ANNUAL REPORT OF NAMANGAN STATE UNIVERSITY ON SDG 15 FOR 2024

Due to the presence of biology, ecology, and chemistry educational areas, Namangan State University is carrying out research and practical work covering issues in the area of SDG 15. In particular,

• The university's areas related to the natural environment: ecological monitoring of plant communities, conservation of biodiversity, combating land degradation. (In line with the user's personal specialty)

• The concept of "Green University": initiatives aimed at improving the ecological environment inside and outside the campus.

• Community activities with students, faculty, and local partner organizations - ecosystem restoration, tree planting, and biodiversity enhancement activities.

The university is carrying out the following work in cooperation with state bodies and public organizations on a national and local scale in the field of ecosystem protection.

- Increase plantations, expand the map of tree and shrub planting,
- Regularize ecosystem monitoring,
- Develop a strategy for preserving biodiversity,
- Support for ecological startups of students and professors,
- Implement joint projects with local and international environmental organizations.

The report briefly presents these prospects (it is recommended to read the document in detail).

- You can familiarize yourself with these works through the following links:https://namdu.uz/page/faoliyat/barqaror-rivojlanish-maqsadlari/ www.namdu.uz+1
- https://cdn.namdu.uz/faoliyat/barqaror-rivojlanish-maqsadlari/2024-11-30-sdg15-report/ www.namdu.uz

The total area of the building of Namangan State University located on Bobirshah Street is 7.0 hectares. In addition to the buildings, various types of seedlings and plants have been grown in other areas. Significant work was carried out in 2024 to use the available land for landscaping the university territory. In particular, an ECOGARDEN was created on an area of 4.0 hectares of the university territory, where more than 9 thousand different types of ornamental trees, shrubs and bushes were brought and grown there. Currently, these areas have been called green spaces and delight those who see them.




Also, a new modern greenhouse was built on the territory of the university to replace the old greenhouse and was completed and put into operation. Currently, it has been converted into a lemon garden, where 24 intensive lemon seedlings are being grown. In addition, valuable medicinal plants and citrus fruit seedlings were also brought in, and they are also being looked after today.




Based on the research conducted by scientists of the Department of Biotechnology, recommendations have been developed for use in production. For example, D. Ergashev's recommendations entitled "Effectiveness of forms and rates of nitrogen fertilizers in repeatedly planted sugar beets", O. Usmonov's "Effectiveness in root vegetables", and A. Yunusov's recommendations entitled "The relationship between planting dates and the number of seedlings on the yield

and quality of amaranth plants" are currently being used by farms in the region, as a result of which they achieve greater economic benefits.

The university regularly participates in solving the water problem in our republic. In particular, on the initiative of our President Sh.M. Mirziyoyev, the “School of Watermen” is being established, where training seminars are being organized aimed at saving water on irrigated lands. These seminars are aimed at introducing farmers to new, water-saving irrigation technologies and teaching them the advantages of using them in production. Professors and lecturers of our university also regularly participate in these events. For example, I.J. Sulaymonov, associate professor of the Department of Biotechnology, has been teaching regional farm managers at the “School of Watermen” since 2024. As a result, water saving and increased crop yields are being achieved by introducing new water-saving irrigation methods into production on farms.

Together with other research institutes, they are actively involved in this regard. In collaboration with the Uzbekistan Cotton Selection, Seed and Cultivation Research Institute, a practical project AL-9124093616 is being implemented on the topic "Development of a technology for growing two types of crops with effective use of water and land resources in areas where drip irrigation technology is used", funded by the **Ministry of Higher Education, Science and Innovations of the Republic of Uzbekistan**.

In May 2024, the first international scientific and practical conference on "Conserving biodiversity in Central Asia: problems, solutions and prospects" began at Namangan State University as part of the 63rd International Flower Festival.

The conference is attended by leading scientists from the International Union for Conservation of Nature ("IUCN"), as well as Canada, Israel, China, Kazakhstan, the Kyrgyz Republic and a number of other countries, as well as deputies of the Legislative Chamber of the Oliy Majlis of the Republic of Uzbekistan, academicians, scientific staff of the Research Institutes of Botany, Zoology, Genetics and Experimental Biology of Plants of the Academy of Sciences of Uzbekistan, as well as professors, teachers and researchers of prestigious higher educational institutions in our country.

