



*Baku State University*

2025 REPORT ON

**13** CLIMATE  
ACTION





# Introduction

## SDG 13: CLIMATE ACTION

Baku State University (BSU) demonstrates a strong commitment to sustainable development, environmental protection, and youth engagement through a wide range of academic, research, and community activities. The university actively integrates the United Nations Sustainable Development Goals (SDGs) into its educational programs, volunteer initiatives, and international collaborations, emphasizing climate action, renewable energy, biodiversity conservation, and smart agricultural practices. Through partnerships with governmental bodies, NGOs, and private sector organizations, BSU fosters practical experiences for students and faculty, enabling them to contribute meaningfully to societal development and environmental stewardship. Initiatives such as field trainings, scientific conferences, workshops on artificial intelligence in agriculture, and the establishment of green campuses highlight the university's role as a center for innovation and sustainable education.

Furthermore, BSU places a strong emphasis on youth development and volunteerism, creating platforms like "BDU Volunteers" to involve students in social, ecological, and humanitarian activities. Students participate in events ranging from tree planting campaigns and coastal cleanups to climate conferences and recycling programs, which cultivate environmental awareness, leadership, and civic responsibility. These programs not only enhance students' academic and professional skills but also strengthen national and international networks, exemplified by BSU's participation in COP29, the International Sustainable Campus Network, and other global initiatives. Collectively, these efforts reflect a holistic approach to sustainability, combining education, research, and active social engagement to address pressing global challenges.

**For previous year's report please see:**

<https://sdg.bsu.edu.az/research-on-sdg-13>





Baku State University monitors greenhouse gas (GHG) emissions across Scope 1, Scope 2, and Scope 3 categories following internationally recognized standards. The University is committed to tracking, reducing, and reporting its carbon footprint to support climate action and sustainable campus development.

### Emissions Recording History

- **Year Emissions Recording Began:** 2021
- **Baseline Year:** 2021
- **Scope 1 and Scope 2 Emissions in Baseline Year:** 2,567 tCO<sub>2</sub>e

This provides a clear reference point for monitoring progress in emissions reductions over time.

### Emissions Data Overview

#### Baseline Year (2021) vs Previous Year vs Reporting Year

Emission Scope	Baseline Year 2021 (tCO <sub>2</sub> e)	Previous Year (tCO <sub>2</sub> e)	Reporting Year (tCO <sub>2</sub> e)	Reduction (Reporting Year vs Previous Year)	% Reduction
Scope 1 & 2	2,567	1,767	1,590	177	10%
Scope 3	–	2,213	1,881	332	15%
<b>Total</b>	<b>2,567</b>	<b>3,980</b>	<b>3,471</b>	<b>509</b>	<b>12.8%</b>

Note: Scope 3 emissions were not recorded in the baseline year 2021.

### Emissions Intensity After Reduction



Per capita emissions after reduction:

- Scope 1 & 2 per capita: **0.08 tCO<sub>2</sub>e**
- Scope 3 per capita: **0.10 tCO<sub>2</sub>e**
- Total emissions per capita: **0.18 tCO<sub>2</sub>e**

These figures demonstrate continued improvement in environmental performance relative to the University population.

Within one year, Baku State University achieved:

- **10% reduction in Scope 1 and 2 emissions** (from 1,767 tCO<sub>2</sub>e to 1,590 tCO<sub>2</sub>e)
- **15% reduction in Scope 3 emissions** (from 2,213 tCO<sub>2</sub>e to 1,881 tCO<sub>2</sub>e)
- **12.8% overall emissions reduction**, equivalent to **509 tCO<sub>2</sub>e avoided**

Since recording began in 2021, Scope 1 and 2 emissions have decreased from **2,567 tCO<sub>2</sub>e at baseline** to **1,590 tCO<sub>2</sub>e in the reporting year**, showing consistent progress in reducing operational carbon footprint.

Metric	Last Reporting Year	Reporting year	Unit	Notes
Total Campus Building Footprint	128,423	128,423	m <sup>2</sup>	Footprint unchanged; reflects total area of all campus buildings.
Total Energy from Renewables	2,198,088	2,527,801	kWh	Includes energy consumed, stored, or sold.
% Increase in Renewables	—	15%	%	Growth in renewable energy generation compared to last year.



## A training session at BSU dedicated to World Reserves and National Parks Day

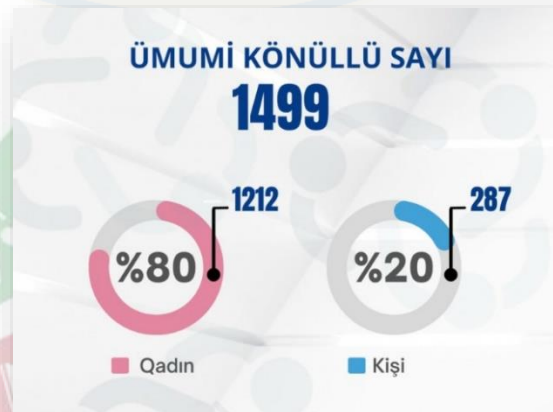
Employees of the Biodiversity Conservation Service of the Ministry of Ecology and Natural Resources held a training session at the Faculty of Ecology and Soil Science of Baku State University on the occasion of World Reserves and National Parks Day on January 11. During the training, information was provided about specially protected natural areas such as national parks, state nature reserves, and sanctuaries, as well as recent developments in this field. Plans for establishing a Geopark based on the Absheron mud volcanoes State Nature Reserve and a Biosphere Reserve based on the Zagatala State Nature Reserve were also discussed. In addition, the creation of two new national parks, Bozdag and Ilisu, was mentioned. It was noted that currently 10 national parks and 10 state nature reserves operate in the country.

**For more information, please click here**

## The chairman of BSU Volunteers: Our organization has become a favorable platform for students development.

Volunteering in Azerbaijan has become not only an activity but also a lifestyle for young people. One of the key directions of the country's youth policy is encouraging youth participation in volunteer activities, reflecting their patriotism, commitment to values, and humanitarian spirit. This policy, founded by Heydar Aliyev and continued by Ilham Aliyev, was strengthened by the adoption of the Law on Volunteer Activity in 2009 and the declaration of 2020 as the Year of Volunteers in Azerbaijan.

Today, many volunteer groups and organizations operate in the country, among which "BSU Volunteers" holds a special place at Baku State University. The organization brings together around 1,500 active student volunteers and has contributed to the university's



achievements over the past five years by creating opportunities for students' personal and professional development. In 2024 alone, more than 13,000 volunteer students participated in over 300 events organized by the group.

Within the framework of the "Green World" program related to the Year of Solidarity for a Green World, 18 events were

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organized to increase youth awareness about sustainable development and ecosystem protection. The organization also collaborates with other volunteer groups and participated in events organized by the Azerbaijan Volunteer Organizations Alliance, where 706 BDU volunteers represented the university.

BDU volunteers also played an active role in the 29th session of the Conference of the Parties to the United Nations Framework Convention on Climate Change, COP29, helping raise awareness about climate change issues. In addition, through the “Internship with Volunteers” program, students gain practical experience within university structures, and 18 volunteers have already been employed at the university.

Overall, the activities of the five-year-old volunteer organization reflect the dynamic volunteer movement at the 105-year-old Baku State University. The dedication of volunteers to their country, state, and university continues to motivate them to achieve further success.

**For more information, please click here**



**537 students of BSU were awarded for their active volunteer work at COP29**



The activities of 537 students from Baku State University who participated in organizing the 29th session of the United Nations Framework Convention on Climate Change, COP29, held from November 11–22 last year, were highly appreciated by the President of Azerbaijan, Ilham Aliyev, who awarded them letters of appreciation and monetary rewards. During the event, volunteers worked in 17 departments across 35 different fields, performing tasks ranging from welcoming guests at the airport to supporting operations at the Baku Olympic Stadium where the conference was held.

They also assisted staff of the COP29 Azerbaijan Operating Company and UN representatives in carrying out their duties. In addition, several department heads and faculty members of Baku State University were also awarded letters of appreciation by the President for their valuable contribution to the organization of COP29.

**For more information, please click here**

## **An International Scientific Conference on the topic of Application of Modern Equipment and Methods in Improving Food and Water Security is being held at BSU**



An international scientific conference titled “Application of Modern Equipment and Methods in Improving Food and Water Security” is being held at Baku State University, jointly organized by the university, Bayramli Group LLC, and the German company AnalytikJena. At the opening ceremony, the rector Elchin Babayev emphasized the global importance of food and water security and noted that it is one of the priority areas of state policy in Azerbaijan. He highlighted that research centers,

modern laboratories, and the Ekomekan and ECOLEAD clinics at the university support new approaches to food safety, environmental problem solving, and efficient use of natural resources. Cavid Bayramli also stressed the importance of public-private partnership and the company’s activities in establishing molecular biology laboratories in several regions. During the scientific session, Marina Mukhina, Aynur Omerli, and Oliver Buttel delivered presentations on modern analytical equipment and methods. The



conference discusses techniques such as atomic absorption spectroscopy, ICP-MS, ICP-OES, and TOC/TN analysis and their applications in food quality control, waste management, and solving ecological problems, and continues with scientific presentations.

**For more information, please click here**

## **The State Youth Policy is being successfully implemented**

At Baku State University, various projects are implemented to increase the public activity of students and staff and encourage their participation in the country's socio-cultural life. The university strengthens cooperation with state institutions, NGOs, and public organizations to implement joint social initiatives. In 2024, cooperation expanded and more than 900 events were held focusing on state youth policy, humanitarian issues, the legacy of Heydar Aliyev, the ideology of Azerbaijanism, and the promotion of national and spiritual values. During the year, cooperation memorandums were signed with institutions such as Veysəloğlu Group of Companies, National Depository Center of Azerbaijan, Education Development Fund of Azerbaijan, National Library of Azerbaijan, Azerbaijan Medical University, International Organization of Turkic Culture (TÜRKSÖY), and the Probation Service of the Ministry of Justice. Several media and discussion rooms were also opened at the university.



