management" (December 12).

Achievements and awards. Based on the results of international rankings, the M. Auezov SKSU: (1) ranked 621st among the 1,503 best universities in the world in the QS World University Rankings 2025; (2) ranked 24th among 303 universities from 65 countries in the HE Higher Education Ranking 2024; (3) placed within the 1001-1500 group in the Times Higher Education Impact Rankings (THE IR) 2024; (4) ranked 138th among 985 universities in the QS Asia University Rankings 2025; (5) placed within the 1201-1250 group in the QS Sustainability Rankings 2025.

Sources: <https://auezov.edu.kz/kaz/#>, <https://green.auezov.edu.kz/ru/component/sppagebuilder/?view=page&id=443>

Taraz Regional University named after M.Kh. Dulati

According to the Resolution of the Government of the Republic of Kazakhstan No.567 of 16.07.2024 "On Certain Issues of the Ministry of Science and Higher Education of the Republic of Kazakhstan", NPAO "Taraz Regional University named after M.Kh. Dulati" was reorganized into two separate institutions: (1) NPAO "Taraz University named after M.Kh. Dulaty"; (2) NPAO "Kazakh National University of Water Management and Irrigation".

For the 2024-2025 academic years, a targeted state educational grant quota was allocated for NPAO "Kazakh National University of Water Management and Irrigation" totaling 245 places (210 for bachelor's, 20 for master's, and 15 for doctoral programs). The total student body across all levels of education will amount to 4 000 students.

²⁸³ Professor Rae Kwon Chung – Advisor to the UN Secretary-General on climate change and Nobel Prize laureate

²⁸⁴ Organized by KazNARU and the International Educational Corporation

9.1.2. Kyrgyz Republic

American University of Central Asia

The American University of Central Asia (AUCA) founded in 1993 is the first university in Central Asia to offer US accredited degrees in liberal arts programs through a partnership with the Bard College in the US. Its curriculum includes 15 undergraduate degree programs, in particular "Environmental Sustainability and Climate Science" (ESCS), and 10 graduate degree programs. The "New Generation Academy" at the American University of Central Asia offers a one-year intensive preparatory program. AUCA also includes the [Tian-Shan Policy Center](#) (TSPC), the Center for Environment and Development, the Technical School of Innovation, which offers six disciplines, in particular "Ecology and Energy Efficiency".

Major events and activities in 2024

Research. The project "Promoting Energy and Resource Efficiency in the Tourism Industry of Kyrgyzstan"²⁸⁵ was completed. During the project period (March 2020-July 2024): (1) 10 advisory services were established across Kyrgyzstan; (2) about 800 private entrepreneurs participated in training sessions; (3) approximately 2,800 small and medium-sized enterprises (SMEs) in the tourism sector received information on Sustainable Consumption and Production (SCP) and Energy and Resource Efficiency (ERE) measures; (4) 50 SMEs in the HoReCa (hotel and restaurant) sector underwent energy audits and received energy-saving assessments and business plans for further development; (5) 4 green financial products were developed in partnership with financial institutions; (6) 7 universities were supported in integrating SCP and ERE principles into their Tourism curricula; (7) The ECO KG voluntary environmental certification scheme was launched for HoReCa enterprises in Kyrgyzstan. Project results were presented at the final forum (July 10, Bishkek).

Ongoing projects: (1) GeoHUB, in partnership with the Central European University (CEU, Budapest, Hungary) and Bard College OSUN²⁸⁶ program; (2) CEPF²⁸⁷ on sustainable pasture management in Chychkan and Suusamy, which included a training workshop "Mapping for Policy Change: A Beginner's Guide to ArcGIS" (May 6-7); a student eco-camp "Sustainable Natural Resource Management and GIS in Chychkan" (August 21-25, Chychkan Gorge, Kyrgyzstan).

Capacity building. The following activities were conducted for students of ESCS: (1) ecosystem study expedition to Issyk-Kul as part of the course "Ecosys-

tem Services" (February); (2) field research in Ala-Archa National Park within the natural science course "Food Security, Nutrition, and Sustainable Development" (May 4, Chui Region).

Events. AUCA organized: (1) "Water for Peace" event (March 27); (2) AUCA Climate Education Week (April 15-21); (3) the traditional "Green Month"²⁸⁸, which included the eco-quest "Sort It 1.0" among universities and schools of Kyrgyzstan under the Youth Led Students Program (October 7-November 4), AUCA Green Fest (October 26); a tree-planting campaign in the Karagachevaya Grove and other.

Achievements and awards. AUCA secured the 1st position among Kyrgyz universities in the prestigious [QS World University Rankings Asia 2024](#). Additionally, it placed within the Top-10 universities in Central Asia.

Source: <https://www.auca.kg/>

Kyrgyz-Russian Slavic University named after B.N. Yeltsin

The Kyrgyz-Russian Slavic University named after B.N. Yeltsin (B.N. Yeltsin KRSU) was established in 1993. Education in the University is offered in 24 disciplines. KRSU has the Dissertation Councils of the Higher Attestation Commission of KR, postgraduate program (on disciplines 05.23.07 "Hydraulic engineering construction" and 25.00.30 "Meteorology, climatology and agrometeorology"), doctoral school (05.23.07 "Hydraulic engineering construction"), and the Inter-branch Scientific-Research Center for High-Altitude Dam Monitoring. The Center, among others, studies the effects of earthquakes and microseisms on hydraulic structures and makes forecasts of their state in order to prevent failures. Water education is offered at the Architecture, Design and Construction Faculty (ADCF) and at the Faculty of Science and Technology.

Major events and activities in 2024

Events. ADCF, with participation from Central Asian and Russian universities, organized the "Water for Peace-2024" competition dedicated to World Water Day (March 18), a scientific-practical conference on innovations in the field of water resources (April), a Nexus Game "Reaching Agreements on the Distribution and Use of Water Resources Among Countries" (May).

²⁸⁵ Implemented by AUCA with financial support from the EU under the SWITCH-Asia programme, in a consortium with partner organizations: UNISON Group (Kyrgyzstan), Technopolis Group (Belgium), and the Collaborating Centre on Sustainable Consumption and Production (CSCP, Germany)

²⁸⁶ The Open Society University Network (OSUN) is a global partnership of educational institutions that integrates learning and the advancement of knowledge across geographic and demographic boundaries

²⁸⁷ CEPF – the Critical Ecosystem Partnership Fund

²⁸⁸ "Green Month" is held at AUCA in April and October

Experts from the Department of Water Resources and Engineering Disciplines took part in: (1) the roundtable "Water Resource Challenges in Kyrgyzstan under Climate Change" dedicated to World Water Day made a presentation "Study of Hydrological Conditions and Assessment of Peak Discharges of Rivers in the Western Part of the Issyk-Kul Basin" (April 23, Bishkek); (2) international scientific-practical conferences: (a) "Recent Advances in Earth Sciences and Geo-Data Analysis" with a presentation "Formation of Peak Streamflow in the Western Part of the Issyk-Kul Basin" (June 20-21, Tashkent, online); (b) the Conference dedicated to 100th Anniversary of the A.N. Kostyakov All-Russian Research Institute of Hydraulic Engineering and Land Reclamation with the paper "Mathematical Modeling and Study of a Flow Stabilizer (FS) at a Water Outlet" (October 9-11, Moscow, Russia); (c) "Water Challenges and Opportunities for Mutually Beneficial Water-Energy Cooperation of Central Asian Countries" (the 4th Mamatkanov Readings) with a presentation "Hydro-Economic Justification for Selecting a Reservoir Site on the Kyzyl-Suu River (Amu Darya Basin) for Hydropower Purposes" (October 28, Bishkek); (3) the National Water Forum "Rational Use of Water Resources of the Kyrgyz Republic under Climate Change and the Preservation of Lake Issyk-Kul" with the presentation "Impact of Climate Change on Kyrgyzstan's Water Resources: Challenges and Practical Solutions" (November 29, Bozteri, Issyk-Kul Region).

