



# Samarkand State University named after Sharof Rashidov

SUSTAINABILITY REPORT 2022

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**Augmenting Action**

Our strategy is to integrate the knowledge mobilization and operating domains together that augments their contribution, which means leveraging collaborations between the university’s activities and embedding innovation and learning into how we operate and engage.

1. Climate Leadership
2. Campus as Living Lab
3. Sustainable Learners and Practitioners



**Integrating Knowledge**

To stimulate action and solutions for sustainable practices, we inspire our teachers, students, and staff for developing a deep disciplinary and interdisciplinary approach on sustainability. For this purpose, we collaborate with communities, government, industry, and other institutional partners to work together for practical solutions and reciprocal learning.



**Proactive Actions**

University is determined to model the commitment and actions mandatory to effect meaningful change by 2025. We are also committed to promoting the health of the ecosystem and preventing harm to the natural environment.

## Acknowledgment

The Samarkand State University named after Sharof Rashidov put forward gratitude toward its traditional owners of the unseeded land on which we work, learn, and live. It was founded as Mirzo Ulughbek on September 21, 1420. We pay our gratitude to all our ancestors for establishing a vision for the future of our society. The university also acknowledges the contribution of modern forefathers and stakeholders that extended unparalleled support to the university, turning it into a modern and state of art university.

We extend our sincere gratitude to all Uzbekistan people for endorsing their enduring culture and continuously growing society. It is evident that the Samarkand was the ancient route of trade and cultural exchange. The imprints of diversity are still intact in a much more acceptable form.

We pay our sincere respect to our elders past, present, and future, and acknowledge the importance of indigenous knowledge in the university. In addition, the current community of researchers, teachers, professional staff, and other stakeholders learn every day with indigenous colleagues and partners.

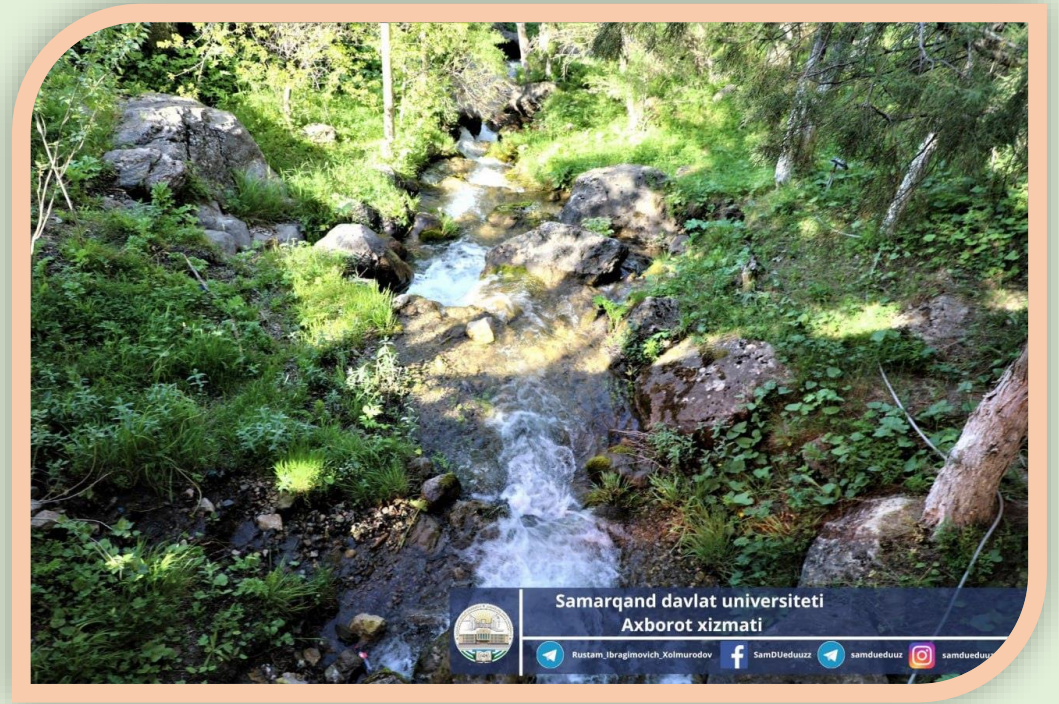


# MASSEGE FROM THE RECTOR

In 2022, we established a group of high-ranked academicians for implementing the Sustainability Plan 2025. This plan was aimed to achieve the university's sustainability objectives over the coming years. Samarkand State University is committed to fulfilling its social, academic, research, and cultural responsibilities to the world community. The plan is ambitious and strategic in equal measure, exhibiting the university's core values towards sustainability and its significance to society.

