BUKHARA STATE UNIVERSITY
1930

SDG13: Climate Action

13 CLIMATE ACTION

Among the environmental problems that concern the entire world community today, climate change requires serious attention. So that the priceless environment is kept healthy and citizens can live in welfare, our nature should be preserved from various affects that may cause climate change. As one of the outstanding universities in Uzbekistan, Bukhara state university also strives to contribute to solve environmental issues in such levels as local, regional, national and in some cases global.

1. Low-carbon energy tracking

The theoretical aspects of the process of conducting experiments on low-carbon energy sources at BuxDU have been deeply studied by university scientists, and their scientific work has reached the stage of practical research. Due to the hot climate of Bukhara and the convenience of using solar energy, a green energy area has been established at the university, and several objects of this area are regularly powered by solar energy.

Main traffic light near the entrance gate of the university.

Before being charged by solar panels, this traffic light used to be powered by electricity. As a result of natural and technical reasons, when the electricity supply was cut off, the traffic light would not work and the traffic would be chaotic on the road. Based on the project proposed by university scientists, these traffic lights are regularly used after the power source is provided by solar energy.

Furthermore, the barrier installed to control vehicle access to the university is powered by the energy supplied by these solar panels.

Gate barrier at the main entrance of the university.

Path projectors

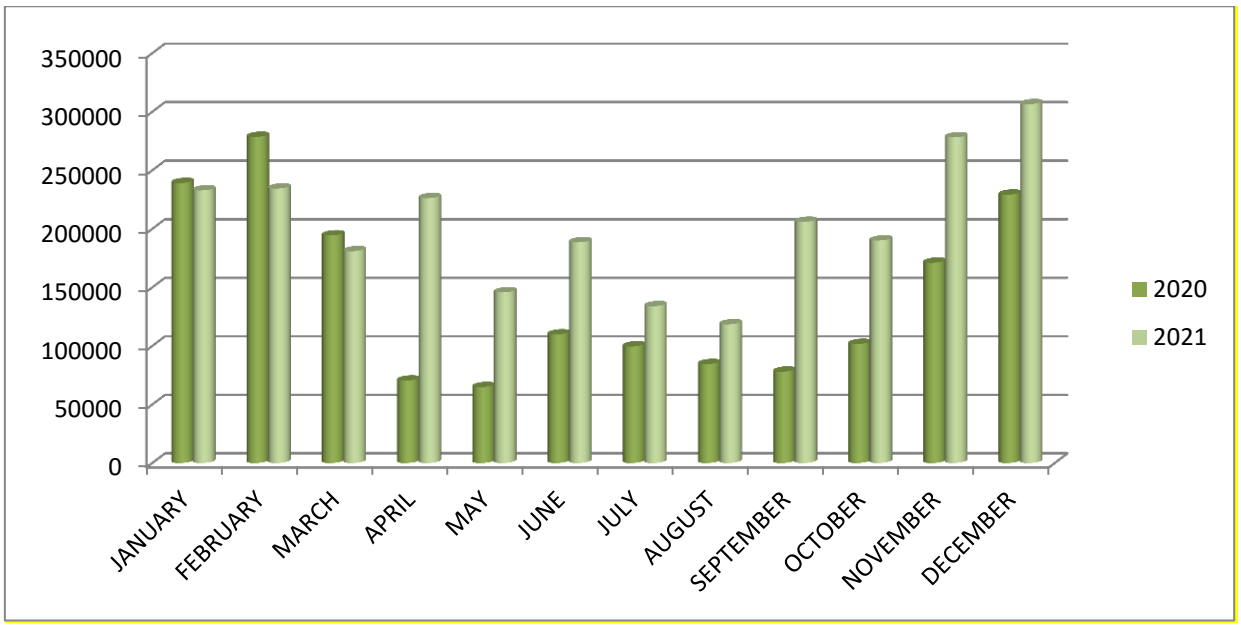
Because there are three shifts at the university and dormitory is situated near, it is natural that university paths are crowded with students and this requires illuminating these active paths at evenings. Path projectors at the entrance door are also connected to the solar panels which can continuously supply the projectors charged.