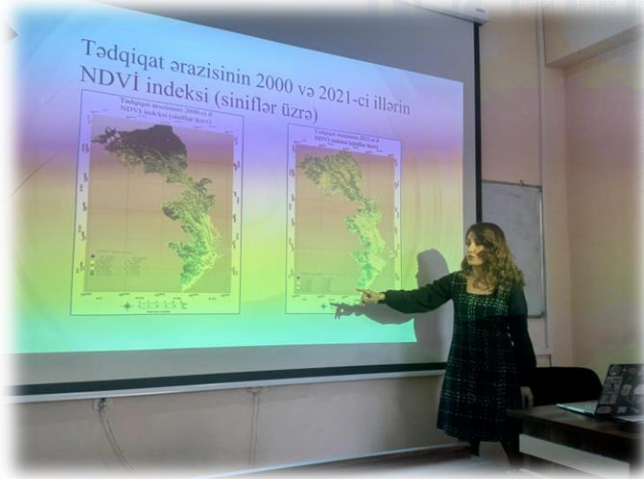
Within the framework of the “Year of Solidarity for a Green World”, more than 70 environmental awareness events were organized. In connection with COP29, about 30 events were held at the university, and 537 students participated as volunteers and were awarded by the President of Azerbaijan, Ilham Aliyev.

Various projects such as “Youth Week 2”, “From Student to Schoolchild”, “COP29 Week”, the “Young Cultural Journalists School”, a career festival, the “Young Programmers” competition, the “Young Leaders” forum, and “BDU Volunteers Week” were organized during the year. Student organizations remained very active: the Student Youth Organization held 161 events, the Student Trade Union Committee organized 126, and the “BDU Volunteers” organization conducted 389 events. Volunteer activities expanded to 1,500 members, and students participated in more than 100 projects and activities outside the university. In addition, BSU students took part in more than 40 international and national competitions, contributing to the successful implementation of state youth policy in Azerbaijan.



For more information, please click here

## An assessment of the ecological situation in the Həkəriçay reservoir was conducted at BSU



A scientific seminar was held at the Faculty of Ecology and Soil Science of Baku State University, where Gunel Heydarzadeh presented research on the quantitative and qualitative assessment of the dynamic state of forest and vegetation cover in the Hakarichay basin (Lachin, Gubadli, and Zangilan districts) during the occupation period. The study analyzed ecological changes in different parts of the basin and their interaction with the regional hydrological regime. Using satellite data, the NDVI index of forest-vegetation cover for different years was determined, area

indicators were calculated, and maps showing increasing, decreasing, and unchanged areas were prepared. Dynamic maps and histograms were created by comparing satellite images from different years, while diagrams illustrating the river network and hydrological dynamics of the districts were also produced. The research further evaluated aerosol levels, analyzed the MNDWI water index, and examined the impact of hydrological changes on vegetation cover. As a result, a multilayer electronic map of the southwestern region of Azerbaijan was developed using processed satellite imagery, including relief layers and multispectral indices such as NDVI, AFRI, and NDWI.

For more information, please click here





## BSU Volunteers Participate in Tree Planting Campaign Dedicated to Azerbaijan Youth Day.

On February 1, a tree-planting campaign dedicated to Azerbaijan Youth Day was held in Mushfigabad settlement. The event was jointly organized by the Ministry of Ecology and Natural Resources of Azerbaijan, the Ministry of Youth and Sports of Azerbaijan, and the Youth Foundation of Azerbaijan in partnership with the Azerbaijan Volunteer Organizations Union, with participation from members of the “BDU Volunteers” organization of Baku State University. The event brought together officials, staff members, representatives of Youth Houses, NGOs, and volunteers, and included the planting of Eldar pine and olive trees suitable for the soil and climate conditions of the Absheron Peninsula.



For more information, please click [here](#)

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**Methodology for calculating biomass and carbon sequestration potential in Azerbaijan Forests brochure published by BSU staff.**



A brochure titled “Methodology for Calculating Biomass and Carbon Sequestration Potential in Azerbaijan’s Forests” was prepared by Yusif Abiyev from Baku State University and Cuma Uyk from the Food and Agriculture Organization Regional Office for Turkey, Asia, and the Caucasus. The brochure was developed within a project supported by the Regional Development Public Union under the “COP29 International Initiatives” grant program

with support from the Ministry of Ecology and Natural Resources of Azerbaijan and the State Support Agency for Non-Governmental Organizations of Azerbaijan. Students from the BSU Faculty of Biology’s Student Scientific Society—Nazira Abbasova, Fariz Hasanaliyev, and Aydan Valiyeva—also contributed to the research.

The brochure explains the ecological importance of Tugay forests and provides a systematic methodology for calculating forest biomass and carbon storage using international standards, including assessments of above-ground and below-ground biomass, deadwood, and soil organic carbon. The study examined Tugay forests along the Kura River and the carbon sequestration potential of the Qarayazi State Nature Reserve. It also proposes a special allometric equation allowing the analysis of satellite images from Azercosmos to assess the carbon sequestration potential of plain forests, based on carbon stock evaluations conducted in Samur-Yalama National Park. Training sessions on this methodology were also organized at the university for experts, teachers, and students.

**For more information, please click here**

## **BSU staff participates in the event dedicated to the 21st anniversary of the creation of Hirkan National Park.**

Professors from the Faculty of Biology at Baku State University—Mirmusa Jafarov, Yusif Abiyev, and PhDs in Biology Vazeh Bakhshiyev, Sevinj Mammadova, and Tahir Yunuslu—participated in a roundtable dedicated to the 21st anniversary of Hirkan National Park, held in Lankaran. The event was organized by the Biodiversity Protection Service under the Ministry of Ecology and Natural Resources of Azerbaijan and included scientists from Lankaran State University, the Institutes of Zoology and Botany, as well as representatives of the World Wide Fund for Nature and other partner organizations.

During the discussions, the ecological importance of Hirkan National Park, known for its rich biodiversity and rare flora and fauna, was emphasized. Experts highlighted the need



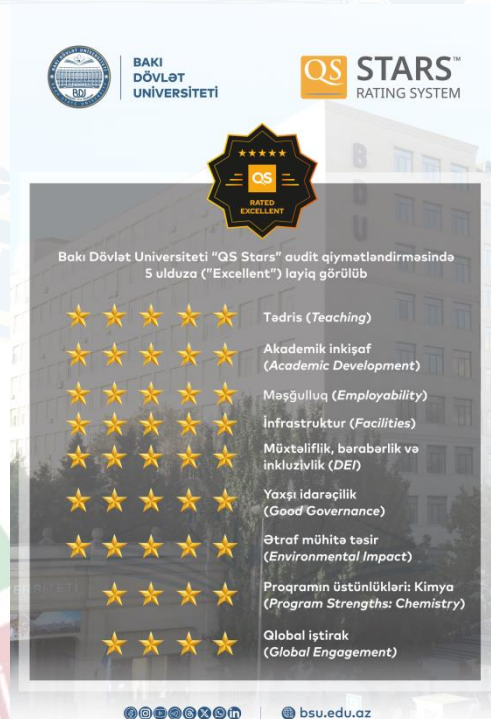
for stronger cooperation to protect its ecosystems, expand scientific research, and develop ecotourism. They also noted the importance of including the unique Hirkan forests along the southwestern and southern coasts of the Caspian Sea in the UNESCO World Heritage List. At the end of the event, participants exchanged ideas on strengthening cooperation and implementing broader scientific and environmental projects for the future development and conservation of Hirkan National Park.

For more information, please click here

## BSU has been awarded 5 stars in the "QS Stars" audit evaluation

Baku State University (BSU) has achieved significant international success by receiving a 5-star ("Excellent") rating in 7 out of 9 categories in the QS Stars audit conducted by QS Quacquarelli Symonds. The university excelled in teaching, academic development, modern facilities, graduate employability, environmental initiatives, diversity and inclusion, and good governance, while global engagement and the chemistry program received 4 stars. This accomplishment confirms BSU's adherence to international standards in education, research, and management, further enhancing its reputation in the global higher education arena.

For more information, please click here



## Scientific seminar at BSU: Development of smart irrigation technology



A scientific seminar was held at the Faculty of Physics of Baku State University (BSU), organized by Sara Rahimzadeh from the Department of Chemical Physics of Nanomaterials, focusing on the project **“Development of Smart Irrigation Technology (SmAgTech),”** which won the 5th grant competition by the Small and Medium Business Development Agency (SMBDA). Professor Mais Suleymanov emphasized the global relevance of smart irrigation, particularly for drought-prone Azerbaijan, while Dean Bəxtiyar Paşayev highlighted the benefits of youth involvement in innovative projects. The project, led by Rahimzadeh, aims to create a cost-effective smart irrigation system that minimizes water waste, enables remote monitoring of fields and greenhouses via a mobile app, allows automatic fertilization, and uses a special sound system to repel pests, ultimately increasing agricultural productivity. The seminar concluded with a discussion session addressing participants' questions.



**For more information, please click here**

## **A scientific seminar titled The Glaciation Phases of Our Planet was held at BSU**



On March 27, Baku State University (BSU) held a scientific seminar at the Faculty of Geography in honor of “Science Day” in Azerbaijan. Dr. Vagif Mammadov from the Geological and Geophysical Institute presented on “The Glaciation Phases of Our Planet,” highlighting that about 72 million km<sup>2</sup> of Earth is annually covered by snow, with glaciers affecting climate and the greenhouse effect through changes in surface albedo. Dean Məqsəd Qocamanov emphasized the significance of the presidential decree establishing Science Day in 2018 and the growing interest of youth in scientific research. The seminar concluded with a Q&A session addressing questions from faculty and researchers.