We are continuously running towards net zero emissions by adopting innovative and practical solutions. For example, University is investing a big amount of money to install solar systems for supplying the energy needs of the university. Our researchers are also working on sustainability research and academicians are teaching sustainability courses for making awareness among students as well as communities.

I like to greet all stakeholders of Samarkand State University for their consistent efforts to achieve United Nations Sustainable Development Goals (UN-SDGs).



# 2022: A GLIMPSE

Launched  
Sustainability  
Plan 2022

Net Zero  
Emission Mission

Sustainable  
Procurement

Hosted Climate  
and Sustainability  
Events

Founded a Green  
Campus  
Initiative

Incorporated  
New  
Sustainability  
Courses

Introduced  
Sustainability  
Curriculum

Focused  
Research on  
Sustainability

Established  
University  
Community  
Bonds

New Sustainable  
Financial  
Framework

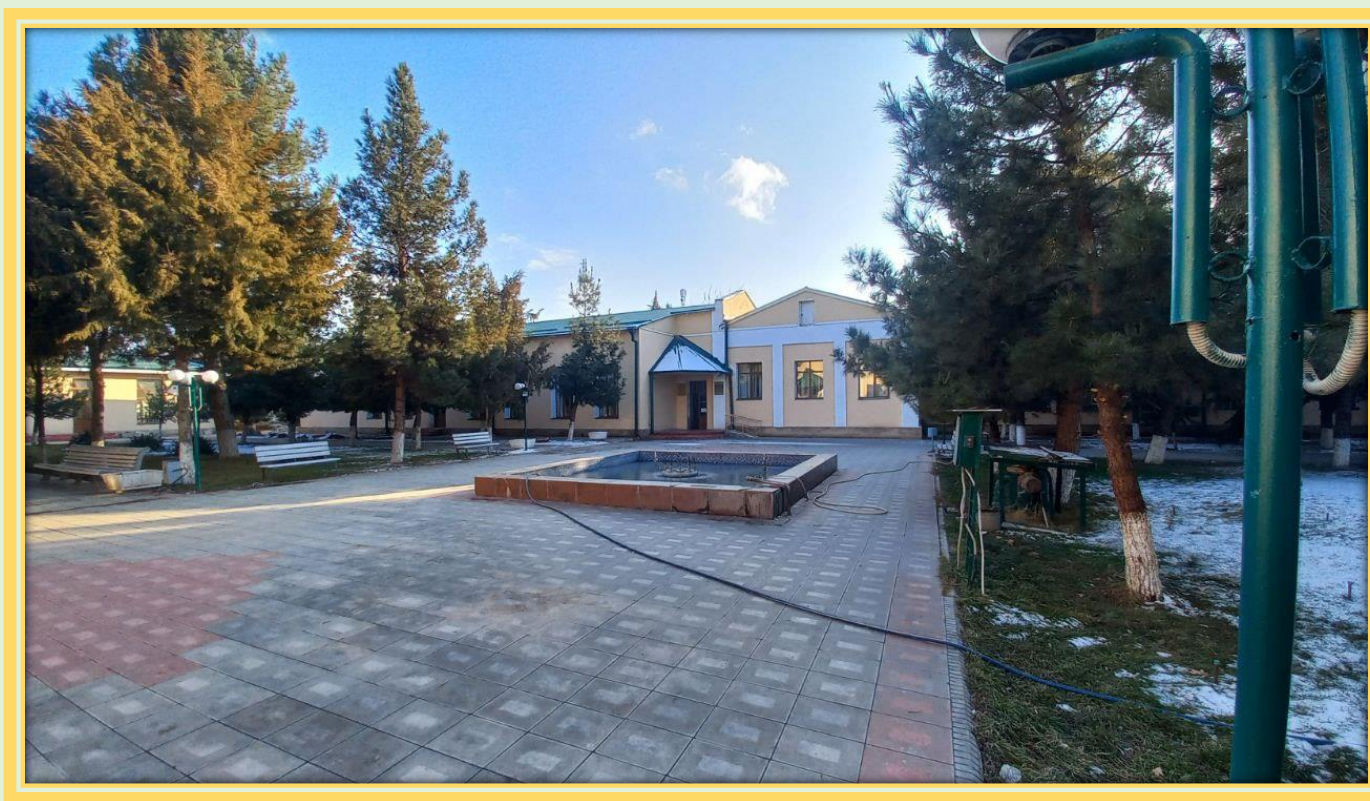
Extended  
Community  
Services

Extended Efforts  
for Plastic Free  
University



## Introduction:

Samarkand State University prepared its first sustainability report in August 2022. This report contains our ambitions, collaborative approaches to spearheading sustainability, and creating some success stories for our upcoming generations that how our community mobilized for sustainability action in 2022. As University implement the sustainability plan over the coming year, it will track the progress of each step toward achieving each of the target set out in the plan.