At the beginning of the event, Dilshodbek Kholmatov, Vice-Rector for Academic Affairs of Namangan State University, noted that this conference, which is being

organized for the first time and brings together leading biologists and scientists from the world, is of great importance in identifying current and future urgent problems related to biodiversity, exchanging modern knowledge and experience, and developing strategies for protecting the environment and biodiversity in Central Asia, including Uzbekistan.

The fact that the conference is being held at the same time as the International Flower Festival is ongoing has a symbolic meaning. Therefore, the people of Namangan, who are connoisseurs of beauty and elegance, devotees of protecting the environment and biodiversity, highly value flowers. Along with practical work, they also conduct scientific research in this regard, - says Academician Komiljon Tojiboyev, Director of the Botanical Research Institute of the Academy of Sciences of Uzbekistan. - In addition, the speakers at the conference touched upon in detail the measures taken in the Central Asian region in recent years to protect the environment and biodiversity on Earth, their results, solutions to existing problems and current goals and objectives, and outlined the prospects for cooperation.

I am extremely pleased to participate in the scientific and practical conference being held at Namangan State University. The conference is dedicated to a topic that is currently important for all of humanity, - says Rahman Chaffarzadekan Rabati, a professor at the Concordia University of Montreal in Canada, Doctor of Biological

Sciences. - What caught my attention was that the conference paid extensive attention to the endangered animal species in the countries of Central Asia and effective approaches to their conservation. As a biologist-scientist, I support the ideas expressed and the proposals put forward. If we organize joint work, we can achieve the expected results in preserving biodiversity.

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The effective use of alternative energy sources is one of the most important issues affecting the living conditions of the Earth's population today. Research is being conducted around the world in this regard. Fortunately, members of the "Innovation Club" of Namangan State University are also active in this process.

Club member, third-year student of the Faculty of Physics Khurshida Normirzayeva created the "Sunflower" solar panel. There is a reason why this device is called that. Solar panels are usually installed on the roofs of buildings where they are in use. Of course, this takes into account the fact that the panel receives more sunlight during the day. However, it turns out that the light source can be used even more effectively.

Khurshida has proven this in practice. The "Sunflower" solar panel she created, like a sunflower plant, is sensitive to light and "turns" towards it from sunrise to sunset, which means that it produces 47 percent more electricity than a device operating in a conventional system.

The operating time of typical solar panels at high efficiency is 6 hours, during which time it is possible to obtain 18 kW of electrical energy. The operating time of the “Sunflower” solar panels at high efficiency is 10 hours, - says the inventor Khurshida Normirzayeva. - During this time, 26.5 kW of electrical energy can be obtained. That is, the useful efficiency of this device is 8.5 kW, which, when calculated in percent, is 47 percent. Another advantage of it is its light sensitivity. Due to this, it can rotate 180 degrees.

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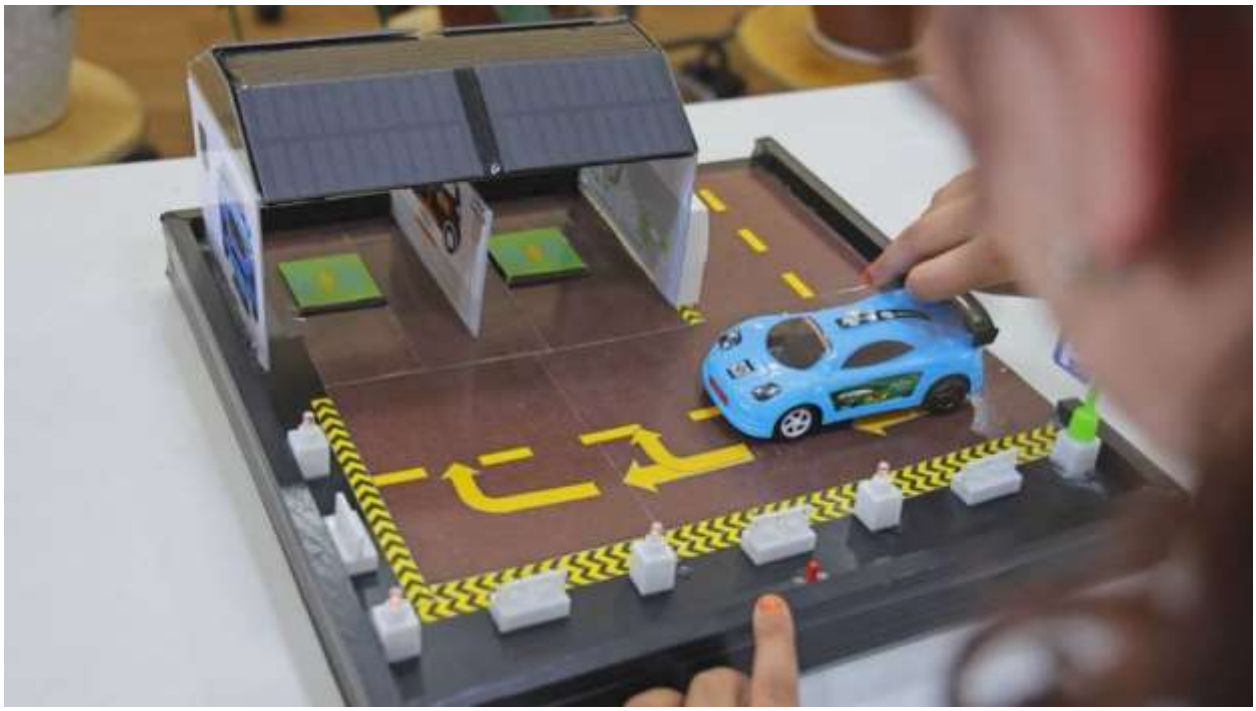