**For more information, please click here**



## TEDx-style meeting at BSU



The Public Speaking Club of Baku State University (BSU) organized a **TEDx-style meeting** under the Student Youth Organization. Speakers presented on diverse topics: Ravana Guliyeva on motivation, Aisha Jafarli on personal development, Sabuhi Haqverdiyev on the links between thoughts and language, and Nurgul Alizade on the ecological role of carbon dioxide. The event highlighted TEDx meetings as an effective platform for young people to enhance their public speaking, presentation, and self-expression skills while sharing innovative ideas in science, culture, and technology.

For more information, please [click here](#)

## Dedicated lanes for bicycles and small electric vehicles at the main entrance of BSU

Dedicated lanes for bicycles and small electric vehicles have been established at the main entrance of Baku State University. These lanes were created in accordance with the Decree of the President of the Republic of Azerbaijan, Ilham Aliyev, dated January 30, 2025, on the “Approval of the State Program for the Improvement of Transport Infrastructure in Baku and Surrounding Areas for 2025–2030.” The initiative aims to develop micromobility, reduce traffic congestion, decrease reliance on private cars, and promote sustainable and environmentally friendly urban transport. Secure bicycle parking spaces have also been installed along these lanes.





For more information, please click here



## BSU Volunteers organize awareness event dedicated to International Recycling Day

The “BSU Volunteers” organization, together with students from the Faculty of Ecology and Soil Science, held an event for International Recycling Day to raise environmental awareness. The program focused on proper waste management, recycling practices, and ecological preservation, teaching students practical ways to reuse materials and adopt eco-friendly habits. Participants learned about the global and local impacts of environmental issues, proper sorting of recyclables, and actionable tips to reduce waste and strengthen their everyday ecological responsibility.

For more information, please click here





## SDG WEEK HAS STARTED WITH THE ORGANIZATION OF BSU THIK

The opening ceremony of “Sustainable Development Goals (SDG) Week” at Baku State University (BSU), organized by the Student Trade Union Committee (STUC), highlighted Azerbaijan’s efforts toward the UN-established SDGs. Zöhrab Cavadzadə and other speakers emphasized the global importance of addressing poverty, inequality, climate change, and quality education, noting BSU’s role as a center of innovation, science, and education in promoting these goals. The week-long program, running until April 11, will feature training sessions, seminars, and interactive activities focused on health, education, climate action, sustainable cities, and reducing inequality.



For more information, please click [here](#)

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## BSU has joined the global academic network CANIE to combat climate change

Baku State University (BSU) has joined the Climate Action Network for International Educators (CANIE), marking a key step in its commitment to climate action and sustainable development. As the first Azerbaijani university in the network, BSU will work to reduce its carbon footprint, advance environmental education, implement green campus strategies, and promote sustainable academic mobility. This membership complements BSU's existing initiatives, including the "ECOLEAD" project and the "Green University" concept, reinforcing its leadership in ecological responsibility and international collaboration in higher education.



For more information, please click [here](#)

## The first workshop of the project titled "Application of Artificial Intelligence in Precision Agriculture" organized by the Agricultural Innovation Center at BSU has been held

The Ministry of Agriculture's Agrarian Innovation Center launched the project "Application of Artificial Intelligence in Precision Agriculture" to promote AI-driven innovations in agriculture. The first workshop, held on April 16 at Baku State University (BSU), highlighted smart management of soil, water, and natural resources through AI, supporting Azerbaijan's digital development and modernization of the agricultural sector under President Ilham Aliyev's leadership. Rector Elchin Babayev emphasized BSU's





active role in research, innovation, and sustainable agriculture, citing student achievements at TEKNOFEST with projects like smart irrigation, smart monitoring systems, and the “Irrigo – Sustainable Agricultural Ecosystem.”

The project aims to enhance intellectual development in agriculture, strengthen collaboration between universities and industry, and provide practical training for young innovators. A Bootcamp in Aghali village, Zangilan District (April 28-29), will promote innovative agricultural solutions, facilitate knowledge sharing, and implement smart technologies on selected farms.

Officials from the Ministry of Agriculture, ASAN Innovation Center, major agro-parks, and private sector leaders—including Elmar Allahverdiyev, Shohret Mammadov, Kocheri Mammadov, Emin Kara, Ruslan Zeynal, and Isa Gasimov—shared insights on AI applications, automated systems, and initiatives supporting technological advancement and entrepreneurship in agriculture. This initiative marks a key milestone in advancing smart agriculture and fostering innovative solutions in Azerbaijan.

**For more information, please click here**

## **An International Earth Day has been celebrated at BSU**

A scientific seminar marking April 22 – International Earth Day was held at Baku State University (BSU), jointly organized by the Faculties of Geology and Geography to raise awareness of environmental challenges and current issues in geological and geographical sciences. Dean Professor Magsad Qocamanov highlighted the history and significance of Earth Day and the importance of ecological stability and sustainable resource use. Associate Professor Avaz Mammadov presented on “Problems of Earthquake Prediction,” detailing scientific methods, international practices, and the state of seismology in Azerbaijan. Professor Chingiz İsmayilov discussed geomatics, spatial data analysis, and their role in environmental monitoring, disaster prediction, and sustainable regional development.



**For more information, please click here**



## Information session on the international startup acceleration program Green and Digital Silk Road at BSU



Baku State University (BSU) hosted an information session on the international startup acceleration program “Green and Digital Silk Road.” Isa Gasimov, Head of the “Enterprise Azerbaijan” portal at the Center for Analysis of Economic Reforms and Communication (CAERC), explained the program’s goals: supporting startups in green and digital technologies, enhancing regional cooperation, and attracting investment. Participants received guidance on registration, participation, and

opportunities to work with international mentors, followed by a Q&A session addressing students’ questions about the program.

For more information, please click here

## BSU joins the International Sustainable Campus Network

Baku State University (BSU) has become the first Azerbaijani university to join the International Sustainable Campus Network (ISCN), reinforcing its commitment to sustainable development and ecological responsibility in higher education. ISCN connects leading universities worldwide to share best practices in environmental protection, social responsibility, and support for the UN Sustainable Development Goals (SDGs). BSU’s membership highlights international recognition of its sustainability initiatives and green campus strategy, enabling participation in global projects, events, and collaborative research in sustainability.

For more information, please click here





## Deputy director of the State Agency on Renewable Energy Sources delivers a masterclass at BSU

At the Faculty of Ecology and Soil Science of Baku State University (BSU), Fagan Abdurahmanov, Deputy Director of the State Agency on Renewable Energy Sources under the Ministry of Energy, delivered a masterclass entitled “Renewable Energy Sources and the Development of Green Energy in Azerbaijan: Current Status and Future Prospects.”

In his opening remarks, Faculty Dean Associate Professor Akif Agbabali highlighted the importance of such educational initiatives in enhancing students’ knowledge and skills, as well as in guiding their future career choices. He expressed his gratitude to the speaker and the delegation, emphasizing the value of providing students with internship and exchange opportunities within the relevant departments of the State Agency on Renewable Energy Sources.

During his presentation, Mr. Abdurahmanov elaborated on the role of green energy in environmental protection and provided comprehensive information about ongoing wind and solar energy projects, which are considered highly promising sectors in Azerbaijan. He discussed production mechanisms, economic efficiency, the country’s current utilization of renewable energy sources, the installed capacities of wind and solar power plants, and planned future projects. The session concluded with a Q&A segment, during which students’ questions were addressed.

**For more information, please click here**





## BSU students visit the Gobustan Mud Volcanoes

A group of faculty and students from the Department of Economic-Political Geography of Foreign Countries and Tourism at Baku State University (BSU) visited the Gobustan Mud Volcanoes Tourism Complex to study regional geological processes and assess natural resource potential. Students learned about the scientific importance of Gobustan mud volcanoes for environmental protection and disaster prediction, as well as their geological, natural, and therapeutic properties. The visit included exploration of the volcanoes' features and the area's stratigraphic rock formations.



For more information, please [click here](#)

## Awareness event on Combating Environmental Crimes: Legal and Organizational Approaches held at BSU

Baku State University (BSU) hosted an awareness event on “Combating Environmental Crimes: Legal and Organizational Approaches,” organized by the Student Trade Union Committee (STUC) from the Faculties of Ecology and Soil Science and Law. Faculty speakers highlighted Azerbaijan’s efforts to address environmental problems, enforce regulations, and restore ecological balance. Lecturer Rashad Murshudov explained the legal framework for environmental crimes under the Criminal Code, including responsibilities, penalties, and the impact of violations on society and sustainable development. The event concluded with an interactive session where students asked questions on legal protection, environmental conservation, and challenges in enforcing environmental laws.



For more information, please [click here](#)



## The ECOLEAD project is being successfully implemented

As part of the ECOLEAD project (Environmental Empowerment: Awareness and Law Enforcement Measures), a tree-planting campaign was held in the Surakhani district of Baku to honor the 102nd anniversary of National Leader Heydar Aliyev. The event was attended by Prosecutor General Kamran Aliyev, BSU Rector Elchin Babayev, officials from the Prosecutor's Office, the Ministry of Ecology and Natural Resources, and local executive authorities. A total of 500 trees were planted across 2 hectares. Since the launch of ECOLEAD in 2024, over 2,200 trees have been planted across 10 hectares in multiple districts of Baku. The project is jointly implemented by the Prosecutor General's Office, Ministry of Ecology, BSU, Nakhchivan State University, and Karabakh University, with plans to continue its environmental initiatives



For more information, please click here

## Field training programs commence at BSU

As part of their curriculum, final-year undergraduate students from the Faculties of Geography, Ecology and Soil Science, and Biology at Baku State University (BSU) began field training programs on May 14 in the regions of Quba, Shamakhi, Gabala, and Lankaran. The training covers physical, economic, and hydrometeorological characteristics, tourism and recreation, local economies, population, landscapes, water resources, soils, and vegetation. Starting May 27, final-year students from the Faculty of History will conduct training at the Gabala Archaeological Center, Gobustan National Historical-Artistic Reserve, Quba Genocide Memorial Complex, and the Shamakhi City History and Ethnography Museum.