Sustainability is considered as integral part of our lives. Therefore, our aim is to provide our community with clear, honest, and transparent information on the university's sustainability performance. The report is prepared by reporting the United Nations principles and draws upon the draft standards on sustainability- related financial disclosures and climate related disclosures by the university. We continue our efforts to develop our strategy to ensure that future reports should prepared accurately towards sustainability targets.

## Our Sustainability Plan

was launched in 2022, providing a road map for 2025 and discusses our climate leadership, and embed sustainability in our every activity. The plan describes the university's commitment towards sustainability, core purposes, commitment to our people, our partners, and our place. We are determined to deliver our commitments to the university's sustainability charter and convince it to adopt a sustainable path toward achieving the primary goals set out in the university's strategy.

We are working on our sustainability targets for many years. However, we have calibrated our targets with the launched Sustainability Plan 2025 and heading towards our targets. In the coming years, the university will establish on these foundations, exploring opportunities to embed sustainability in all processes including academics, research, procurement, and businesses.



## Sustainable Development Goals

Samarkand State University named after Sharof Rashidov is strongly aimed to implement the United Nations Sustainable Development Goals as a global framework, designed to speed up sustainability by 2030. It's encouraging cumulative efforts by governments, corporations, civil societies, and communities toward a more sustainable future.

We are currently implementing SDGs in a proper way and exploring our impact in relation to the sustainable development goals to understand the intensity of efforts to the global goals. We are continuously working on reporting in a better and more reliable way to the world community about our efforts.



## Report Scope

Our sustainability report is the reflection of our deep and consistent efforts to the sustainable development goals.

Samarkand State University has an existing reporting framework for environmental, social, and governance, and the majority of the activities are closely associated with sustainable development goals. It covers a broad scope of social, financial, and environmental including diversity, gender equality, health & well-being, employee rights, and safety.

This report contains environmental sustainability and does not address other areas which are part of institutional strategies.

- Diversity and Inclusion Plans 2030
- Disability Inclusion Action Plan 2022- 2025
- Indigenous Strategy 2022- 2025
- Students Development Plans 2022- 2025
- Research Strategy 2018- 2026
- Sustainable Procurement Framework 2022- 2025

## Our Functional Environment

### International Climate and Biodiversity Action

Researchers at Samarkand State University constantly carry out top-notch research to prevent climate change and lessen its effects on nations and their economies.

In 2022, our top faculties accomplished ground-breaking work in rehabilitating water bodies, improving irrigation techniques, and expanding tree planting. The Republic of Uzbekistan is undoubtedly a developing nation that is suffering from severe desertification, posing a serious threat to the ecosystem and ensuring food security.

The university is leading a number of biodiversity programs, establishing us as leaders worldwide in the fight to protect flora and fauna.

### Climate Risks and Our Response

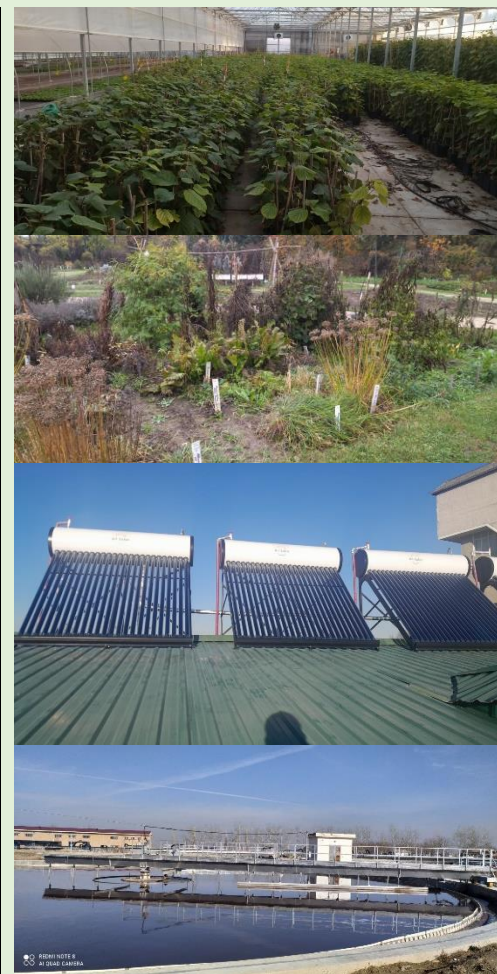
Climate change has raised the risk of desertification, soil degradation, soil salinity, water resource contamination, and water resource depletion, which impacts both the university's stakeholders and residents as well as the entire nation.