Publications. KRSU published 12 issues of the "KRSU Newsletter".

Faculty members from the Department of Water Resources and Engineering disciplines have made contributions to the range of fields: (1) Frolova G.P., Anapyanova S.B., et al. "Assessment of the suitability of treated wastewater for irrigation of small settlements located in the Yertis river basin". KazNARU Publishing House, Almaty, 2024, No.3 (103), pp. 361-371. ISSN 2304-3334; (2) Frolova G.P., Atamanova O.V. "River Water Supply of Settlements Located near the Issyk-Kul Biosphere Reserve". Scientific Works of Khvalynsky National Park, Vol. 16, Saratov: "Amirit" LLC, 2024, pp. 209-216. ISBN 978-5-9999-1809-3; (3) Adzhygulova G.S., Frolova G.P. "Model Studies of a Turning Structure for an Unconventional Supercritical Flow under Turbulent Conditions." In Proceedings of the Conference "Land Reclamation and Water Management – the Basis of Food and Environmental Security", dedicated to the 100th anniversary of VNIIGIM named after A.N. Kostyakov. Moscow, 2024, pp. 296-301. ISBN 978-5-907464-67-4. DOI: 10.37738/VNIIGIM.2024.36.93.001. (Indexed in RSCI, HAC KR).

Additional publications are available on: <https://gidro.krsu.edu.kg/index.php/publikatsii/115-publikatsii>.

Source: B.N. Yeltsin Kyrgyz-Russian Slavic University, <https://www.krsu.edu.kg/>

Kyrgyz National Agrarian University named after K.I. Skryabin

The Kyrgyz National Agrarian University named after K.I. Skryabin (K.I. Skryabin KNAU) was established on January 30, 1933. The University consists of 6 faculties, including the **Hydromelioration, Ecology and Land Management Faculty** (HELMF) which trains: (1) bachelors on "Land reclamation, recultivation and protection", "Engineering systems of agricultural water supply, irrigation and drainage", "Hydraulic engineering construction", "Land management and cadaster", "Geodesy and remote sensing", "Ecology and nature management"; (2) master's students on "Hydraulic engineering construction", "Land management and cadaster", "Environmental management and water use", "Geodesy and remote sensing", and "Ecology and nature management".

Major events and activities in 2024

Research. The project "Strengthening Higher Education in the Water Sector for Climate Resilience and Security in Central Asia (HWCA)" under Erasmus+²⁸⁹ (European Education and Culture Executive Agency) continued. As part of the project: (1) the Water Management Laboratory was opened at the Department of land management and cadaster (April 29); (2) faculty members participated in: the training course "Water Resources Management" for members of the project consortium at the IHE Delft Institute for Water Education (July 9-19, Delft, the Netherlands); a training on water diplomacy for university professors and a summer school for young researchers (master's and doctoral students) (August 4-17, Tashkent, Uzbekistan); the project monitoring meeting (October 10, Bishkek); the coordinators' and experts' meeting, which addressed key progress under project work packages, preparation of a memorandum of cooperation between European and Central Asian partners, and other matters (November 17-21, Almaty, Kazakhstan, GKU).



²⁸⁹ The HWCA project consortium includes 16 universities: 12 universities from Central Asian countries – Kazakhstan, Kyrgyzstan, Tajikistan, Uzbekistan, and Turkmenistan, and 4 universities from Europe

Events. K.I. Skryabin KNAU hosted several significant events: (1) Celebration of World Water Day “Water for Peace-2024” (March 11); (2) International Scientific and Practical Forum “Agricultural Science for Agrarian Production in the CIS and BRICS Countries” (September 27); (3) World Food Day celebrations, including an exhibition of innovative agricultural technologies and a student quiz on food security (October 16); (4) International Scientific and Practical Conference “Innovative Approaches in Land Reclamation and Water Management as Key Factors for the Sustainable Development of Kyrgyzstan’s Agro-Industrial Complex in the Context of Digital Transformation and Climate Change”, dedicated to the 75th anniversary of the Hydromelioration, Ecology, and Land Management Faculty (December 5); (5) roundtable “Aspects of Regional and National Security in the Context of Global Climate Change”²⁹⁰, which addressed environmental, food and biological security issues, along with associated risks and challenges (December 11-14).

Professors, master’s students and undergraduates participated in: (1) the 9th Forum on Cooperation in Agricultural Education, Science, and Technology of the Silk Road (July 9-12, Tashkent, Uzbekistan); (2) the 3rd Forum of Rectors of Agricultural Universities of the SCO Member States “Joint Efforts to Promote Quality Development of Cooperation in Agricultural Education, Science, and Technology” (September 19-20, Yangling, PRC); (3) the Conference “Development of

Science in Kyrgyzstan – the Path to Success” (November 14, Bishkek); (4) the Forum of Rectors of Central Asian Universities, during which KNAU signed a Roadmap for Cooperation with the S.Seifullin Kazakh Agrotechnical Research University and the Tashkent State Agrarian University, as well as memoranda with other regional universities. A Joint Declaration was adopted, outlining key directions for educational and scientific cooperation among Central Asian universities (November 21, Bishkek); (5) the National Water Forum “Rational Use of Water Resources of the Kyrgyz Republic under Climate Change and Preservation of Lake Issyk-Kul” (November 29, Bozteri, Issyk-Kul province).

International cooperation. As part of the academic exchange program, K.I. Skryabin KNAU hosted a delegation from Xinjiang Agricultural University (China). A series of meetings and joint activities were held during the visit (November 21-30).

Achievements and awards. K.I. Skryabin KNAU was recognized as one of the leading universities in the field of agricultural sciences and received the Agricultural University Award of the IAAR Eurasian University Ranking (IAAR EUR)²⁹¹.



Национальный водный форум, 29 ноября, с.Бозтери, Иссык-Кульская область



Publications. KNAU published 2 issues of its “KNAU Newsletter”.

Source: <https://knau.kg/>

9.1.3. Tajikistan

Tajik Agrarian University named after Shirinsho Shotemur

The Tajik Agrarian University named after Shirinsho Shotemur (Sh. Shotemur TAU) was established in 1931.

The University has 10 faculties, including the Hydro-melioration Faculty, which offers the following disciplines: “Irrigation and water management”, “Hydraulic engineering”, “Rational use and protection of water resources”, “Land reclamation and water management”. TAU hosts an Innovation Research

²⁹⁰ The event was held within the framework of the international inter-university scientific and practical conference of young researchers and students “From National to Global Security: A Multifactor Analysis of Challenges and Threats to the Sustainable Development of Central Asia”

²⁹¹ IAAR is aimed at a comprehensive assessment of the quality of university performance and is based on the international methodological standards of IREG (the Observatory on Academic Ranking and Excellence). The ranking methodology adheres to the Berlin Principles, including transparency and objectivity, which confirms the high standards of evaluation

Cluster on Integrated Water Resources Management (IWRM), a Career Development Center, and an educational and production greenhouse.

Major events and activities in 2024

Research activities carried out under the University's research plan for 2021-2025 include 15 mandatory topics. These topics include among others: "Development of effective use of land and water resources of the Upper Zeravshan for the expansion of agricultural production and food self-sufficiency" (2022-2026); "Monitoring and prospects of land use in the Republic of Tajikistan" (2022-2026).

Capacity building. Sh. Shotemur TAU organized a series of Training of Trainers (ToT) sessions within the framework of: (1) the TRIGGER²⁹² Project "Comprehensive Development of Rural Areas" (October 3); (2) JICA's initiative "Smallholder Horticulture Empowerment and Promotion (SHEP)", focused on empowering small farmers in the horticultural sector (December 6).