In April 2024, at the initiative of our President, leaders at all levels, including rectors of higher educational institutions, were instructed to identify and regularly work with 50 young people in the “heavy” category, who need attention.

As a result of individual work with 51 young people living in the Pop district, who are attached to the rector of Namangan State University, over the past period, each boy and girl has found their place in society and life. The fact that they have a specific profession, income, and their own job, some of them are studying in higher educational institutions, and have returned to a healthy life, has shown in practice how correct and rational the system established by the head of our state is.

2024 year, work in this direction continues. This year, the leadership of Namangan State University will work with 29 young people living in the Tashkurgan, Vodiy, Yangiabad and Birlashgan neighborhoods of the Pop district attached to it.

On the eve of Ramadan Eid, an organizational meeting dedicated to this issue was held in the Yangiabad Palace of Culture of the Pop district with the participation of university vice-rectors, heads of departments and deans of faculties, which was attended by officials, young people assigned to them, and their parents.

At the meeting, the rector of Namangan State University, Professor Sobitkhon Turgunov, noted the work being carried out by our government to

comprehensively support young people, that no young man or woman is left unattended in society, and that all opportunities are being used for this. He also recognized that finding solutions to the problems of young people in need of attention and socio-material assistance has become one of the most important directions of state policy.

On April 18, 2024, in accordance with the action plan, an open dialogue was organized at the university on the initiative of the Faculty of Natural Sciences on the topic "Life is a priceless gift, Patriotism is the highest feeling."

The dialogue was attended by the chief imam-khatib of the Namangan region M.Abbosiddinov, head of the regional department of the Center for Spirituality and Enlightenment M.Appakov, holder of the Order of Honor of the Fatherland Ziyovuddin Mansur, poetess O.Kholdorova, head of the department Sh.Jurayev, head of the department K.Mamatov, and deputy dean A.Sobirkhonov with their reports.

Students also actively participated in the proceedings with their questions and comments. The goal of the meeting is to instill a spirit of patriotism in young students, to promote peace and tranquility, and to once again emphasize that life is the most precious gift.

In accordance with the Resolution of the President of the Republic of Uzbekistan No. PQ-251 dated May 20, 2022 "On measures to organize the cultivation and processing of medicinal plants in a cultural form and their widespread use in treatment", a meeting was organized in collaboration with the Faculty of Biotechnology of Namangan State University and the Namangan Regional Department of Agriculture and AKIS. At the meeting, the cultivation of medicinal plants, products prepared from them, and herbariums of plants were demonstrated.

A roundtable discussion on the topic "Solutions to Environmental Problems and Comments on the State Program" was organized in cooperation with the Faculty of Natural Sciences of Namangan State University and the Regional Council of the Ecology Party.

The event was attended by PhD A.Sobirkhonov, associate professors of the Department of Ecology and Climate Science S.Abdurahmonov, M.Qoriyev, A.Rahimov, Chairman of the Regional Council of the Ecology Party Q.Supijanov, specialists of the Central Council of the Republican Ecology Party, tutors and students via the zoom program.

The speakers expressed their suggestions and comments on environmental problems and the state program. Students also asked questions and made suggestions.