The operations, resources, and infrastructure of our campuses, as well as the security of the university community, are increasingly threatened by these vulnerabilities.

To make sure we are ready and safe, we are taking a number of actions. Through its youth organizations, the university takes a proactive approach to tackling climate challenges and raising public awareness.

Since 2022, we have surveyed university students, teachers, and other staff members to assess the work that has been done thus far. Priority areas have been put forward as action and satisfaction with initiatives in place.

1. Reducing the University's carbon footprint.
2. Improving waste reduction and management practices.
3. Incorporating ethical purchase policies.
4. Spreading Awareness
5. Using University's campus as the live play of sustainability practices.





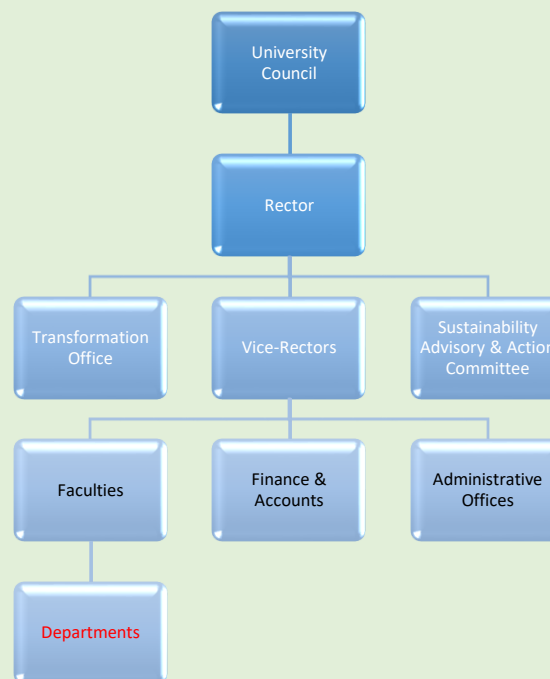
## Sustainability Governance

Our approach is implemented in a coordinated manner thanks to the governance framework for sustainability at the University, which also serves as an accountability system and keeps us moving in the right direction.

### Sustainability Advisory & Action Committee (SAAC)

The university's sustainability strategy is being guided and put into action by the Sustainability Advisory & Action Committee (SAAC), which was established in 2022. The rector, vice-rectors, senior professors, deans, researchers, and professional personnel make up this committee. This committee monitored the work completed on a quarterly basis and noted recommendations for future efforts to reduce carbon emissions, as well as sustainable practices and results. Such a framework has been in place at Samarkand

State University for a long time to monitor green spaces, water resources, and vegetation control for better environmental conditions. In accordance with the Sustainability Plan 2025, they make the appropriate suggestions to the Vice-Rector for Construction and Renovations for implementation in the near future.



## Sustainability Governance

### Sustainability Across the University

The Sharof Rashidov-named Samarkand State University has made a long-term commitment to acting in a sustainable manner. As a result, numerous faculties were created to carry out cutting-edge research and instruct sustainable courses at the faculties of geography & ecology, biology, and chemistry.

- Specific sustainability courses were added to the curriculum of numerous faculties' undergraduate and graduate programs in 2022. For instance, the curriculum for a chemistry undergraduate degree includes a course on green energy.
- Since 2020, Dr. Akbar Ahmedov of the Biology faculty has been continuously evaluating the climate factors that contribute to the extinction of various species of flora and fauna.
- For creating sustainable structures and planning at various levels to infuse sustainability across the institution, the vice-rector role of construction and renovations was renegotiated. For this purpose, Dr. Shukurov Shavkat Shukurovich was appointed as Vice-rector for construction and renovations in 2022.
- Samarkand State University has begun changing its current curriculum and syllabuses to include sustainability courses in order to fully implement sustainability and to integrate it in society.