Training of Trainers session within the framework of the TRIGGER Project "Comprehensive Development of Rural Areas", October 3



Training of Trainers session within the framework of JICA's initiative "Smallholder Horticulture Empowerment and Promotion (SHEP)", December 6

Events. The Hydromelioration Faculty organized an international scientific and practical conference²⁹³ "Sustainable Water Resources Management as a Basis for Achieving the Strategic Goal of Food Security under Climate Change Conditions" (March 6-7, Dushanbe).

Publications. In 2024, the University published 4 issues of its Kishovarz journal.

Source: <https://www.tajagroun.tj/>,
https://www.instagram.com/_tau_official_/,
www.facebook.com/groups/683492831824366/

Tajik Technical University named after Acad. M. Osimi

The Tajik Technical University named after Academician M. Osimi (TTU) was founded in 1956. The University has 7 faculties, including **Power Engineering Faculty** and Construction and Architecture Faculty. The latter includes the "Hydraulic structures and water resources protection" Department, which offers training in the following disciplines: (1) "Construction and operation of HPPs" and "Rational use and protection of water resources" (bachelor's degree); (2) "Construction and operation of HPPs" (master's degree, correspondence and second higher education).

Major events and activities in 2024

As part of implementation of the Green Economy Development Strategy (2023-2037), a Resource Center for Renewable Energy Sources was established (November 29). The Center aims to train highly qualified specialists in line with labor market needs and implement measures up to 2032 to ensure full transition to renewable energy generation. The Center was equipped with modern educational equipment, with the financial support of the Embassy of Germany in Tajikistan.

Events. The University hosted: (1) the exhibition "Energy in Transition – Powering Tomorrow", along with a series of thematic conferences on renewable energy, energy saving and energy efficiency (February 28 -March 20); (2) the scientific and practical conference "Sovereignty and Ensuring Energy Independence: Achievements and Prospects for Development" (September 13); (3) the international scientific and practical conference "Energy: Current State and Development Prospects" (December 22).

Cooperation. In the 2024-2025 academic year, under the bilateral agreement between the Governments of Tajikistan and Kazakhstan, TTU students began studies at the Joint Faculty of Information Technologies, established in collaboration with the L.N. Gumilyov Eurasian National University (Kazakhstan).

²⁹² With financial support from the EU and BMZ

²⁹³ With the support of the USAID Regional Water and Environment Project

A memorandum of cooperation was signed between TTU and CAREC, laying the foundation for further integration within the Academic Network and strengthening institutional partnerships. Within this framework, CAREC donated a Tajik-language edition of the NEXUS Simulation Game to TTU (January 23, 2025).

9.1.4. Turkmenistan

Turkmen Agricultural University named after S.A. Niyazov

The Turkmen Agricultural University named after S.A. Niyazov (S.A. Niyazov TAU) was founded in 1930. The University consists of 8 faculties, including the Hydromelioration Faculty, which offers training in such disciplines as "Hydromelioration" and "Land construction and cadaster". In 2024, S.A. Niyazov TSAU joined the University Alliance of the Silk Road (UASR)²⁹⁴.

Major events and activities in 2024

Capacity building. TAU organized: (1) a series of scientific and practical meetings and training events covering a wide range of topics, including water-saving technologies (March), Key Performance Indicators (KPI)²⁹⁵ (April), application of organic fertilizers (April), innovations in agriculture (May) and others; (2) in cooperation with the Astrakhan State University named after V.N. Tatishchev, a training workshop "Effective and Cost-Efficient Methods for Producing Environmentally Friendly Organomineral Fertilizers in Agriculture" (June 11); (3) together with the Turkmen Agricultural Institute (TAI), a webinar "The Role of Digitalization in Achieving the Sustainable Development Goals in Agricultural Production" (October 14, online); (4) a hackathon on geoinformation systems and solutions among students of secondary vocational and higher educational institutions of Turkmenistan (November 18); (5) the 3rd Open International Online Olympiad on Ecology for students (December 5).

Representatives of the World Bank organized a workshop for TAU teaching staff and students on agricultural policy, presenting information about the functions of the WTO, the results of Turkmenistan's accession process, global agricultural market trends and export support measures (23 May).

TAU students participated in: (1) the International Student Olympiad "Sustainable Development Goals in

Publications. In 2024, TTU published 4 issues of its academic journal "Polytechnic newsletter series: Intelligence, Innovation, Investment" and 4 issues of "Polytechnic newsletter series: Engineering Studies".

Sources: <https://www.facebook.com/ttu.m.s.osimi>

Central Asia, Afghanistan and Mongolia" organized by the GKU (May 10, online); (2) the All-Russian Open Youth Water Competition organized by the Institute for Environmental Project Consulting together with the project "Hydrogeospatial Analysis and Predictive Modeling of the Amu Darya Basin Dynamics under Climate Change Conditions" (May, Moscow, Russia) and others.

Events. S.A. Niyazov TAU hosted: (1) the international competition of research and project works "The Role of Youth in Achieving the Sustainable Development Goals", dedicated to World Environment Day (June); (2) the international scientific and practical conference "Sustainable Development of the Agro-Industrial Complex" (November 6).

The teaching staff and students took part in: (1) the 10th International Conference on World University Rankings UI GreenMetric (June 4-7, Bogotá, Colombia); (2) the Scientific Forum "Agricultural Development – the Key to Prosperity" (September 17-18, Vienna, Austria); (3) the 4th Forum of Young Scientists (November 27-29, Sochi, Russia).

Achievements and awards. TAU took the 474th place with 6795 points in the [UI GreenMetric World University Ranking](#)²⁹⁶, and the 2nd place among the universities of Turkmenistan.

In 2024 students were awarded 3 golden, 2 silver and 9 bronze medals at international Olympiads.

Source: <https://tohu.edu.tm>

Turkmen Agricultural Institute

The Turkmen Agricultural Institute (TAI) was established in 2010 at the Ministry of Agriculture and Environmental Protection of Turkmenistan²⁹⁷. The Institute offers training at the Hydromelioration and Agricultural Mechanization Faculty in such disciplines as "Operation of hydro-reclamation systems", "Hydromelioration"

²⁹⁴ UASR is a non-governmental and non-profit organization that brings together universities from countries located along the historic Silk Road. It was established within the framework of China's foreign policy initiative "One Belt, One Road"

²⁹⁵ The Key Performance Indicator (KPI) system measures the performance of an enterprise or organization in achieving its core objectives

²⁹⁶ The [UI GreenMetric World University Ranking](#) is a global ranking of green campuses and environmental sustainability, initiated by the University of Indonesia in 2010. It ranks universities based on their environmental commitments and initiatives. Universities are assessed according to 6 criteria (university infrastructure / SI; energy efficiency and climate change / EC; waste management / WS; transport policies that reduce carbon and particulate emissions / TR; environmental education in university programs / ED; water / WR) and 39 indicators

²⁹⁷ By the Decree of the President of Turkmenistan of 14.07.2023 No.240, the Ministry of Agriculture of Turkmenistan was established on the basis of the former Ministry of Agriculture and Environmental Protection

and "Hydraulic facilities". TAI includes the Training and Production Facility, the Research and Production Center (RPC) and a UNESCO Club.

Major events and activities in 2024

Research. The project "Strengthening Higher Education in the Water Sector for Climate Resilience and Security in Central Asia (HWCA)" under Erasmus+²⁹⁸ (European Education and Culture Executive Agency) was continued. The Institute's staff participated in the coordinators' and experts' working meeting of the project, where key implementation issues were discussed, including the preparation of a Memorandum of Cooperation between European and Central Asian partners (November 18-20, Almaty, GKU, online).