## BSU is represented at Caspian Agro – the 18th Azerbaijan International Agriculture Exhibition

Baku State University (BSU) participated in the 18th Azerbaijan International Agriculture Exhibition, “Caspian Agro,” showcasing its “Irrigo – a Sustainable Agricultural Ecosystem” project under the “Smart Agro” initiative of the Agrarian Innovation Center. The system treats wastewater and uses artificial intelligence to tailor irrigation water and fertilizer application to crop needs, supporting the Smart Village concept and Azerbaijan’s





National Strategy on Efficient Use of Water Resources, with a focus on sustainable development in liberated Karabakh territories. During the exhibition, President Ilham Aliyev visited the BSU booth and was briefed on the project as well as the university's achievements in startups and technology competitions. BSU also presented its innovations and academic strengths at a dedicated promotional stand for higher education institutions.

**For more information, please click here**

## **Republic Scientific Conference on the new stage of land reform and the resolution of ecological problems at BSU**



Baku State University (BSU) hosted a republic-wide scientific conference titled “The New Stage of Land Reform and the Resolution of Ecological Problems” in honor of the 102nd anniversary of National Leader Heydar Aliyev. The event highlighted his contributions to Azerbaijan’s agricultural development, land reforms, and environmental policies, emphasizing the integration of ecological considerations into state programs. Speakers—including Mais Suleymanov, Akif Agbabali, Sevinj

Hajiyeva, Garib Mammadov, Elmar Allahverdiyev, and Shovqi Goychayli—discussed his legacy in sustainable development, natural resource management, and ecological protection. The plenary session featured presentations on ecological changes in Agdam District and wetland impacts at Gizilaghaj National Park, with the conference continuing across five specialized sections.

**For more information, please click here**



## The series of trainings dedicated to the integration of SDG into education and research at BSU has been successfully completed

Baku State University (BSU) successfully completed a series of training sessions focused on integrating the United Nations Sustainable Development Goals (SDGs) into higher education teaching and research. Organized by BSU's Quality Assurance Center under Asiman Ilyasov, the program involved over 400 academic staff in interactive, discussion-based sessions to enhance understanding of sustainability and develop practical strategies for applying SDGs in academic and research activities. This initiative reinforces BSU's commitment to sustainability and represents a key component of the university's long-term strategic development priorities.



For more information, please click here



## BSU Faculty of Ecology and Soil Science students conduct field training in Shamakhi and Gobustan

Fourth-year students from the “Ecology,” “Soil Science and Agrochemistry,” and “Land Management and Real Estate Cadastre” programs at Baku State University’s (BSU) Faculty of Ecology and Soil Science (across Azerbaijani, Russian, and English divisions) participated in a field training trip to Shamakhi and Gobustan districts. In Shamakhi, students studied the region’s soil-landscape diversity, agricultural practices, industrial areas, and recreational resources, including hands-on examination of mountain forest-brown soils in Pırgulu. In Gobustan, at the Gobustan Regional Experimental Station (GRES), Director Atabay Jahangirli guided students through cereal crop cultivation areas, soil-climatic conditions, and morphogenetic soil analysis, including genetic horizons and formation processes. Students also conducted environmental monitoring, measuring ozone, ammonia, noise pollution, water and soil pH, and radiation levels, while observing patterns of soil, vegetation, river regimes, and landscape changes across elevation zones.



For more information, please click [here](#)

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## BSU Flower Planting Campaign

Baku State University (BSU) Student Trade Union Committee (STUC), together with “BDU Volunteers” and the Student Youth Organization, organized a flower planting campaign on campus. Students from various faculties participated, planting flowers, installing flower pots on light poles, and building birdhouses. The initiative aimed to promote environmental protection, enhance ecological education, and positively contribute to the university’s natural surroundings.

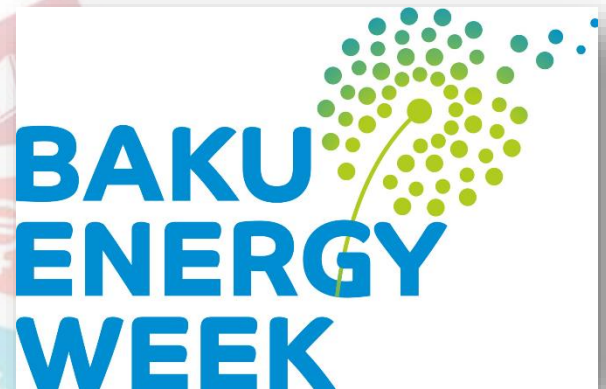


For more information, please [click here](#)

## BSU represented at Baku Energy Week

Baku State University took part in Baku Energy Week, which brings together three major platforms: the 30th Anniversary Caspian Oil and Gas Exhibition, the 13th Caspian Power Exhibition, and the 30th Anniversary Baku Energy Forum.

Within the “Smart Energy Hub” startup zone, 10 local and international projects were presented. At the BSU booth, the university showcased its renewable energy-powered charging station, operating with solar and wind energy and supporting CCS2 and GBT standards. In the future, it will also enable charging for electric bicycles and scooters used by students. This year, Baku Energy Week is hosting 267 companies from 39 countries.





**For more information, please click here**

## **EcoDay-2025 competition at BSU dedicated to World Environment Day**

Baku State University (BSU) hosted “EcoDay-2025”, a competition-exhibition organized by the Bioteam club of the Faculty of Biology to mark World Environment Day on June 5. The event showcased over 20 student projects made primarily from recyclable materials, many using natural dyes, emphasizing ecological awareness and sustainable practices. Winners included Zeynab Abdullayeva (“Pacific Ocean, Silent Storm”), Kenan Huseynzada (“The Revived Battery”), and a team from the Faculty of Physics (“Spectrometer”).

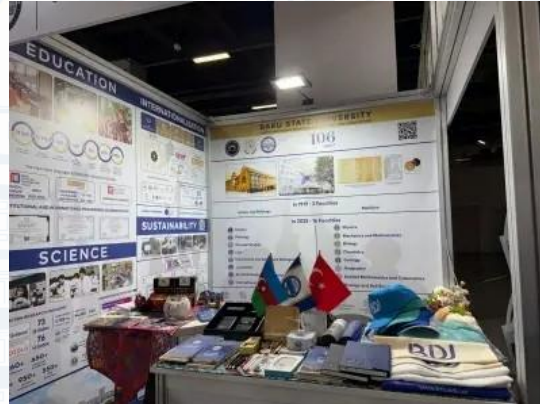


Speakers highlighted the UN Sustainable Development Goal 12: Responsible Consumption and Production, stressing the role of both producers and consumers in addressing food waste, plastic pollution, and unsustainable habits. The event encouraged students to combine creativity with environmental responsibility, fostering a green and sustainable future.

**For more information, please click here**

## **BSU is represented with its own stand at the Global SDG**

Baku State University (BSU) participated in the Global Sustainable Development Congress (GSDC), held June 16–19, 2025, in Istanbul, Türkiye, with its own stand in the Azerbaijan Pavilion. The event, organized by Times Higher Education (THE) and the Turkish Council of Higher Education (YÖK), brings together leading universities, research centers, and organizations to discuss activities related to the UN Sustainable Development Goals (SDGs) and promote international cooperation. At the BSU stand, visitors learned about the university’s sustainable development initiatives, green campus projects, climate adaptation efforts, internationalization strategy, and research aligned with SDGs. Interactive discussions facilitated knowledge exchange, fostered new partnerships, and enhanced BSU’s global recognition while showcasing Azerbaijan’s higher education sector internationally.



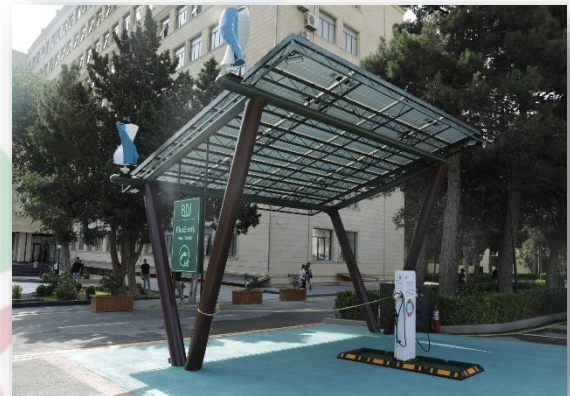
**For more information, please click here**

## **BSU and KOBIA open EcoEnergy Station on Campus**

An EcoEnergy Station powered by renewable energy sources has been inaugurated at Baku State University (BSU) in partnership with the Small and Medium Business Development Agency (KOBIA). The station uses solar and wind energy to provide clean charging for electric vehicles.

Rector Elchin Babayev highlighted green energy and green economy as national priorities. The “Clean-Charge” AC station was among the winners of KOBIA’s 5th grant competition, receiving nearly 20,000 AZN in funding. Chairman Orkhan Mammadov emphasized support for innovation-driven projects.

With a total capacity of 22 kWh, the station aims to reduce carbon emissions, contribute to the UN Sustainable Development Goals, and be integrated into the academic curriculum. The event concluded with a live demonstration of an electric vehicle charging at the new station.



**For more information, please click here**



## Scientific seminar at BSU: Carbon credit market and potential opportunities

The scientific seminar titled “Carbon Credit Market and Potential Opportunities” was organized by the Nano-Research Scientific Laboratory operating under Baku State University. Presentations were delivered by laboratory researchers Orkhan Gulahmadov and Kim Jiseok.

Orkhan Gulahmadov described climate change and the energy crisis as two of the most serious global challenges of our time, explaining the negative impacts of increasing carbon dioxide (CO<sub>2</sub>) emissions on ecosystems, human health, and economic systems. He also provided information about international initiatives and mechanisms implemented to address these issues.