### Target and Metrics

Our guiding principles, pledges, and goals are contained in the Sustainable Plan 2030. It does not, however, provide a comprehensive list of steps to do in order to reach our goals and desires. Setting concrete goals for sustainability at the time a plan is unveiled runs the risk of passing up chances to increase ambition in response to new trends and technology. The 2023 Sustainability Annual Report, which will be released in May 2024, will include a detailed description of the targets, and work is currently being done to identify the most appropriate indicators to report progress against each of them. In this regard, the SP2030 framework encourages transparency and rigorous reporting while enabling increased adaptability to new ideas,



initiatives, and innovation throughout its delivery.

## OUR IMPACT



### Multi-faceted Sustainability Buildings

The renovation and construction department at Samarkand State University renovated and built more than 3 buildings in 2022, all of which were specifically planned to meet sustainability objectives. The university's sustainability team actively participates in more effective and efficient sustainable building design as well as campus landscape design. In this manner, sustainability activities are incorporated into site building, architectural and landscape design, and refurbishment.

### Creativity and community forum

The university has a strong tradition of creativity that permeates every aspect of campus life. In order to adopt sustainable practices at the university, the institution and its administrators have built a debate ecosystem that fosters diverse dialogue, takes into account perspectives, and offers more sustainable alternatives. These individuals work to raise awareness among city dwellers.

### Sustainability- A Hope for Earth

Numerous sustainable courses have been introduced by the universities' faculties of geography and ecology, biology, and chemistry. The topic encourages critical analysis of both the systems that advance sustainability and the ones that support unsustainable practices. A sense of "active hope" can be developed via both individual and group action as academics and students examine the realities of escalating environmental and social problems, noting the emotional pain that many experience in the face of these challenges.

### Living Laboratory

Samarkand is a beautiful tourist destination. Numerous millions of people live in this city, which also draws visitors from all over the world. As a result, city officials are more attentive to the local weather. In order to demonstrate the seriousness of our commitment to sustainable practices and to showcase results to the community of learners and leaders, Samarkand State University also offers new means of showing a mosaic of lovely landscapes as well as rehabilitating heritage buildings. Our living campus offers first-hand exposure to environmentally friendly structures, designs, and landscapes.

## Energy Expenditure and Carbon Emissions

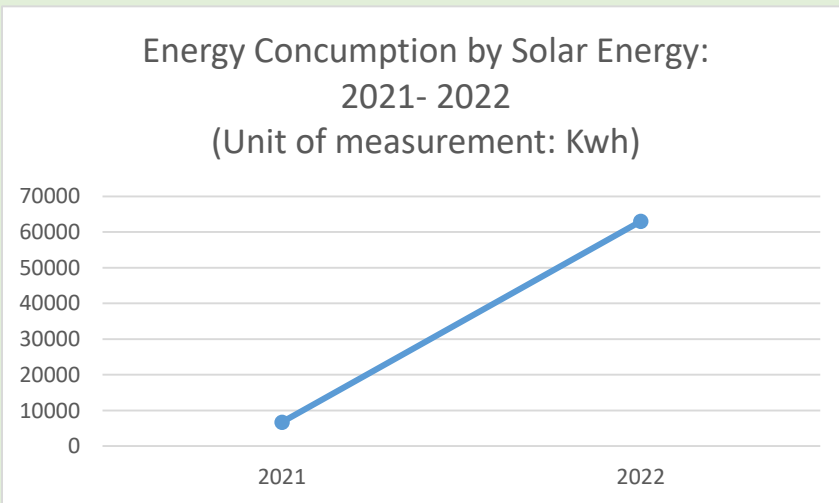
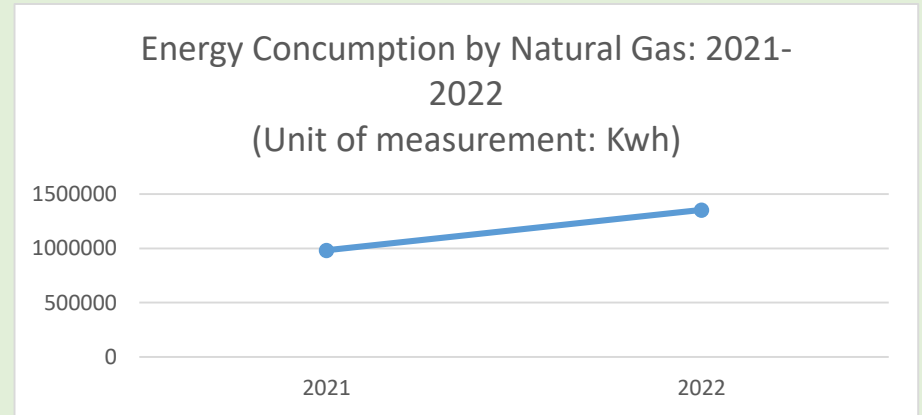
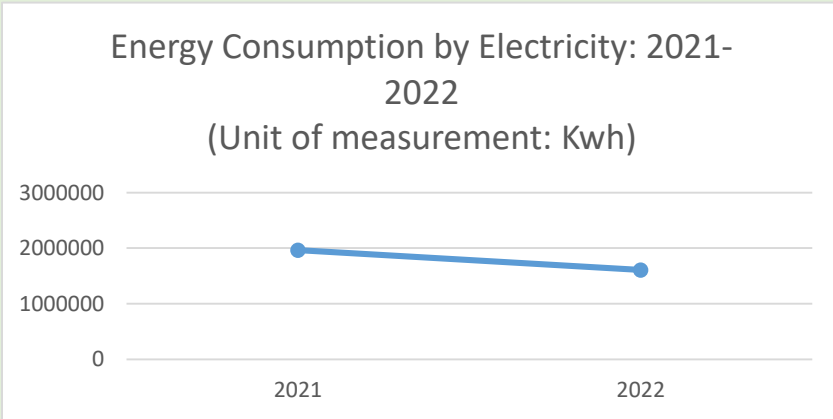
It is clear that this decade is crucial for taking action on climate change. If we take proactive measures to curb climate change and create a more sustainably developed world. To hasten this process, it is crucial to effectively mobilize our resources and communities. To accelerate the process, the institution must integrate its sustainability initiatives throughout campus operations, research, teaching and learning, and interaction with partners. We have made a commitment to enhancing our group's sustainability impact and exhibiting leadership in climate action. We are encouraging staff and student collaboration through our living laboratories to co-create solutions and opportunities for experiential learning that connect with the social, environmental, and economic components of sustainability. We are helping the university community to improve its practices and knowledge of sustainability. By combining these activities, we can increase our overall impact.