Capacity building. The following activities were conducted: (1) online training in cooperation with the Samarkand State University of Veterinary Medicine, Animal Husbandry, and Biotechnology on "Application of GIS Technologies for Mapping Irriga-

ted Soils" (May 16); (2) Hackathon "AGRITECH" among students of Turkmen higher education institutions (June); (3) online session on "Monitoring of Agricultural Land" (September 24); (4) workshops on "Activities Undertaken in Central Asia to Save the Aral Sea" (World Sea Day, September) and "Climate Change and Food Security: Challenges and Solutions" (September); (5) joint webinar with the Turkmen State Agricultural University named after S.A. Niyazov (TSAU) on "The Role of Digitalization in Achieving the Sustainable Development Goals in Agricultural Production" (October 14, online); (6) training course "Digital Land Management: From Theory to Practice" (November 14-16).

Events. TAI hosted the following events: (1) international scientific and practical conferences "Rational Use of Natural Resources in Agriculture" (April 23); "The Role of Biotechnology in the Sustainable Development of the Agricultural Sector" (December 19); (2) Youth Conference on Climate Change (September 3); (3) international scientific project competition "Agro-Innovations: The Path to Sustainable Development" (October 16-17); (4) scientific and practical conference "Harvest Festival – Celebration of Creative Labor, Prosperity and Unity" (November 4); (5) scientific conferences: "Methods for Increasing Soil Fertility" (November 18-19); "Innovative Technologies in Agriculture" (November 20-21).

Achievements and awards. The staff of TAI participated in the "Digital Solution – 2024" Innovative Projects Competition by submitting its project "Digital Solution for Fertilizer Application – NPK Calculator" and won 2nd place.

TAI took the 726th place with 5910 points in the [UI GreenMetric World University Ranking](#) (1058th place in 2023).

Source: <https://tohi.edu.tm/ru/index.php>



Workshops on "Activities Undertaken in Central Asia to Save the Aral Sea", September

9.1.5. Uzbekistan

National Research University "Tashkent Institute of Irrigation and Agricultural Mechanization Engineers" (NRU "TIAME")

NRU "TIAME" is the first and single national research university in Uzbekistan with a long history as a leading educational institution that offers research, higher education and expert consultations on water and environment.

NRU "TIAME" consists of: a parent university with 7 faculties, Research institute of fundamental and applied sciences, Bukhara Institute of Natural Resources Management, Karshi Institute of Irrigation and Agrotechnology, Scientific education farm in Tashkent province, UNESCO Chair on Water Diplomacy, Water Resources Management and Environmental Protection (established in 2018), which serves as a platform for multidisciplinary education and research. The University offers about 40 curricula for bachelor's degree, 36 – for master's degree and 21 – for doctoral degree.

²⁹⁸ The HWCA project consortium includes 16 universities: 12 universities from Central Asian countries – Kazakhstan, Kyrgyzstan, Tajikistan, Uzbekistan, and Turkmenistan, and 4 universities from Europe

Major events and activities in 2024

NRU "TIAME" established the first QS impACT²⁹⁹ Council in Central Asia, which helps students engage in QS impACT Awards and QS impACT Schoolship programs, expanding opportunities for international exchange and education at top-1000 global universities.

Research. As part of projects: (1) "Sustainable Water-Saving Irrigation Technologies for Achieving Water, Energy and Food Security in the Context of Climate Change in Uzbekistan"/*SusWEF*, field studies are conducted in pilot farms "Shodi Ugli Salim" and "Sharapov Yusuf" (Karshi district) to determine optimal norms for the application of BioProPhyto biostimulant and to enhance drip irrigation efficiency on saline soils; (2) "ReAct" project (funded by DAAD), a series of activities were held, including a roundtable on the SDGs; an international workshop on strengthening cooperation and developing new projects in renewable energy (24 July); the Young Scientists School-YSS focused on climate change and water management (July 29-August 1). Further details on university research can be found on: https://tiame.uz/scientific_activity/research_and_projects/national_projects.

Capacity building. The University has implemented a dual education system in cooperation with the Ministry of Water Management, Ministry of Economy, Uzbekhydroenergo JSC and others. Students undergo integrated academic and practical training under various models: (1) 4+2 scheme (Automation and Process Control) – practical training at Tashkent Hydropower Cascade and Tashkent Water Supply JSC; (2) 3+3 scheme (Mechatronics, Robotics, Technical Expertise and Marketing) – training at Technopark LLC and Energo Max Group LLC; (3) 5+1 scheme (Hydropower Facilities in Irrigation Systems) – practice at Chirchik HPP Cascade and the under-construction Lower Chatkal HPP.

NRU "TIAME" organized: (1) water diplomacy training for CA universities' teaching staff³⁰⁰ (August 5-16); (2) internship for master's students of Al-Farabi Kazakh National University (October 14-25); (3) workshop "Environmental Culture: Today and the Future" (November 28).

The teaching staff delivered lectures at the "The School of Water Workers" ("Suvchilar Maktabi") on "Improving Water Accounting and Distribution in Irrigation Networks Using IT Solutions" (July 31); "Efficient Energy Use and Expansion of Renewable Energy Applications" (September 19-21).

Events. Under the initiative of the President of Uzbekistan, the Ministry of Water Management jointly with

NRU "TIAME" and with the financial support from Agrobank, established the "Suvchilar Maktabi"/"The School of Water Workers"³⁰¹. The inauguration ceremony was held on 3 February.

The University hosted: (1) roundtable "Youth Ecology and Legislation" (February 15); (2) international conferences: "Agroengineering and Solutions for Green Infrastructure (AEGIS-2023)" (April 20); "Environmental Technologies and Engineering for Sustainable Development (ETESD-2024)" (October 24); (3) XXIII Scientific-Practical Conference of Young Scientists, Master's Students, and Gifted Students "Modern Problems of Agriculture and Water Management" (May 10-11); (4) VI International Scientific Conference "Construction Mechanics, Hydraulics and Water Resources" (CONMECHYDRO 2024) (December 19-21).

The teaching staff and students participated in: (1) Huawei Tech Carnival 2024 (May 13-15, Baku, Azerbaijan); (2) international conference GISTC-2024 (June 26-27, Beijing, PRC); (3) conference "Innovation in Optimization: Bridging Theory and Practice" (August 27-30, Banda Aceh, Indonesia); (4) SCO University Rectors' Forum (September 19-24, Xian, PRC); (5) International Congress on Environmental Sciences, Technologies, and Engineering (October 14, online); (6) InnoWeek.uz 2024 (November 14-16, Tashkent); (7) 6th International Symposium "Biohealth of Agriculture" organized by Faculty of Life Sciences (November 12-17, Xian, PRC); (8) Agroexpo Uzbekistan and Agrotechmash Expo (November 27, Tashkent); (9) Republican Conference "Environmental Conservation – The Key to a Healthy Future" (December 19, Tashkent State University of Economics).

Cooperation. In 2024, a branch of NRU "TIAME" was established at the KazNARU (Almaty, Kazakhstan). Joint dual-degree bachelor's and master's programs were launched in "B082 Water Resources and Water Use" and "M137 Water Resources and Water Use" in line with national educational standards.

The Innovative Digital Technologies Center was opened at [Shihezi University](#) in partnership with NRU "TIAME" (November 18, Shihezi, China).

NRU "TIAME" held a China Cooperation Week, during which meetings were conducted with delegations from the [Northwest A&F University](#), [Xinjiang Normal University](#) and [Qingdao Agricultural University](#). As a result, the [China-Uzbekistan Advanced Engineering School](#) was officially opened at NRU "TIAME".