Kim Jiseok explained the essence and functioning principles of the carbon credit market, as well as the economic value of credits granted in exchange for reducing emissions. He outlined the fundamental principles of the carbon credit system and referred to the experiences of the European Union, Japan, Canada, and South Korea.





During the seminar, it was emphasized that following COP29, held in Baku in 2024, the regulation of carbon emissions and the implementation of a carbon taxation system have become key priorities on Azerbaijan's national agenda. It was noted that strengthening cooperation between government institutions, the private sector, and academic and research institutions is essential for the development of a national carbon credit market. The seminar concluded with a Q&A session.

**For more information, please click here**

## **BSU student wins the "Azad Mirzajanzade Development Program" of RiİB**



Saida Rahimli, a fourth-year student at the Faculty of Ecology and Soil Science of Baku State University (BSU), won the "Azad Mirzajanzade Development Program" organized by the Regional Development Public Union (RiİB) with her project "CMC-Vessel." Out of over 100 applicants nationwide, 10 projects were selected for financial support. The "CMC-Vessel" project aims to clean oil-based pollutants and plastic waste from the Caspian Sea using chemical methods and artificial intelligence, with development taking place at BSU's Student Scientific and Technical Creativity Center. The program, launched in September 2023, has supported numerous successful projects in social, environmental, educational, and innovative fields.



**For more information, please click here**



## Opening ceremony of the UN Local Conference of Youth on Climate Change – “LCOY Azerbaijan 2025” held at BSU

The opening ceremony of “LCOY Azerbaijan 2025,” the United Nations Local Conference of Youth on Climate Change, was held at Baku State University, organized by the “EkoSfera” Ecological-Social Center in partnership with SEA BREEZE Resort and with media support from CBC – Caspian International Broadcasting Company.

The conference gathered more than 150 young climate leaders, government representatives, and international organizations. Speakers emphasized the key role of youth in combating climate change. The event is part of the YOUNGO platform and aims to contribute to the upcoming COP30.

Panel discussions covered topics such as climate leadership, digital platforms, AI in environmental monitoring, and sustainable agriculture. The second day will continue at “SEA BREEZE Resort,” where the Azerbaijan Youth Climate Declaration will be adopted.



For more information, please click here

For



## National Youth Climate Statement of Azerbaijan adopted at the UN Local Conference of Youth on Climate Change

The second day of “LCOY Azerbaijan 2025,” organized by the “EkoSfera” Ecological-Social Center in partnership with Baku State University and SEA BREEZE Resort, with media support from CBC – Caspian International Broadcasting Company, was successfully held.

In his speech, Mukhtar Babayev described Azerbaijan’s hosting of COP29 as a historic milestone and emphasized the importance of active youth participation in climate processes. Other officials also highlighted the key role of young people in building a sustainable future.

Panel discussions covered sustainable infrastructure, circular economy, biodiversity, ESG principles, green jobs, and water security. At the end of the event, the draft National Youth Statement on Climate was adopted, which will contribute to the Global Youth Statement to be presented at COP30.



**For more information, please click [here](#)**

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## BSU Volunteers participate in “Protect the Caspian 2025” International Coastal Cleanup

Members of the “BSU Volunteers” organization took part in the annual “Protect the Caspian” International Coastal Cleanup, organized by the Public Association of Azerbaijan Graduates Educated in the USA. This global initiative, observed in over 100 countries for the past 30 years, is the largest volunteer movement dedicated to cleaning coastlines. Azerbaijan has actively joined the “Protect the Caspian” campaign for over 15 years, with the event growing in scale each year.



For more information, please [click here](#)

## BSU participates in “Sustainability Exhibition: Art and Innovation for the Planet”

Baku State University (BSU) participated in the “Sustainability Exhibition: Art and Innovation for the Planet” during Baku Climate Action Week with two innovative projects: “Irrigo: Sustainable Agricultural Ecosystem” and “Hydroponics.” The “Irrigo” project, led by Reyhan Mirsultanova at BSU’s Student Scientific-Technical Creativity Center, develops a next-generation agricultural model that treats wastewater and recycles it for irrigation, conserving water and supporting sustainable farming. The “Hydroponics”





project, by Gumru Huseynova and Elvira Tahmazli at BSU's Research, Development and Innovation Excellence Center, promotes soilless cultivation for SMEs to enhance resource efficiency and green economy practices. "Irrigo" was selected among the top six projects and received a certificate of recognition for its creativity and contribution to sustainable development.



## BSU students visit IDEA Animal Care Center

Students and staff from the Faculty of Ecology and Soil Science at Baku State University (BSU), organized by BSU Volunteers, visited the IDEA Animal Care Center. During the visit, participants learned about the Center's history, mission, and activities. Established in October 2014 by Leyla Aliyeva, Vice-President of the Heydar Aliyev Foundation and founder of the IDEA Public Union, the Center officially opened on November 10, 2016, and has operated since March 1, 2017. Students toured its modern facilities, including a veterinary clinic, shelters for dogs and cats, quarantine units, adoption area, pet hotel and grooming salon, playgrounds, dormitory, conference hall, café, and shop.



For more information, please click [here](#)



## BSU hosts “Youth Dialogue of the Future” event dedicated to the 80th Anniversary of the United Nations

A “Youth Dialogue of the Future” event marking the 80th anniversary of the United Nations (UN) was held at Baku State University (BSU), highlighting the university’s role in promoting international cooperation, sustainable development, and the UN Sustainable Development Goals (SDGs). BSU Rector Elchin Babayev emphasized Azerbaijan’s long-standing UN collaboration and BSU’s commitment to integrating SDGs into education, research, and public engagement. The event showcased student participation in Model UN, youth forums, and climate-related initiatives, including COP29 projects. BSU’s global recognition was noted, including advancement in the Times Higher Education 2025 and QS Sustainability 2025 rankings, reflecting achievements in climate action, green campus projects, and social inclusion. Vladanka Andreeva, UN Resident Coordinator in Azerbaijan, and officials including Huseyn Huseynov highlighted youth’s role in implementing SDGs. A panel discussion on “Green Transition, Education, and Health for a Sustainable Future” underscored the need for youth-led climate solutions and the “One Health” approach. The event concluded with interactive discussions with students.





## AYNA holds info session on Sustainable Urban Mobility at BSU

An informational session on “Sustainable Urban Mobility: Ongoing and Planned Initiatives in Baku” was held at Baku State University (BSU), organized by the Azerbaijan Urban Transport Agency (AYNA).

Ramin Samedov, Head of the Department of Humanitarian Affairs and Youth Policy at BSU, highlighted the significance of educational events like this and underscored the university’s engagement in social projects supporting sustainable urban development.

Elmira Abbasova, Head of Internal Communication and Event Management at AYNA, presented on the development of micromobility infrastructure in Baku. She explained that these initiatives aim to enhance urban mobility, reduce traffic congestion in city centers,





and improve environmental conditions. Currently, micromobility lanes have been established on 31 streets and avenues, with plans to expand the network to 100 km. The session included an interactive discussion with students, allowing them to provide input and ask questions about the city's micromobility system and future improvements. The event concluded with a bicycle tour on the BSU campus, giving students practical exposure to sustainable urban mobility concepts.



## “Waste-for-Gifts” festival held at BSU

A new edition of the “Waste-for-Gifts” festival was held at Baku State University (BSU) with support from the Ministry of Ecology and Natural Resources, the “Araz” supermarket chain, “Azərsun Holding”, the “Təkan” and “EcoHub” public unions, and “Yağmur-2” LLC. The festival aimed to raise public awareness about proper waste management, sorting, and recycling, while encouraging active youth participation in environmental initiatives.

The event attracted significant interest from students, young people, and the wider community. Participants collected 3,410 liters of plastic waste, 685 liters of glass waste, and 1,481 used batteries, receiving various gifts in return. The program also featured interactive educational activities to promote environmental awareness.

This initiative highlights the importance of fostering environmental culture, increasing civic responsibility, and promoting proper waste management practices.





## Completion of the 3rd EMIDWORLD international conference on economics, public finance, business and social sciences at BSU

The 3rd EMIDWORLD International Conference on Economics, Public Finance, Business, and Social Sciences, jointly organized by Baku State University (BSU) and Kilis 7 Aralık University (Turkey), has successfully concluded.

At the closing ceremony, it was highlighted that the participation of scholars and researchers from 33 countries, along with representatives of government institutions and business organizations, made the conference a significant platform for scientific dialogue at both regional and global levels.





The event emphasized future plans to expand cooperation between BSU and Kilis 7 Aralık University, including joint empirical research, collaborative publications, and greater involvement of young researchers in these activities. Based on conference discussions, several recommendation-based conclusions were drawn regarding sustainable economic development, transparent public finance management, green transition, social equality, and innovative governance models.

During the ceremony, certificates were awarded to speakers and session moderators. Participants

noted that the conference strengthens the strategic alliance between Turkey and Azerbaijan in science and education, opening new avenues for scientific collaboration.

**For more information, please click here**

## **Roundtable at BSU: “Constitution and natural resources from a scientific-legal perspective”**

A roundtable titled “Constitution and Natural Resources: A Scientific-Legal Perspective” was held at Baku State University (BSU) as part of the “Year of the Constitution and Sovereignty.” The event was jointly organized by the Student Trade Union Committees of the Faculties of Geology and Law.

During the roundtable, law student Roza Khalilova discussed the essence of the Constitution of Azerbaijan and its fundamental principles, highlighting core values such as state sovereignty, territorial integrity, state property, and the protection of human rights. She also explained provisions concerning the protection of natural resources found in the Constitution and other legislative acts.

Geology student Saima Annagiyeva presented on “The Role of Oil and Geology in the Dimensions of Science and Law,” focusing on the significance of geological research, scientific methods for exploring oil reserves, and the legal aspects of natural resource management. She stressed that proper protection and management of natural resources are vital from both scientific and legislative perspectives.





The session included discussions on the Constitution's impact on geological policy, state control over natural resources, and the advancement of scientific research. The roundtable concluded with an interactive exchange of views and dialogue among participants.