Yearly energy generating capacity of the experimental solar panels is about 95 GJ. This project was fully financed by the University Innovation Fund. University scientists plan to convert other traffic lights, organizations and households of Bukhara region to solar energy.

2. Low-carbon energy use

Total energy consumption

The consumption of electricity in the university shows the dynamics of change in different trends from year to year. Over the past 5 years, the number of subjects and directions taught at the university has increased the sharp increase in the number of students, as well as the provision of modern educational equipment and laboratory equipment has led to an increase in this indicator.



Description:

The total electricity usage of BukhSU in 2021 is 2442260 kWh.

No	Months	2020	2021
1	January	239140	232900
2	February	278560	234440
3	March	194400	180960
4	April	70440	226280
5	May	64840	145820
6	June	109840	188540
7	July	99610	133980
8	August	84500	118500
9	September	78040	206060
10	October	101700	190100
11	November	171100	278180
12	December	229260	306500
	Total	1721430	2442260

Total energy used from low-carbon sources

The only source of low carbon energy production in the university is solar energy, which is being experimented in low energy requiring appliances. This include traffic light, automatic gate barrier and path projectors And the source is solar panels. Yearly amount of low carbon energy generated by solar panels is about 95 GJ.

3. Local education programs or campaigns on climate

There are a large number of climate-related programs in existing university curricula.

No	Degree	Course name
1	Bachelor	Applied ecology
2	Bachelor	Basics of ecology
3	Bachelor	Bioecology
4	Bachelor	Bioecology of vertebrates
5	Bachelor	Climate change and ecological adaptation
6	Bachelor	Ecological and agrotourism
7	Bachelor	Ecological expertise
8	Bachelor	Ecological genetics
9	Bachelor	Ecological monitoring
10	Bachelor	Ecological physiology
11	Master	Ecological physiology of plants
12	Bachelor	Ecological problems of agrochemistry
13	Bachelor	Ecology
14	Bachelor	Ecology and environmental protection
15	Bachelor	Ecology and land law
16	Bachelor	Ecology and nature protection
17	Bachelor	Ecology of Bukhara region
18	Bachelor	Ecology of populations
19	Bachelor	Ecology of regions and settlements
20	Bachelor	Economy of environment and natural resources
21	Bachelor	Environment Economy
22	Master	Environmental and socio-economic problems of modern energy
23	Bachelor	Environmental aspects of sustainable development
24	Bachelor	Environmental chemistry
25	Bachelor	Environmental law
26	Bachelor	Environmental policy
27	Bachelor	Environmental protection
28	Bachelor	Environmental protection and rehabilitation
29	Bachelor	Environmental security in agriculture
30	Bachelor	Environmental tourism
31	Bachelor	F&B environment
32	Master	Fish ecology
33	Bachelor	General Hydrology and Climatology
34	Bachelor	Geoecology
35	Bachelor	Geoecology and Landscape Ecology

36	Master	Global Climate Change and Its Impact on Uzbekistan's Natural Resources
37	Bachelor	Greenhouse production of environmentally friendly products
38	Bachelor	Hospitality industry environment
39	Bachelor	Hydroecology
40	Bachelor	Hydroecology and geoecology
41	Bachelor	Hydrology and climatology
42	Bachelor	Information and communication technologies in ecology
43	Bachelor	Insect ecology
44	Master	Land resources management and environmental protection
45	Master	Methodology of teaching ecology and natural science
46	Master	Methods of teaching ecology
47	Bachelor	Modern environmental problems
48	Master	Modern methods of environmental analysis
49	Master	Modern methods of environmental analysis
50	Master	Paleoecology and the dynamics of civilization
51	Bachelor	Physical ecology
52	Bachelor	Reclamation and ecology of degraded lands
53	Bachelor	Social ecology
54	Bachelor	Soil and agroecologya
55	Master	Soil and climate change
56	Bachelor	Soil and environmental pollution
57	Bachelor	Soil and environmental pollution
58	Bachelor	Soil biology and ecology
59	Bachelor	Soil ecology
60	Master	Sustainable environment physics
61	Master	Urban and industrial ecology
62	Master	Use of alternative energy in conservation