The University hosted meetings with delegations from: Italy (September); Óbuda University (October 22); Xinjiang Institute of Ecology and Geography (November); Slovak University of Agriculture (November);

²⁹⁹ QS impACT is a project by the QS (Quacquarelli Symonds) ranking organization; it is one of the international initiatives aimed at further promoting the SDGs

³⁰⁰ The training was organized by the NRU "TIAME" in collaboration with UMED, the Diplomatic Academy of the Ministry of Foreign Affairs of Kyrgyzstan, and the International Water Management Institute (IWMI) within the framework of the Erasmus+ HWCA project

³⁰¹ The official launch of "The School of Water Workers" took place on 29.05.2023



The Innovative Digital Technologies Center was opened at Shihezi University in partnership with NRU "TIAME", November 18, Shihezi, China

PRC (November), focusing on further strengthening partnerships and expanding cooperation.

NRU "TIAME" signed Memoranda of Understanding (MoUs) with Óbuda University (Hungary) under the "Pannonia" scholarship program (April 23), UWED (August 23), the South Korean company HADA Inc. (August 30), Nanjing University of Information Science and Technology (Jiangsu Province, PRC) (October 29), MinoSpace, which provides for the launch of the NRU "TIAME" satellite spacecraft, faculty training in space technologies, and the opening of a MinoSpace branch office in Tashkent (October 30–November 2, Beijing, PRC).

Achievements and awards. NRU "TIAME" was awarded the "Science and Innovation – 2024" prize in the category "Best Higher Education Institution of the Year"³⁰².

According to international rankings: (1) Times Higher Education (THE) Impact Ranking 2024 ranked 601st, entering the top 1000 universities worldwide; (2) QS World University Rankings: Sustainability 2024 ranked 828th globally, 238th in Asia, 3rd in Central Asia, and 1st among universities in Uzbekistan.

Students and staff members of NRU "TIAME" won the "Smart Agriculture" competition for young agricultural and water engineers organized under the joint UNDP–MEWR Uzbekistan project "Sustainable Rural Development" financed by the IsDB and the OPEC Fund for International Development (OFID).

Publications. NRU "TIAME" publishes several scientific and technical journals, including: Irrigation and Land Reclamation; Sustainable Agriculture; Fundamental and Applied Research; Journal of Hydraulic and Environmental Engineering; Geodesy, Cartography, and Geoinformatics; Agroengineering Solutions. In 2024,

the university issued: 20 textbooks, 23 teaching manuals, 25 monographs, and 7 methodological guidelines; received 4 certificates and 4 patents; published over 174 scientific articles in internationally indexed journals (QS Q1–Q4 and Web of Science).

Source: <https://tiame.uz/>

National University of Uzbekistan named after Mirzo Ulugbek

The National University of Uzbekistan named after Mirzo Ulugbek (M. Ulugbek NUUz) was established on May 12, 1918. The University has in its structure 16 faculties, including Geography and Geoinformation System Faculty. A Research Department of Applied Ecology and Sustainable Development³⁰³ operates under the University.

Major events and activities in 2024

Research. M. Ulugbek NUUz continues the following projects: (1) "Development of technology for landscape restoration and conservation of arid ecosystems of the Amu Darya delta (Karakalpakstan) using agroforestry methods" (IL- 492104180, 2023–2025); (2) "Integrated use of ground-based observation data and solar radiation data from geostationary weather satellites for the sustainable development of agriculture, water resources and energy sources" (AL-5721122072, 2022–2024).

Capacity building. Students of M. Ulugbek NUUz participated in the Annual International Field School "FORESTA", during which they visited the Pinezhsky State Nature Reserve, Golubino Karst Massif and the Golubino Landscape and Cultural Park. As part of the program, they presented a project "Prospects and Challenges of Ecotourism within Protected Natural Areas: The Case of the Golubino Karst Massif Nature Monument" (June 6–9, Arkhangelsk, Russia).

Events. The University hosted the international scientific conferences: (1) "The role of modern geoinformation cartography, methods and remote sensing technologies in geographic research" (April); (2) "Sustainable Development Goals: International experience and Uzbekistan's practice" (April 26); (3) "Integrating climate change into education in Uzbekistan" (May); (4) "Integration in modern geographic research: Challenges and solutions" (October 11); (5) "Climate change and its impact on the environment: Problems and solutions" (October 28); (6) "Current state and prospects for the development of geodesy, cartography and cadaster in Uzbekistan" (December 6).

³⁰² The annual "Science and Innovations-2024" award ceremony, organized by the international scientific journal "Science and Innovations" and Uzreport TV channel, highlighted the achievements of Uzbek scientists and organizations in the following categories: "Scientist of the Year," "Best Young Scientist of the Year," "Best University of the Year," and "Best Research Institute of the Year"

³⁰³ It was established by a decision of the University Academic Council as the Research Department of Applied Ecology and Rational Use of Natural Resources (Order No.01-67 of 01.03.1991). In 2014, it was renamed the Research Department of Applied Ecology and Sustainable Development at Mirzo Ulugbek National University of Uzbekistan (Order No.01-236 of 02.07.2014). The department's activities focus on ecology, environmental protection and environmental education



The teaching staff of the M. Ulugbek NUUZ participated in: (1) the Global Congress on Sustainable Development (June 10-13, Bangkok, Thailand); (2) the International Conference "Digital Reality: New Challenges in Cartography, GIS, and Remote Sensing" (November 7-8, Almaty, Kazakhstan); (3) the conferences "Geographical Awareness" (November 20, Chicago, USA) and "Environment and Life Sciences" (November 21-23, Chicago, USA).

Cooperation. The teaching staff delivered a series of guest lectures for students enrolled in the Kazakh National University (KazNU) under the educational programs: 6B07301 – Geodesy and Cartography, 6B07302 – Geoinformatics, 6B07304 – Cadaster (November, Almaty, Kazakhstan).

Achievements and awards. M. Ulugbek NUUZ was ranked among the top 1000 universities worldwide, placing 781-790 in the QS World University Rankings 2025. It was also listed among the top 600 universities in the Times Higher Education (THE) Impact Rankings.

Publications. Since 1997, NUUZ has been publishing the "NUUZ Newsletter" to showcase the results of research activities and articles by faculty and students.

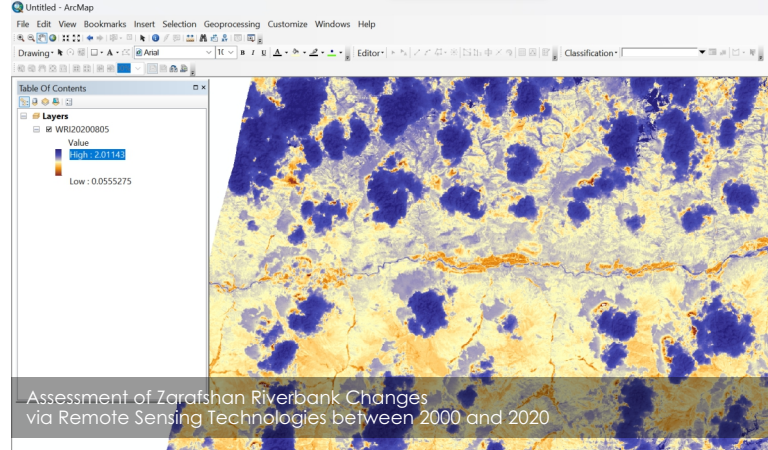
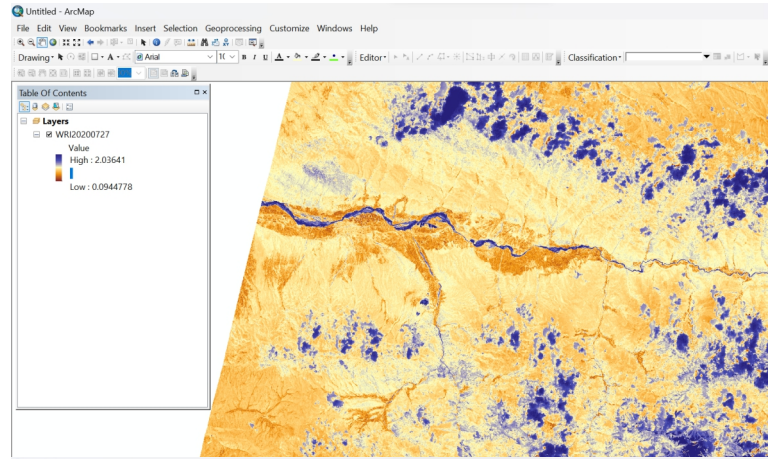
Source: <https://nuu.uz/ru/>

Samarkand State University named after Sharaf Rashidov

The Samarkand State University named after Sharaf Rashidov³⁰⁴ (SamSU) was founded in 1927. The University has 14 faculties. The Faculty of Geography and Ecology offers training in such disciplines as "Ecology and environmental protection", "Hydrometeorology" (Bachelor's degree) and "Ecology", "Hydrology" (Master's degree).