Energy Consumption by Source at Samarkand State University						
	2021			2022		
Months	Electricity (Kwh)	Natural Gas (Cubic M)	Solar (Kwh)	Electricity (Kwh)	Natural Gas (Cubic M)	Solar (Kwh)
January	205622	151515		155500	296968	3005.5
February	205622	151515		155500	296968	3106.6
March	255422	90910		155555	96969	3207.4
April	146815	115453		177000	0	3309.5
May	146740	32120		177000	0	4406.7
June	146665	32120		109000	0	5508.9
July	146665	30302		109000	0	6610.3
August	146665	30302		109000	0	8754.23
September	146665	35795		182972	0	8909.24
October	146665	104643		160000	374804	6201.38
November	146665	104643	3803.6	92444	238995	5808.23
December	123345	102678	2903.6	22755	49999	4203.24
	1963556	981996	6707.2	1605726	1354703	63031.22
tCO <sub>2</sub> e	416.92	179.86		340.94	248.12	

Samarkand State University publishes its direct and indirect carbon emissions by publishing a sustainability report in the form of energy consumption by source from 2021 to 2022.



Samarkand State University made a considerable reduction and bought 16 Gwh of power in 2022 after making a 19 Gwh purchase in 2021. Solar power installation work is ongoing all across the university in mission mode. The capacity of solar energy, which was just 6707 Kwh in 2021, climbed dramatically to 63031 Kwh in 2022, as seen in the table. To reduce carbon emissions, it is hoped that all buildings would have significant solar capacity installed. These solar panels will generate over 1 Gwh of clean energy for our campuses each year. In 2022, we kept up with our Smart Campus Energy Upgrades program. We spent over 1 million upgrading to LED lighting and chillers, installing solar panels on-site, and optimizing the heating, ventilation, and air conditioning.



For a more comprehensive sustainability plan, we are planning to upgrade the cycling infrastructure at the campus as well as many other plans to become a carbon-neutral university.

## Living Campuses

In 2022, the Sustainability Plan 2030 will serve as the main point of focus for all directing, instructive, and educational efforts. In order to give students real-world experience and insight into how the institution responds to sustainability concerns, professionals were also invited, guest lectures were scheduled, and internships were organized. Numerous faculties introduced sustainability courses, and many students received additional assistance in finishing projects connected to sustainability.