4. Climate Action plan

Together with the Bukhara State University and the Bukhara Regional Forestry Department, seminars are held to protect from the negative effects of climate change. At the seminar, Rector of Bukhara State University O.Kh. Khamidov, Head of Bukhara State Forestry R. Khojiyev, Deputy Head of Bukhara Regional Forestry Department A. Jumayev, Director of Forestry of Qorovulbazar District H. Akhmedov, scientific works and innovations Vice-rector O.S. Kahhorov, vice-rector for international cooperation A.T. Jorayev, dean of the Faculty of Natural Sciences H.T. Ortikova, dean of the Faculty of Agronomy and Biotechnology A.Q. Kadirov and professors of the faculty participated. The seminar was opened by the rector of Bukhara State University O. Khamidov . Brief information was given about the video selector meeting, chaired by the President of the Republic of Uzbekistan, Shavkat Mirziyoyev, dedicated to the analysis of the effectiveness of reforms on the development of forestry.


They told about the work being done to establish a forest farm in the desert region of Bukhara region. It was discussed that it is necessary to work in cooperation with the forest industry of Bukhara region. Head of Bukhara State Forestry, R. Khojiyev, reported that there are 9 forestry farms, 2 hunting farms, 1 pharmaceutical farm, 1 scientific experiment farm in the system of the Bukhara Regional Forestry Department. There are forests, the total area is 576 thousand ha, of which 65% is covered with forest. He gave information about the Jaliks. Then the deputy head of the forestry department of Bukhara region, A. Jumayev, spoke; He spoke about the current work in forestry. In particular, in 2018-2019, more than 320,000 mulberry saplings of Kairagoch and Catalpa were planted on an area of 300 hectares in order to establish hedgerows against wind erosion of irrigated lands and sand inundation of water management facilities. The forests have been established In 2020, it is planned to establish Ikhota forests on a total area of 220 ha in the region, and information has been given that this task has been completed 100%. The director of the forest, H. Akhmedov, the main part of the forest funds of the region consists of deserts, the main task of the established forests is to move sand and various types of harmful salts, to prevent and reduce soil erosion.

https://buxdu.uz/en/news/2763/buxoro-davlat-universiteti-va-buxoro-viloyat-ormon-xojaligi-boshqarmasi-bilan-birgalikda-seminar-trening-otkazildi/

7. Co-operative planning for climate change disasters

In Bukhara, the State Committee for Nature Protection of the Republic of Uzbekistan, the Committee for Nature Protection of the Bukhara Region and the Bukhara State University organized a republican scientific-practical conference.

A large amount of dust and salt rising into the atmosphere from the dry bottom of the island is spreading to near and far regions. According to experts, as a result of this, 250-400 kilograms of substances per hectare are deposited on the crops of Bukhara region every year. They have a negative impact on the productivity of fields. Such salts especially damage the surface of historical-architectural monuments.

At the conference, the issues of climate change, combating desertification, management of water resources and their rational use were widely discussed.

https://kun.uz/uz/94580

5. Support local or regional government in local climate change disaster/risk early warning and monitoring

6. Collaborating with NGOs on climate adaptation

The next research of the Bukhara regional branch of the "Young Future" foundation was held together with the students of the Faculty of Agronomy and Biotechnology of the Bukhara State University in the "Bukhara Varnet" greenhouse cluster. During the study, Hamroyev Beshim Qurbanovich, the director of the Bukhara Varnet cluster, gave information about the activity of the greenhouse and more than 500 available vacancies there. Most importantly, interesting information was given about the possibility of working in the green nature in the same tropical climate in all 4 seasons.