Major events and activities in 2024

Research. The Department of Geology and Hydro-meteorology is conducting research on "Assessing changes in river flow using geographic information systems (using the example of the Zerafshan River)". In collaboration with scientists from the Hungarian Institute of Botany and Ecology and the University of Szeged, SamSU researchers are developing new methods and approaches aimed at restoring endangered pastures of the Kyzylkum Desert.



Assessment of Zerafshan Riverbank Changes via Remote Sensing Technologies between 2000 and 2020

Field Research on Soil Seed Stock and Soil Fertility Across Sandy Rangelands of the Kyzylkum Desert in Navoiy Province



³⁰⁴ Resolution of the President of the Republic of Uzbekistan No.PP-82 of 13.01.2022 "On Additional Measures to Further Improve the Activities of Samarkand State University"

A researcher from the Institute of Agrobiotechnology and Food Security at SamSU is carrying out a study at the University of Greifswald (Germany) on "Development of Evaluation Criteria for the Current State of the Zerafshan River Forest Ecosystems", as part of the Marion Dönhoff Fellowship

Capacity building. SamSU organized: (1) a workshop "Climate change and isotope ecology" for faculty of the Institute of Biochemistry, followed by a scientific field trip to the Turkestan and Nurata mountain ranges³⁰⁵ (March 24); (2) international summer schools "Young Ecologists" (starting on July 5) and "Information Technologies in Agriculture" for faculty and students from Russia and China (starting on July 11).

SamSU staff completed a [six-month international training course](#) on combating land degradation (GRO-LR) at the Agricultural University of Iceland.

Events. The University hosted: (1) the international conference "Anthropogenic Landscape Science: Research Methods, Modernization, and Sustainable Development" (May 17-18); (2) "Agrobiotechnological Problems and Innovative Solutions in Intensive Agriculture" (September 27).

University representatives participated in: (1) the International Scientific Conference "[Important directions of "green" economy: eco-, nano-, bio- and information technologies](#)" (June 13, Ashgabat, Turkmenistan); (2) the 3rd Forum of Rectors of SCO Agricultural Universities (September 19-29, Northwest Agriculture and Forestry University, PRC).

Cooperation. SamSU opened a [representative office](#) of Tottori University (Japan) aimed at promoting the implementation of innovative technologies and research results developed by Japanese scientists in arid agriculture. SamSU became a member of the International Alliance for Innovation in Agricultural Education and Research along the Silk Road. A Memorandum of Understanding was signed between SamSU and the [Tuscia University](#)³⁰⁶ (Viterbo, Italy).

Agreements were reached with: (1) the Stirling Foundation (Utah, USA) [for research](#) on pasture conservation and management; (2) Kyoto University (Japan) for [joint projects](#) in agriculture and agrobiotechnology; (3) Southwest University of Agriculture and Forestry (China) to [conduct](#) joint scientific research, establish shared laboratories, and facilitate faculty and student exchanges.

Achievements. SamSU achieved the status of a [5-Star University](#) in the QS Stars Rating.

Publications. SamSU published 6 issues of the "[Scientific Newsletter of the Samarkand State University](#)" journal in 2024. These publications featured articles by the Institute's staff members.

In 2024, six issues of the "Scientific Bulletin of Samarkand State University" were published, featuring research articles authored by the university's faculty and scholars.

Source: <https://www.samdu.uz/ru>

9.2. Regional Higher Education Institutions and Professional Development Centers

9.2.1. Regional Training Center at SIC ICWC

Water sector professional development courses in Central Asia were established at SIC by the ICWC decision (ICWC Protocol No.24 of 23.10.1999). The courses were founded by the ministries of agriculture and water resources of five CA states, SIC ICWC, BWO Amu Darya and BWO Syr Darya. Later, these vocational training courses were transformed into the Regional Training Center (RTC) at SIC ICWC.

Major events and activities in 2024

In line with the decision of the 86th ICWC meeting³⁰⁷: (1) on strengthening training activity at both regional and national levels, the SIC ICWC began publishing

information on upcoming training courses and professional development programs from open sources on the RTC website³⁰⁸ and in the "Training and Capacity-Building Courses"³⁰⁹ section of the Water Yearbook; (2) the 90th anniversary of the late V.A. Dukhovny, 90th anniversary of N.K. Kipshakbaev and 80th anniversary of R.A. Giniyatullin were commemorated during the scientific-practical conference "Water in Central Asia: the Future in Cooperation" (November 8, Tashkent). Throughout the year, in cooperation with:

■ **SIC ICSD and UNDP Turkmenistan**³¹⁰ 2 workshops for members of the national coordination

³⁰⁵ With the participation of Professor Elisabetta Boaretto from the Weizmann Institute of Science

³⁰⁶ A leading university in agri-biotechnology, fruit growing and viticulture, climate change and forestry

³⁰⁷ April 12, 2024, Shymkent

³⁰⁸ <http://cawater-info.net/training/index.htm>, section "Event Calendar", <http://cawater-info.net/training/calendar.htm>

³⁰⁹ https://www.cawater-info.net/yearbook/index_e.htm

³¹⁰ As part of the GCF project "Development of the National Adaptation Planning Process in Turkmenistan"

mechanism and decision-makers and 1 training-of-trainers (ToT) session on mainstreaming climate change adaptation into water sector planning in Turkmenistan were held. A [teaching guide](#) "Integration of Adaptation to the Effects of Climate Change in Water Management Planning in Turkmenistan" was published;

□ **IWMI** a study tour, including a dialogue on transboundary water management and the workshop "Transboundary Water Cooperation: from the Experience of the Fergana Valley to the Waters of South Asia" were held ([June 24-27](#), Tashkent, Andijan and Fergana regions);

□ **OSCE Programme Office in Astana** a workshop "Safety of Hydraulic Structures" for heads and chief specialists of the Shu-Talas, Balkhash-Alakol, and Syr Darya Basin Inspections of Kazakhstan, including field visits to the Upper Chirchik hydrosite and the Charvak reservoir were organized ([July 22-24](#), Tashkent).

SIC experts presented as guest lecturers: (1) on "Transboundary Water Use: Legal Aspects" before the staff of the [Institute of Legislation and Legal Policy](#)

under the President of the Republic of Uzbekistan (10 May); (2) during the Training Workshop on Water Diplomacy for University Faculty of Central Asia (August 5-16); (3) at the workshop for BISA specialists at "[Suvchilar Maktabi](#)" / "School of Water Workers" (November 13). Regular practical trainings are offered for farmers and design engineers on "Hydraulic Calculation of Drip Irrigation Systems" at the School of Water Workers and lecture courses are delivered for students on "Taxation and Fiscal Policy" at the Tashkent State University of Economics.