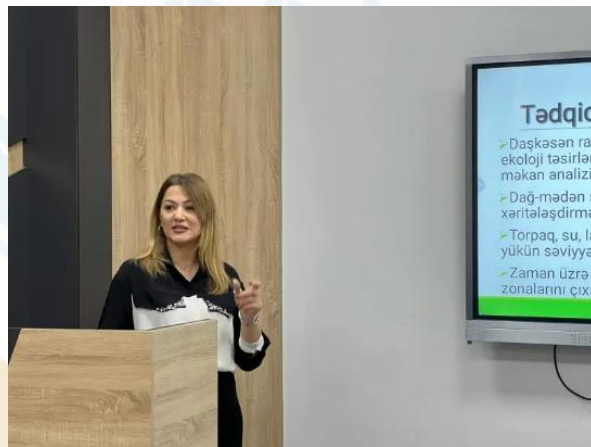
**For more information, please click here**

## Scientific seminar on the ecological problems caused by the mining industry

At the Faculty of Geography of Baku State University (BSU), a scientific seminar was held on “Investigation of Ecological Problems Caused by the Mining Industry in the Dashkasan District Using GIS Technology.”

The seminar opened with remarks from Professor Maqsad Qocamanov, Dean of the Faculty of Geography, who emphasized the importance of sustainable natural resource use, ecological safety, and sustainable development, underlining the need for research in this field. He highlighted the contributions of İlhamə Qaribova, a faculty member of the Department of Geodesy and Cartography, noting her extensive research applying Geographic Information Systems (GIS) to study ecological impacts of the mining industry.

İlhamə Qaribova presented detailed findings on the development stages of the mining industry in Dashkasan, including major exploited deposits and operational mining areas, and their environmental impacts such as soil degradation, forest transformation, and surface and groundwater pollution. Her research utilized aerospace imagery, topographic maps, and field observations to construct a spatial GIS database, map anthropogenic impact zones, and classify areas according to ecological risk levels. She also provided recommendations addressing the socio-economic consequences of mining-induced ecological problems, effects on residential areas and infrastructure, and the use of GIS technology for rehabilitation and reclamation measures.





During the seminar, faculty members including Professors Chingiz Ismayilov and Aydin Ibrahimov, Doctor of Geography Mehman Mehbaliev, and Associate Professors Ramiz Əhlimanov, Əfqan Talibov, İradə Əliyeva, Ələkbər Həsənəliyev, and Üliyev İsmayilova praised the innovative methodological approach, underlined the relevance of the topic, and recommended further scientific studies in this area.



For more information, please click [here](#)

## BSU becomes the South Caucasus leader in “UI GreenMetric 2025” Ranking

Baku State University has become the leader in the South Caucasus according to the UI GreenMetric World University Ranking 2025. The university ranked 493rd among 1,745 universities from 105 countries, improving by 114 positions compared to last year, and secured the top position among 19 Azerbaijani higher education institutions included in the ranking.

The ranking evaluates universities based on ecological sustainability criteria, including campus environmental impact, energy policies, water management, digitalization, sustainable transportation, integration of environmental topics into education, and research output on sustainability.

This achievement highlights BSU’s environmental initiatives and commitment to sustainable development, further strengthening its international standing.





For more information, please click here

## BSU young researchers' projects reach the final of the "Earth Observation" competition

Young researchers from Baku State University (BSU) have advanced to the final stage of the "Earth Observation" competition organized by the Azerbaijan Space Agency (Azercosmos).

Tahir Yunuslu, a dissertation researcher at the Department of Geographical Ecology, and Ramil Hasanov, a doctoral candidate at the Department of Bioecology, reached the final with their respective projects.

- Tahir Yunuslu's project, titled "Development of a Geographic Information System for the Landscape Complex of the Mud Volcanoes Group State Nature Reserve," involved comprehensive studies across approximately 500 km<sup>2</sup>, covering 10 of the 43 volcanoes in the reserve. His research utilized Azersky/Spot 6–7, Sentinel-2, Landsat-8 satellite imagery, Google Earth images, and SRTM GL1 DEM data. Analyses included terrain characteristics, slope, soil and vegetation cover, landscape dynamics, and fauna diversity. The results were visualized in a GIS environment through thematic maps, digital models, and graphical materials. Additionally, a structured database and prototype website reflecting the natural characteristics of the reserve were developed. Future plans include expanding the database and creating a fully integrated platform covering all 43 volcanoes.
- Ramil Hasanov's research focused on the impacts of the Caspian Sea water level decline on the biodiversity of Gizilaghaj National Park. Using Azersky/Spot 6–7 satellite images, Google Earth, and DEM datasets, combined with field studies, the research assessed changes in vegetation cover, monitored resident bird and mammal species, and evaluated biodiversity dynamics along the coastal zone.



The "Earth Observation" competition, held for the ninth time in 2025 under the theme "The Map of the Future," received 293 applications with 74 project submissions, of which 50 projects advanced to the final stage. This year's edition marked the 5th anniversary of the Victory in the Patriotic War and emphasized topics such as development in the Karabakh region, predictive modeling using AI, innovative cartographic design, and climate change impact analysis, prioritizing projects led by young researchers.

The competition promotes the use of satellite imagery, particularly Azersky archival data, supports the development of geographic information systems, and encourages innovative research in space-based environmental monitoring.



For more information, please click [here](#)

## PhD students of the faculty of Geography present at NASCO XXVIII Conference

PhD students from the Faculty of Geography at Baku State University (BSU) presented their research at the 28th Republican Scientific Conference of Doctoral Students and Young Researchers (NASCO XXVIII), held in honor of the “Year of Constitution and Sovereignty.”

The BSU doctoral candidates delivered presentations across diverse geographic, socio-economic, and environmental topics:

- Sayali Jalilova – “Development Trends and Influencing Factors of Creative Tourism in the International Tourism Market”
- Vusala Akbarli – “Development Features of the Transport Structure in the Absheron-Khizi Economic Region”
- Imran Bayramov – “Geographical Assessment of Demographic Trends and Settlement Patterns in the East Zangezur Economic Region”
- Aygul Mikayilova – “Impact of Migration and Unemployment on the Socio-Demographic Development of Urban Population in the Central Aran Economic Region”
- Tamerlan Mehdiyev – “Investigation of Continentality and Aridity Changes in Azerbaijan in the Context of Climate Change”





- Nazrin Gasimova – *“Application of Geographic Information Systems for Flood Risk Assessment and Forecasting”*
- Nargiz Majidova – *“Agricultural Development and Employment Efficiency Enhancement in the Gazakh-Tovuz Economic Region”*
- Nurlan Azizli – *“Morphometric Analysis of the Southeastern Slopes of the Greater Caucasus Using GIS”*
- Narmin Hasanli – *“The Role of Teachers in Applying Learning Models”*

The doctoral students’ presentations received high praise from conference participants, who actively engaged with questions and discussions. Each presenter was awarded a certificate of recognition for their contribution.

The conference, organized by the Ministry of Science and Education of the Republic of Azerbaijan, took place on 16–17 December at the Azerbaijan State University of Oil and Industry, with nine PhD students from BSU’s Faculty of Geography contributing through their research presentations.

**For more information, please click here**





# Conclusion

The initiatives at Baku State University illustrate the institution's leadership in promoting sustainability, climate awareness, and social responsibility both locally and internationally. By integrating advanced scientific research, technological innovation, and environmental management into its curriculum and community programs, BSU provides students with opportunities to engage with real-world challenges, such as climate change, renewable energy adoption, and sustainable agriculture. The university's dedication to fostering international cooperation, exemplified through participation in networks like CANIE and ISCN, further strengthens its position as a model for higher education institutions seeking to align with the UN SDGs.

Moreover, BSU's approach emphasizes the importance of youth engagement, volunteerism, and community-based actions in achieving sustainable development. Through structured volunteer programs, field projects, and awareness campaigns, students gain hands-on experience while contributing to national and global sustainability efforts. The university's ongoing projects, from EcoEnergy Stations and smart irrigation systems to climate education and biodiversity protection, underscore a practical and forward-looking strategy that connects academic excellence with societal impact. In summary, BSU's comprehensive efforts illustrate how higher education can effectively integrate sustainability into its core mission, empowering students and faculty to become agents of positive environmental and social change.



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13 CLIMATE ACTION



# SDG Focused Memberships



**ISCN**  
International Sustainable Campus Network

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**GUNA**  
GLOBAL UNIVERSITY  
NETWORK FOR INNOVATION



13 CLIMATE ACTION



# SDG FOCUSED RANKING RESULTS



## Rated for Excellence

# Baku State University

Through rigorous and independent data collection and analysis of performance metrics as set out in the QS Stars™ methodology Baku State University has been awarded 5 Stars.

★ ★ ★ ★ ★  
TEACHING

★ ★ ★ ★ ★  
FACILITIES

**QS Stars**

The QS Stars™ rating system evaluates universities across a wide spectrum of important performance indicators as set against pre-established international standards. By assessing a broader scope of criteria than any world ranking exercise, QS Stars™ illuminates the unique strengths and diversity of the rated institution with both precision and clarity.