Examples include:

- Providing Bachelor/ Master of Biology students with an overview of the university's biodiversity.
- Providing Bachelor/ Master of Geography and Ecology students with an overview of environmental and ecological diversity.
- Offering internships focused on biodiversity, transport, energy, and asset management.
- Planning and development of innovative sustainable methods for problems related to water, energy, food, climate, and construction technology.
- Staff and students have installed sensors for collecting different information and further analyzing this information for better decision-making.



## Society of Learners and Practitioners

Our faculties, staff, and professionals are collaborating across the university to determine how the faculties and individuals can support the institution's sustainability goals.

In 2022:

- Interdisciplinary workshops, conducted for presenting past, present, and future approaches to sustainability and health education.
- Faculty of Geography and Ecology conducted a conference with North Caucasus Federal University, Stavropol, Russia on renewable energy where many significant pieces of research were read and communicated to attendees.
- Faculties collaborated to explore innovative approaches to sustainability in research and professional practice.
- Students organization also prepare their annual calendar of activities, many of which are attributed to sustainability.
- In order to embed sustainability, Samarkand State University organized more than 50 events and presentations in different faculties, departments, and institutes where more than 2000 stakeholders were attendees.



## Mobilizing Knowledge for Action

Academics and teaching staff are actively investigating the best ways to integrate sustainability into the curriculum based on the theories and methods of each field. Some examples include the following:

- Faculty of Geography and Ecology offered more than 50 sustainability-oriented courses in their curriculum at the bachelor level and 10 courses at the master level. The faculty of Geography and Ecology consists of 5 departments i.e., Physical Geography; Social & Economic Geography; Hydrometeorology; Geology and Remote Sensing and GIS Applications.
- Faculty of Mathematics offered more than 10 sustainability courses in their curriculum at the bachelor and master levels.
- Institute of Engineering Physics offered more than 5 courses, attributed to sustainability. It means the engineering institute added some level of exposure to sustainability content in their curriculum.
- Faculty of Chemistry introduced more than 50 sustainability-related courses in three directions of the bachelor's degree program.
- Faculty of Biology offered more than 100 sustainability courses in three directions where bachelor's degrees are available.
- Several new subjects and courses with sustainability as a focus or strong component launched in 2022 including today's science, and tomorrow's world, subjects for all first-year bachelor of science students.
- Institute of Economics offers sustainable commerce subjects for all first-year students in the bachelor of commerce.





## Indigenous Knowledge

Samarkand State University recognizes and respects indigenous knowledge for creating a sustainable society across the university as well as its surroundings. University and its different faculties and departments celebrate Navruz Day every year with utmost dedication and continuity for a long time. On this day, people display different indigenous skills and expertise, and how they are working with their surroundings in a sustainable way.



and academic fraternities for exploring indigenous knowledge in the welfare of society. We are also making alliances with international sustainability groups of academic and research fraternities for combating climate change and enhancing sustainability practices.

For many decades, Samarkand State University has entered indigenous knowledge into its curriculum. For example, University and its departments proactively work with the local community in preparing, disseminating, and enriching local culture, traditions, and sustainable practices across the world in the form of exhibitions on the university premises and surroundings.

Through these programs, teachers are supported to integrate Uzbek culture and knowledge into the subject curriculum, including the relationship between indigenous knowledge and modern technological innovations.

Different faculties of the university provide strong support for flourishing indigenous methods of creating a sustainable environment in all spheres including architecture, resource management and utilization, women empowerment, cultural enrichment, and others.

The University led the formation of the indigenous knowledge network with Central Asian and neighboring countries' universities

## Engagement and Partnerships:



Samarkand State University has formalized many partnerships with the authorities of Samarkand City to deliver impactful, innovative solutions for sustainability outcomes. The partnership has already made considerable progress in a range of areas, including climate, renewable energy, mapping biodiversity, agriculture, biology, engineering, the indigenization of Samarkand, and urban recovery and resilience.



## Healthy Ecosystems

It is clear that top scientists and specialists in indigenous knowledge are collaborating to build a biodiversity database for Samarkand State University. Leading industries have experts from the biology faculty on their panels to provide essential consultations for preserving and developing biodiversity. We think biodiversity is crucial for prosperity and well-being and aids in the development of the opportunities and answers required to tackle sustainability concerns.



For example, S Researcher Shuhrat Valiyev from the Samarkand State University's Department of Plant Physiology and Microbiology is working the "Ecophysiological Characteristics of the Dominant Species of Grassland Phytocenoses under the Conditions of Livestock Grazing (in the Case of Karnobchol)" at the Agricultural University of Iceland.