Under the memorandum of cooperation between SIC ICWC and NRU "TIAME", SIC participated in the international accreditation process of NRU "TIAME" and hosted an introductory session for bachelor's students in Water Management and Land Reclamation ([January 26](#)).

Serena Vincenti, a student of AgroParisTech (Paris-Saclay University, France), completed an internship at SIC ICWC Regional Information-Analytical Centre, focusing on regional water cooperation and analytical data processing ([April 1-June 28](#)).

9.2.2. University of Central Asia (Kazakhstan, Kyrgyzstan and Tajikistan)

The [University of Central Asia](#) was founded in 2000 to promote socio-economic development in Central Asia, particularly in its mountain communities, by offering an internationally recognized standard of higher education. UCA is comprised of the: (1) [School of Arts and Sciences](#) (SAS), offering a five-year undergraduate program in six majors, including "Earth and Environmental Sciences"; (2) [Graduate School of Development](#) (GSD), which includes the [Mountain Societies Research Institute](#) (MSRI); (3) [School of Professional and Continuing Education](#) (SPCE).

In 2024, several new educational centers of UCA were opened: the Training Center in Kulob, Khatlon Region ([January 4](#)); the Center for Continuing Education in Osh ([June 6](#)); the Research and Partnership Center in Naryn, established jointly with Naryn State University ([September 23](#)). The GSD of UCA received a grant for the establishment of the "ORCID Community: KG Initiative", a unified research network in Kyrgyzstan. The ORCID Community: KG Initiative positions Kyrgyz scholars for success in an increasingly competitive international research environment.

Major events and activities in 2024

Capacity building. UCA organized: (1) a leadership development program for women from Kazakhstan, Kyrgyzstan and Tajikistan aimed at fostering confidence and leadership-related competencies ([July 15](#), Almaty); (2) the 3rd OECD Sustainable Infrastructure Programme in Asia (SIPA) Summer School, jointly organized with the OECD, where experts from Central Asia and Mongolia discussed green and climate-resilient investment opportunities in the energy and industrial sectors ([October 16](#), Astana).



Events. UCA organized: (1) the 3rd regional webinar "Decarbonizing Infrastructure: Challenges and Solutions for Low-Carbon Energy Systems in Central Asia and Mongolia" ([June 13](#)); (2) a joint workshop with FAO "Uniting for Food Security: Perspectives from Central Asia and the Caucasus" ([May 27](#), Bishkek); (3) the 2nd international workshop on mountain conditions "Glaciers of Central Asia" within UCA's initiative "Climate Change and Sustainable Development in Mountain Regions" ([October](#), Khorog, Tajikistan); (4) the conference "Scarcity and Boundaries: Environment, Economy, and Society in Central Asia" ([November 5](#), Bishkek).

UCA's leadership and experts also participated in COP29 ([November 11-12](#), Baku), where they presented research findings on the use of modern technologies for disaster monitoring and the impact of cli-



mate change on natural resources in the Batken and Naryn provinces.

Cooperation. UCA signed memoranda of understanding with: (1) Osh State University (June 5); (2) Karakoram International University (Pakistan) to promote education and sustainable development in mountain regions of Central and South Asia (November 5); (3) the National Television and Radio Broadcasting Corporation of Kyrgyzstan (NTRC) to advance education and best practices in media and communications in Kyrgyzstan³¹¹ (December 18).

Publications. See: https://ucentralasia.org/publications?page=1&display_mode=grid.

Source: <https://ucentralasia.org/ru>

9.2.3. Central Asian University of Environmental and Climate Change Studies – Green University

The **Green University** was established in 2023. It is the first higher education institution in Central Asia specializing in environmental and climate research. The university operates under the auspices of the Ministry of Ecology, Environmental Protection and Climate Change of the Republic of Uzbekistan and serves as a regional hub for education, scientific research, and environmental policy development. The University offers the following **undergraduate** programs: (1) Environmental and Sustainable Management; (2) Ecology and Public Administration; (3) Environment and Economics. The **master's degree** programs include: (1) Sustainable Development; (2) Sustainable Finance; (3) Environmental Law; (4) Environmental Communication.

The **University** includes in its structure: (1) Research Institute of Environmental Protection and Nature Conservation Technologies; (2) Research Institute of Forestry; (3) Research Institute of Hydrometeorology; (4) Center for Retraining and Advanced Training of Employees in the Field of Environmental Protection; (5) "Eco-Energy" Scientific Application Center; (6)

"Darkhan" Scientific Experimental Farm; (7) Tashkent Hydrometeorology Technical College; (8) Forestry Technical College. A campus and office of the International Union for Conservation of Nature (IUCN) have also been established on the university grounds.

The Green University conducts advanced research in climate change mitigation and adaptation; sustain-

able urban development and green infrastructure; biodiversity conservation and natural resource management; circular economy and environmental technologies, etc.

Capacity building. The University organized: (1) Green Dialogues lecture series (January 12, January 17, September 11); (2) guest lecture by Dr. Ammar Younas "Harmonizing Technology and Nature: An Intercultural Approach to AI and Environmental Sustainability" (March 1); (3) conference in partnership with Ergo Analytics "Emerging Trends in Global Sustainable Development Research" (March 16); (4) educational program "Climate Box"³¹² (May 13); (5) lecture series on international environmental law and climate governance (May 20-30).

Events. The university hosted: (1) Central Asian COP28 Debrief Discussions with participation of environmental ministers of CA countries (February 10); (2) 1st international scientific and practical conference "Environmental Consequences of the Aral Sea Desiccation" (April 22); (3) ceremony of launch³¹³ of the scientific expedition to the dried Aral Sea bed (August 23); (4) workshop³¹⁴ on waste-to-energy technologies (August 28); (5) international scientific and practical conference "Nature-Based Solutions (NBSEP) to Address Environmental Challenges" (November 30); (6) panel discussion "Climate and Energy" and the opening of the "Infinite Universe" exhibition within the framework of the Green Dialogue 2025 initiative³¹⁵ (December 6).

³¹¹ The media projects will showcase how UCA's innovative research in climate change and environmental sustainability is improving the quality of life in remote communities of Kyrgyzstan and Central Asia

³¹² With the support of UNDP, the Ministry of Preschool and School Education of Uzbekistan, and the Zamin Foundation

³¹³ In cooperation with the Ministry of Ecology, Environmental Protection and Climate Change of Uzbekistan, the Xinjiang Institute of Ecology and Geography of China, and the Academy of Sciences of Uzbekistan

³¹⁴ Organized with the participation of the Chinese company Shanghai SUS Environment Co., Ltd., which specializes in sustainable waste management

³¹⁵ In cooperation with the Embassy of France in Uzbekistan and the French Development Agency (AFD)

University staff participated in: (1) the 14th Meeting of the Conference of the Parties to the Convention on Migratory Species (CMS COP14) (February 12-17, Samarkand); (2) 1st Uzbekistan-China Education Forum "Prospects for Cooperation Between Universities of Uzbekistan and China" (February 24, Tianjin, China); (3) 1st CAREC Working Group on Skills Development³¹⁶, presenting Green University's experience in establishing a Climate Center for Science and Education (March 1, Tashkent); (4) international conference "Prospects and Regional Features of Efficient Use of Green Economy Potential in Uzbekistan" (April 26, Bukhara); (5) conference "Beyond Borders: Central Asia amid Climate Change, Water Scarcity and Migration Challenges" (October 15, Tashkent); (6) COP29, where the University represented the Uzbekistan's Environmental Pavilion (November 11-22, Baku); (7) international conference on climate investment and finance under the theme "Global Cooperation and Green Future" (December 8-9, Guangzhou, China).

Cooperation. Green University actively develops academic and institutional partnerships, providing

students and faculty with access to joint research, guest lectures and exchange programs with leading global universities.