★ ★ ★ ★ ★  
EMPLOYABILITY

★ ★ ★ ★ ★  
GOOD GOVERNANCE

★ ★ ★ ★ ★  
ENVIRONMENTAL IMPACT

★ ★ ★ ★ ★  
ACADEMIC DEVELOPMENT

★ ★ ★ ★ ★  
GLOBAL ENGAGEMENT

★ ★ ★ ★ ★  
CHEMISTRY

★ ★ ★ ★ ★  
DIVERSITY, EQUITY & INCLUSION

Leigh Kamolins, Head of Evaluation



13 CLIMATE ACTION



This certificate is awarded to  
**Baku State University**  
as The 493<sup>rd</sup> World's Most Sustainable University  
in 2025 UI GreenMetric World University Rankings

5 December 2025



**Dr. Vishnu Juwono, S.E., MIA**  
Chairperson of UI GreenMetric





13 CLIMATE ACTION



**Baku State University**

**941-950**

in overall performance

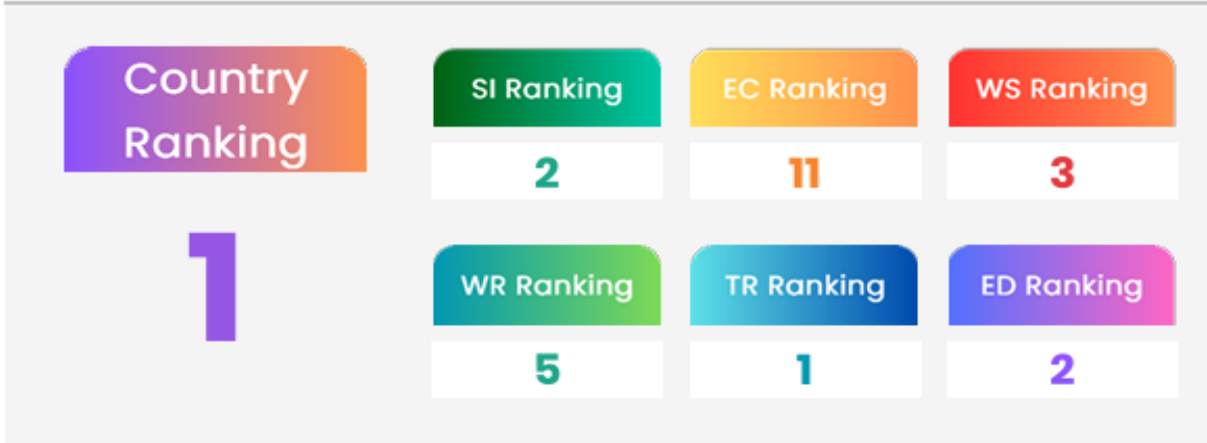
December 2024

Date

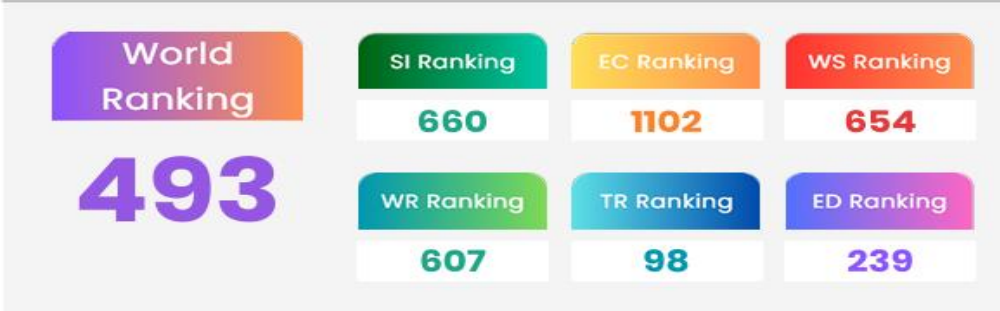
Ben Sowter  
Senior Vice-President  
QS Quacquarelli Symonds



### 4. RANKING IN AZERBAIJAN



### 2. RESULTS SUMMARY



### 3. WORLD RANKINGS HISTORY





### UNIVERSITY PROFILE

NAME : BAKU STATE UNIVERSITY  
 EST. : 1919  
 COUNTRY : AZERBAIJAN

#### 1. VERIFIED DATA

**Campus Sustainability Scores**

Overall Performance **68.75 %** Total Score **6875 / 10000**



**SI** Setting & Infrastructure  
 Current: **950** Maximum: 1500  
 63.33%

**WR** Water  
 Current: **662.5** Maximum: 1000  
 66.25%

**EC** Energy & Climate Change  
 Current: **1000** Maximum: 2100  
 47.62%

**TR** Transportation  
 Current: **1625** Maximum: 1800  
 90.28%

**WS** Waste  
 Current: **1075** Maximum: 1800  
 59.72%

**ED** Education & Research  
 Current: **1562.5** Maximum: 1800  
 86.81%





13 CLIMATE ACTION



# THE IMPACT RANKINGS

## THE Impact Rankings 2025

Download

OVERALL SCORE

**71.8** out of 100

OVERALL RANK

**401-600** out of 2318 institutions

SDG PARTICIPATED

**15** out of 17 Sustainable Development Goals

OVERALL RANK

**401-600** out of 2318 institutions



# 13

## CLIMATE ACTION

SCORE

**41.0**

RANK

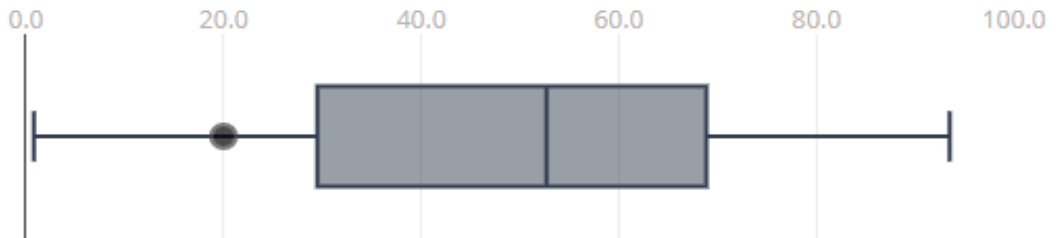
**401-600** out of 1089 institutions

SCORE

**20.0**

### Research on climate action

27% OF THIS SDG

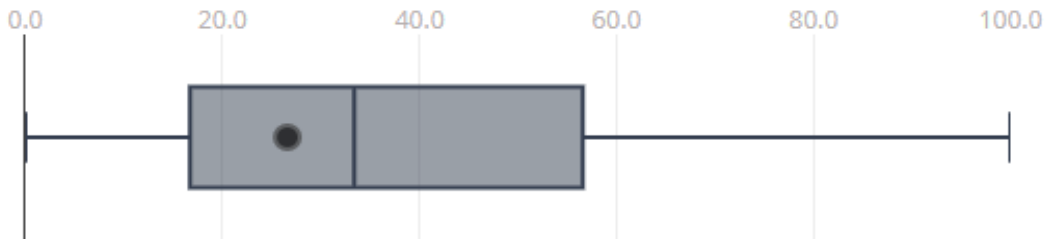


SCORE

**26.6**

### Low carbon energy use

27% OF THIS SDG

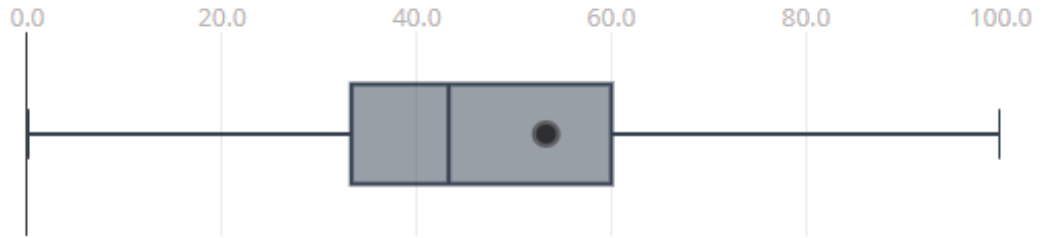




SCORE  
**53.3**

### Environmental education measures

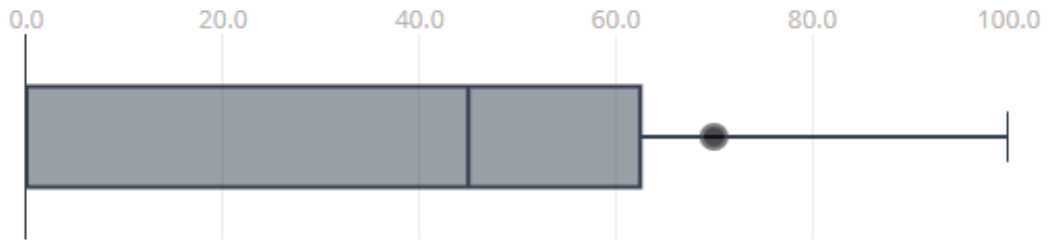
23% OF THIS SDG



SCORE  
**70.0**

### Commitment to carbon neutral university

23% OF THIS SDG



SUSTAINABLE  
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13 CLIMATE ACTION



# SDG FOCUSED RESEARCH

## Introduction:

Baku State University (BSU) has placed climate action at the core of its sustainability and research agenda, aligning with Sustainable Development Goal 13 (SDG 13) – *Take urgent action to combat climate change and its impacts*. Recognizing Azerbaijan's vulnerability to rising temperatures, increasing aridity, and land degradation, BSU researchers are actively contributing to global and national efforts to mitigate climate risks and build resilience.

Research at BSU covers diverse dimensions of climate change science, from renewable energy innovations and CO<sub>2</sub> conversion technologies to climate-smart agriculture, water resource management, and climate-resilient infrastructure. Recent studies have examined the role of solar collectors in Azerbaijan's energy transition, the potential of solar-hydrogen systems for reducing fossil fuel dependency, and the application of GIS and remote sensing tools for climate monitoring. Other projects explore eco-friendly agricultural practices, such as biochar-based seed coatings, and the development of smart infrastructure solutions that align with COP-29 goals.

A central theme in BSU's climate-related research is the integration of scientific knowledge with practical solutions for policy and industry. By investigating CO<sub>2</sub> utilization methods, advancing photocatalytic technologies, and studying ecosystem resilience, BSU provides evidence-based insights that can support Azerbaijan's commitments and the country's upcoming role in hosting COP-29.

Through collaborative projects with international universities, governmental agencies, and NGOs, BSU is fostering innovation in climate adaptation and mitigation strategies. The university's research not only contributes to scientific advancement but also strengthens Azerbaijan's capacity to address pressing environmental challenges, ensuring that climate action is integrated into sustainable development pathways.