In addition, many experts are working locally and globally for managing the ecosystem in a sustainable way for making it beneficial for society.



## Healthy Water Cycles





## Reducing Water Usage:

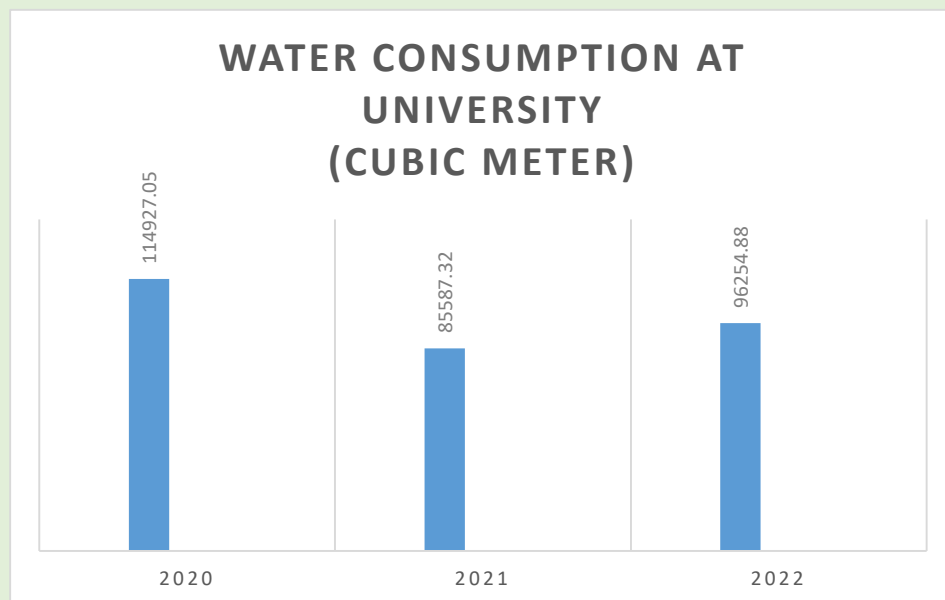
Our water usage is decreasing continuously since 2020. It is increased in 2022. But it remains below in terms of per capita usage. We are continuously updating our water distribution system for reducing water use and running awareness programs for creating attentive behavior among students and staff.

- Updated archaic water taps, potable water pipes, and drip irrigation systems for reducing water waste.
- Optimizing water usage by installing technically sound and excellent machines. For example, washroom hardware and washing machines.
- Running awareness programs and conducting state of art research.



Our teachers, students, student organization, and other stakeholders work together for minimizing water usage for saving water for future generations.

## Total Water Usage from 2020- 2022



The water usage chart clearly shows that Samarkand State University acts responsibly in the reduction of water usage to preserve water by taking all necessary measures. The usage of water is increased in 2022. However, our per capita water usage is still low.

## Plan 2023

<b>Climate Leadership</b>	<p>We are developing a strategy to deepen sustainability roots in all spheres of the university.</p> <p>Implementing a carbon offsets procurement strategy by taking into account the recent local and global carbon offset reviews.</p> <p>Smart energy program will continue in 2023. Plans include the upgradation of energy equipment, appliances, and buildings by high energy rating alternatives.</p>
<b>Living Campus</b>	<p>We are improving current guidelines and activities to support our sustainability plan 2030.</p>
<b>Community of sustainability learners and practitioners</b>	<p>The university is planning to develop a strategy for creating a more viable and vibrant society of learners and practitioners.</p>
<b>Inclusion of sustainable courses</b>	<p>More sustainability courses would be added to our curriculum.</p>
<b>Indigenous Knowledge</b>	<p>University widens its gates and welcomes indigenous knowledge for better sustainability practices.</p>
<b>Engagement and Partnerships</b>	<p>We will seize opportunities to broaden our network and interact more frequently with precinct partners regarding the sustainability effects of capital projects and other projects.</p>
<b>Climate Resilience</b>	<p>In order to improve climate change readiness, preliminary work to identify climate and sustainability risks in the University's Risk Information will be cascaded across the institution in 2023.</p>
<b>Healthy Ecosystem</b>	<p>On our campuses, we'll create goals for reducing biodiversity loss and fostering net gain.</p>
<b>Healthy Water Cycle</b>	<p>We will move through with our action plan to implement smart irrigation, minimize water use, and raise the percentage of non-potable water use.</p>

The report is prepared by Transformation Office.

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