Partnership and cooperation discussions in 2024 included meetings with KOICA (March 9, October 9, October 23-24); OSCE (March 20); ADB (April 4, October 3); USGS (April 25); Ministry of Natural Resources and Ecology of the Russian Federation (April 26); GCF (July 11); ICBA and the Embassy of the UAE (August 1); AFD (September 27); Yale University (October 16); World Education and Culture Organization (WECO) (October 17) and others.

Achievements and awards. Green University received: (1) an Honorary Certificate for participation in the "Eco Zakovat" competition during the celebration of the "Day of Ecological Knowledge", reaffirming its status as a national center for environmental education (April 14); (2) a prestigious award in the category "Climate Awareness and Education" at the international climate competition "Green Eurasia" (October 2, Yerevan, Armenia).

Source: <https://greenuniversity.uz/en/>

9.3. Professional Development Courses and Trainings

9.3.1. Professional Development Courses and Trainings in 2024

February 2, March 1, April 5, September 14, October 10, November 14, December 5 – GOFC-GOLD CARIN (Central Asia Regional Information Network) [Webinar Series](#) (No 14-20).

January 22-26, March, May, September 12 – trainings within the framework of the USAID Project on the Restoration of the Ecosystem on the Drained Bottom of the Aral Sea II.

May, October 14 – WEF Nexus training sessions and lecture series – **February, March, April, June, September, November** (No 21-27) within the framework of the USAID Regional Water and Vulnerable Environment Activity in Central Asia.

April 15 – training "Climate Risk Analysis and Capacity Development/CRACD" organized within the framework of the GIZ Program "[Climate Risk Management in Central Asia](#)".

March 11-12, March 13-15, April 7-8 – training series within the framework of the project "[Developing a National Adaptation Planning Process in Turkmenistan](#)" (UNDP/GCF) on the topics: "Integration of Climate Change Adaptation into Water Planning of Turkmenistan," "Vulnerability of the Water and Agriculture

Sectors to Climate Change," and "Adaptation Tools for Water and Agriculture Sectors".

August 5-16 – "Water Diplomacy Training for University Faculty Members of Central Asia"³¹⁷.

October 28-31 – training on improving hydrological monitoring and hydrological modeling skills, and **October 28-November 1** – workshop on modernization of operational hydrology and hydrological forecasting in national meteorological and hydrological organizations of Central Asia within the SAPHIRE Central Asia Project³¹⁸ (Smart & Precise Prognostic Hydrology for Innovative Risk Management and Resource Use Efficiency in Central Asia).

December 11 – GeoX workshop on climate and water research in Central Asia.

September 24-27, December 11-13 – regional training series on integrated analysis in the field of energy and climate using modeling approaches within the [SECCA](#) Project.

January 16, February 13, February 27 – regional technical webinar series within the framework of the UNDP Project "Climate Change and Resilience in Central Asia".

³¹⁶ Within the framework of the Central Asia Regional Economic Cooperation (CAREC) Program with the support of the Asian Development Bank and the Japan Fund for Poverty Reduction (JFPR)

³¹⁷ Organized by NRU "TIAME" in cooperation with UWED, the Diplomatic Academy of the Ministry of Foreign Affairs of Kyrgyzstan and IWMI within the framework of the Erasmus+ HWCA project

³¹⁸ Implemented by [Hydrosolutions GmbH](#)

Series of webinars held by the International Water Training Institute/Hydroschool (see on <https://hydroschool.org/webinars/>)

NASA Applied Remote Sensing Program Trainings/ARSET (see on <https://appliedsciences.nasa.gov/get-involved/training?page=1>)

August 15-22 – 6th Aral Sea Summer School organized by GKU.

August 13-14 – summer school on hydrological modeling within the WE-ACT Project.

September 9-13 – Annual Central Asian Leadership Program on Environment for Sustainable Development/CALP.

9.3.2. Professional Development Courses and Trainings in 2025

Training workshops of CAREC:

January 29-30 – youth seminar “Drops of the Future” on the water, energy and food nexus.

April 3 – webinar “Enhancing Circularity in Infrastructure Project Procurement”.

April 8 – webinar “Circular Economy: A Catalyst for ESG Efficiency”.

September 15-19 – Annual Central Asian Leadership Programme on Environment for Sustainable Development/CALP.

Online education on environmental protection and sustainable development is available on: <http://elearning.carececo.org/>.

The Water Training Institute/Hydroschool provides training on the following disciplines: “Surface Water Hydrology”, “Surface Water Hydraulics”, “Water Quality” and “Groundwater”. In addition, the Institute will offer a series of webinars in 2025.

The International Water Association/IWA offers short-term courses (https://www.iwa-network.org/iwa-learn?_learning_event_type=Short-term%2520courses), self-paced courses (<https://iwa-network.org/iwa-learn-self-paced-courses/>) and webinars (<https://iwa-network.org/iwa-learn-webinars/>).

The University of Geneva/EUG conducts a short-term course “International Water Law and the Law of Transboundary Aquifers” (<https://www.unige.ch/formcont/en/courses/water-law#11>).

NASA Applied Remote Sensing Program Trainings/ARSET available on: https://appliedsciences.nasa.gov/get-involved/training?program_area=All&languages=All&source=All&page=0.

Series of webinars **GOFC-GOLD** Central Asia Regional Information Network/CARIN.

A wide range of educational activities and formats are offered by the **Geneva Water Hub**, including an annual summer school, distance-learning courses, and free open online courses (<https://www.genevawaterhub.org/what-we-do/education-and-training>).

UNESCO-IHE online courses, <https://www.un-ihe.org/courses/online>.

GKU online courses in the field of sustainable development, <https://edu.dku.kz/>.

WEFE Nexus lecture series held regularly online within the framework of the USAID Regional Water and Vulnerable Environment Activity. For more details, please, refer to https://www.riverbp.net/community_of_practice/hub/webinars/wefe/?fbclid=IwY2xjawK0owdleHRuA2FibQlxMABicmlkETFGZ1E5Z2htMnNydFpSVG9KAR6wUAmVTmsfUU2Mk0oj18cGPizhfAu2jQPrEk0UTueS-EkBsWDcGzKSvWB28w_aem_87HYdxXhAAj64N_6LTU5Pw.

Summer Schools:

June 16-21 – 2nd World Summer School “Innovations in Land Use and Nature Conservation in Central Asia”³¹⁹, Samarkand, Uzbekistan (refer to <https://green-ca.net/news/call-for-applications-2nd-international-samarkand-summer-school-2025/>).

June 23-July 8 – IPROMO³²⁰ 2025 “Glaciers: Understanding, Conservation, and Adaptation to Climate Change,” Pieve Tesino and Ormea, Italy (refer to <https://www.fao.org/mountain-partnership/our-work/capacity-development/ipromo/ipromo-2025/en>).

August 15-24 – 7th Aral Sea Summer School (refer to https://crs.dku.kz/ru/osnovnye-napravleniya/programma-po-vodnym-resursam-i-klimatu/letnyaya-shkola-na-aralskom-more/?fbclid=PAZXh0bgNhZW0CMTEAAaaZ_87OiyF2N8rPmpKfloCo3pkQDMXQii4rS_YW97fnUJ7iPHHnqgE7yQ_aem_XCg32L6WAeDD-9dxzLSXw).

August 20-31 – Educational Expedition “Adventure of Science: Women and Glaciers in Central Asia”, Ala-Archa, Kyrgyzstan (refer to <https://www.inspiringgirls.org/homeru>).

September 15-19 – Summer School “Beyond 2030: Pathways and Priorities for a Sustainable Future”, Potsdam, Germany (refer to <https://potsdam-summer-school.org/>).

³¹⁹ Within the framework of the Regional Programme “Integrative and climate sensitive land use in Central Asia” (ILUCA)

³²⁰ IPROMO is an annual two-week course on sustainable mountain development