**For all SDGs related articles please visit:**

<https://www.scopus.com/pages/organization/60071969#tab=sdgs>



## SDG contributions

Goal 1: No poverty	9 documents	Goal 10: Reduced inequalities	40 documents
Goal 2: Zero hunger	74 documents	Goal 11: Sustainable cities and communities	37 documents
Goal 3: Good health and well-being	241 documents	Goal 12: Responsible consumption and production	44 documents
Goal 4: Quality education	21 documents	Goal 13: Climate action	55 documents
Goal 5: Gender equality	12 documents	Goal 14: Life below water	50 documents
Goal 6: Clean water and sanitation	83 documents	Goal 15: Life on land	31 documents
Goal 7: Affordable and clean energy	353 documents	Goal 16: Peace, justice and strong institutions	36 documents
Goal 8: Decent work and economic growth	68 documents	Goal 17: Partnership for the goals	47 documents
Goal 9: Industry, innovation and infrastructure	101 documents		

**1. Authors:** Garazade I.M., Gupta R.K., Singh K.N., Kuznetsov M.L., Mohan B.

**Focus:** Catalytic CO<sub>2</sub> conversion through cycloaddition to epoxides for cyclic carbonates.

**Methods:** Review of metal-coordinated complexes (Schiff base ligands, 2D complexes, MOFs) and mechanistic insights.

**Findings:** Lewis acidic sites enhance catalytic activity; challenges remain with selectivity and scalability.

**Recommendation:** These catalysts show promise for sustainable industrial CO<sub>2</sub> utilization.

[Full text](#)



## 2. Authors: Tayyar A.E., Gasim N., Biçen Ö.F., Mukhtarov S.

**Focus:** Effects of climatic factors on Türkiye's agricultural GDP share (1970–2022).

**Methods:** Econometric methods (BMA for variable selection, A-ARDL for long-term analysis).

**Findings:** Minimum average temperature positively affects agriculture; CO<sub>2</sub> emissions, ground temperature, and cultivated area negatively impact it.

**Recommendation:** Türkiye needs tailored climate-smart agricultural policies.

 [Full text](#)

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## 3. Authors: Salmanova F.A., Salamov O.M., Mustafayeva R.M., Mahmudova T.A., Nurubeyli T.K., +3 authors

**Focus:** Thermal efficiency of solar water heating collectors in Azerbaijan's Absheron Peninsula.

**Methods:** Two-dimensional heat transfer modeling and numerical simulation (spline method, Turbo Pascal).

**Findings:** The computational model accurately predicts thermal behavior of solar collectors.

**Recommendation:** Solar collectors offer a viable renewable energy alternative for Azerbaijan.

 [Full text](#)

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## 4. Authors: Tagiyeva S.F., Osmanova S.N., Rustamova A.I., Pashayeva F.K., Muradkhanov R.M., +2 authors

**Focus:** Continuous-flow process for CO<sub>2</sub> conversion to methanol at atmospheric pressure.

**Methods:** Co–Pd/Siral catalyst with two-stage reaction (hydrogenation + partial oxidation).

**Findings:** Pd addition enhances methanol yield via Pd–PdO redox cycle; synergistic role of Co and Pd.

**Recommendation:** Process shows potential for selective CO<sub>2</sub>-to-methanol conversion.

 [Full text](#)

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## 5. Authors: Teymurova V.E., Abdullayeva S., Muradova K., Aslanova M.M., Bayramli M.

**Focus:** Environmental challenges in Azerbaijan and their economic/trade impacts.

**Methods:** Indicators such as atmospheric emissions and HDI analyzed.

**Findings:** Air pollution, land degradation, and climate change cause economic losses; human capital is key to solutions.

**Recommendation:** Strengthen vocational education, innovation, and clean technologies to drive sustainability.

 [Full text](#)



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## 6. Authors: Mukhametov A.E., Moreva E.L., Bayramli M., Smirnov A.V., Egorov I.

**Focus:** Diversification strategy for Arabian Peninsula economies.

**Methods:** Economic structure and oil price trend analysis (1970–2023).

**Findings:** Reliance on oil is unsustainable; diversification into digital, renewable, and tourism sectors is essential.

**Recommendation:** SMART diversification strategies ensure macroeconomic and political stability.

 [Full text](#)

## 7. Authors: Najafov B.A., Nasirov S.N.

**Focus:** Solar-hydrogen energy and thin-film solar cells for renewable applications.

**Methods:** Plasma deposition of thin films ( $a\text{-Si}_{1-x}\text{C}_x\text{:H}$ ,  $a\text{-C:H}$ ,  $nc\text{-C:H}$ ) in bilayer p-i-n structures.

**Findings:**  $nc\text{-C:H}$ -based cells achieved highest stability and 9.6% peak efficiency; irradiation improved film quality during but not after production.

**Recommendation:** Solar-hydrogen systems are promising for reducing fossil fuel dependence and enhancing energy sustainability.

 [Full text](#)

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## 8. Authors: Orujova T.Y., Gurbanova U.A.

**Focus:** Biochemical diversity of the Chenopodiaceae family and adaptation to harsh environments.

**Methods:** Analysis of C4 photosynthesis regulation and biochemical adaptability in arid/saline conditions.

**Findings:** Enhanced water-use efficiency supports plant survival in extreme conditions.

**Recommendation:** Insights can inform biotechnology to improve crop resilience under climate change.

 [Full text](#)

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## 9. Authors: Mustafayeva G.A., Mammadova S.Y., Balajayeva T.P.

**Focus:** Climate-resilient infrastructure aligned with COP-29 goals.

**Methods:** Mixed-methods study analyzing economic, health, and investor impacts.

**Findings:** Sustainable infrastructure improves cost efficiency, public health, and investor confidence.

**Recommendation:** Climate considerations must be integrated into infrastructure planning for resilience and competitiveness.

 [Full text](#)

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## 10. Authors: Huseynova G., Valiyeva A., Tahmezli E., Surkhayli S., Tahmezli M.

**Focus:** Water quality and climate impact monitoring in Azerbaijan's Guba-Khachmaz region.



**Methods:** Multivariate analysis + GIS + Google Earth Engine integration.

**Findings:** Improved climate forecasting in arid zones; GIS enhances water resource management.

**Recommendation:** Wider adoption of GIS-based monitoring can support sustainable water management under climate change.

 [Full text](#)

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### 11. Authors: Najafov B.A., Nasirov S.N., Neymetov S.R.

**Focus:** Advances in solar-hydrogen technologies for green hydrogen production.

**Methods:** Photoelectrochemical systems, photocatalytic splitting, pilot plants, and bioinspired hydrogels.

**Findings:** Deposition techniques affect thin-film hydrogenated structures, improving efficiency and stability.

**Recommendation:** Scaling up these innovations can accelerate fossil fuel reduction and emission cuts.

 [Full text](#)

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### 12. Authors: Samadova U.F., Aligayev A.K., Ismail P.M., Xia P., Qiao L.

**Focus:** Perovskite ZnMoFeO<sub>3</sub> nanosheets as photocatalysts for CO<sub>2</sub> reduction.

**Methods:** Visible-light photocatalysis with narrow bandgap material.

**Findings:** Achieved stable CO<sub>2</sub> conversion into CO and CH<sub>4</sub> through formaldehyde/carbonyl pathways.

**Recommendation:** ZnMoFeO<sub>3</sub> nanosheets are a cost-effective candidate for sustainable CO<sub>2</sub> utilization.

 [Full text](#)

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### 13. Authors: Mustafazade T., Maharram M., Akhundzada H.V.N., Khankishiyeva R.F.

**Focus:** Eco-friendly wheat seed coatings using chitosan-biochar composites.

**Methods:** CS-BC composites tested at different ratios for germination and soil health.

**Findings:** CS-BC 4:1 improved germination rates (+30%) and soil organic carbon (+12%).

**Recommendation:** Sustainable seed coatings can reduce synthetic agrochemical use, though field trials are needed.

 [Full text](#)

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### 14. Authors: Amiraslanova M.S., Babazade R.A.H., Musabayli K.K.M.

**Focus:** Vegetation mapping with high-resolution remote sensing + AI.

**Methods:** UAV and satellite multispectral imaging, machine learning (ML) and deep learning (DL) classification.

**Findings:** Automated feature extraction/classification produced precise vegetation maps.

**Recommendation:** Integration of AI + remote sensing supports agriculture, biodiversity,



and climate studies.

 [Full text](#)

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### 15. Authors: Azizkhanli S.A., Aliyeva S.B.

**Focus:** Environmental impact of capacitor films (PP, PC, PPS).

**Methods:** Life cycle assessment (LCA).

**Findings:** PPS had highest footprint, PC moderate, PP lowest (most sustainable).

**Recommendation:** Using PP films in capacitors reduces environmental and fossil fuel impact.

 [Full text](#)

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### 16. Authors: Khang A., Abdullayev V.H., Litvinova E.I., Gadirova E.M., Avramović Z.Ž.

**Focus:** IoT and bioelectronics for sustainable waste treatment.

**Methods:** Review and practical applications of smart waste treatment technologies.

**Findings:** IoT-enabled bioelectronics can improve efficiency and sustainability in waste management.

**Recommendation:** Adoption of green digital technologies is essential for future sustainable waste solutions.

 [Full text](#)

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### 17. Authors: Mejidov A.A., Guliyeva E.A.A., Fatullayeva P.A., Yalçın B., Özdemir M., +1 author

**Focus:** Synthesis and properties of mixed-metal polymeric complex  $[Co_xMn_{1-x}(maleate)(H_2O)_2]_n$ .

**Methods:** X-ray, spectroscopy, EPR, and voltammetry for structural and redox analysis.

**Findings:** Maleate acted as bidentate ligand; Mn and Co centers displayed distinct redox behaviors.

**Recommendation:** Mixed-metal complexes show potential in materials science and catalysis applications.

 [Full text](#)