

# Environmental problems - are the focus of attention in the development of New Uzbekistan

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**Abstract:** This article discusses issues related to environmental problems, issues related to air pollution and the negative impact of industrial enterprises on the environment, ensuring environmental safety, and also gives an opinion on research work carried out within the framework of the national project "Green Region" in the field of improving the environmental condition of the regions. Key words: ecology, atmosphere, social environment, landscaping, natural resources, environmental safety, state of the environment.

## 1 Introduction

Some global problems associated with close interconnections lead to the exacerbation of other problems. Thus, there is no way to solve a specific problem without focusing on other problems. The reasons for the emergence and exacerbation of global problems are the multiple growth of the world population in a short period of time, the rapid development of industry and other branches of production, imbalance in the natural environment under the influence of human economic activity, the establishment of the world economy as a single global system due to the strengthening of international economic relations, scientifically-technical revolution and development of modern information and communication technologies. Among the main global problems, it is worth noting the environmental problem. This problem is a problem not only for our republic, but also for the whole world, and it calls on us to find a solution [1-3].

Today, as a result of climate change, there is a need to stabilize the environmental situation throughout the world. Therefore, one of the main directions of the new decade is environmental protection. Based on this point of view, today it is appropriate to pay great attention to landscaping [4-8].

In order to protect trees, shrubs and green areas, as well as expand their areas, further effectively organize the activities of organizations responsible for this area, as well as implement the tasks defined in the Decree of the President of the Republic of Uzbekistan dated October 30, 2019 No. UP-5863 "On approval Concept of environmental protection of the Republic of Uzbekistan until 2030":

1. Implement nationwide project "Green Region", aimed at increasing tree plantations: planting and caring for trees; creation of "green parks" and "green public parks" in the regions; reviewing the tree watering system to ensure its effective functioning; identification

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of persons responsible for caring for each tree, widespread introduction of incentive mechanisms in this direction; strengthening responsibility for damage and destruction of trees, further increasing public control in this area.

2. Extend the moratorium on cutting down valuable species of trees and shrubs not included in the state forest fund for an indefinite period.

In this regard, a number of measures are being taken to improve the environmental situation in our country, to prevent the harmful effects of transboundary Garzel winds and dust and sand storms on the environment.

In confirmation of this, Decree of the President of the Republic of Uzbekistan No. PF-199 dated November 23, 2023 “On measures to further increase the level of greenness in the Republic, ensure environmental stability through the consistent implementation of the national project “Green Region” was adopted. Over the past period, 588 hectares of “green parks”, 662 hectares of “green public parks”, 40 km of “green belts” were built around the cities of Bukhara, Nukus, Khiva and Urgench within the framework of the national “Green Parks” project. At the same time, the effective continuation of the national project requires the adoption of measures that cannot be postponed today.

The further popularization of the national project “Green Region” in Uzbekistan, the improvement of the public administration system in the field of ecology and the widespread introduction of advanced technologies, as well as the tasks defined in the strategy “Uzbekistan - 2030” have been identified.

Bukhara, a tourist city in Uzbekistan, like many other modern cities, faces serious environmental problems. Despite some efforts by the authorities, the environmental situation remains far from ideal, and serious measures are required to improve the situation. One of the main problems is air pollution. The city suffers from a high concentration of harmful substances emitted by industrial enterprises and vehicles. High levels of air pollution negatively affect the health of city residents, especially children and people with weakened immune systems. Solving this problem requires introducing stricter environmental safety standards for businesses and limiting the use of obsolete vehicles.

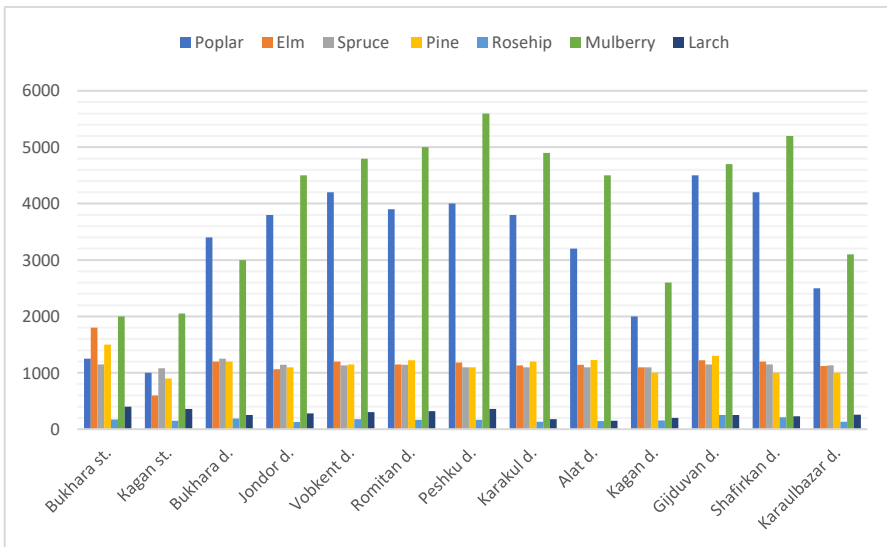
Water resources are also under significant pressure. Uncontrolled use of water in industry and agriculture leads to the drying up of rivers and lakes. In addition, insufficient control over wastewater discharge leads to the pollution of water bodies and an increased risk of water-borne diseases. Effective water resource management and strict environmental policies are needed to keep water clean and available for future generations. One of the most noticeable environmental problems facing the Bukhara region is the lack of green spaces and public spaces. The limited number of parks and squares makes the urban environment unsuitable for rest and recreation. The lack of trees and plants also affects air quality and microclimate, exacerbating problems associated with pollution and elevated temperatures. Greening the city should be a priority for the authorities, leading to a healthier and more pleasant urban environment.

## **2 Methods**

Particular attention is paid to environmental safety and environmental protection, and within the framework of the national project “Green Region”, landscaping work is being carried out in accordance with the climate of the Bukhara region. The objectives identified in this project were analyzed using the example of the Bukhara region (table 1).

**Table 1.** analyze of objectives

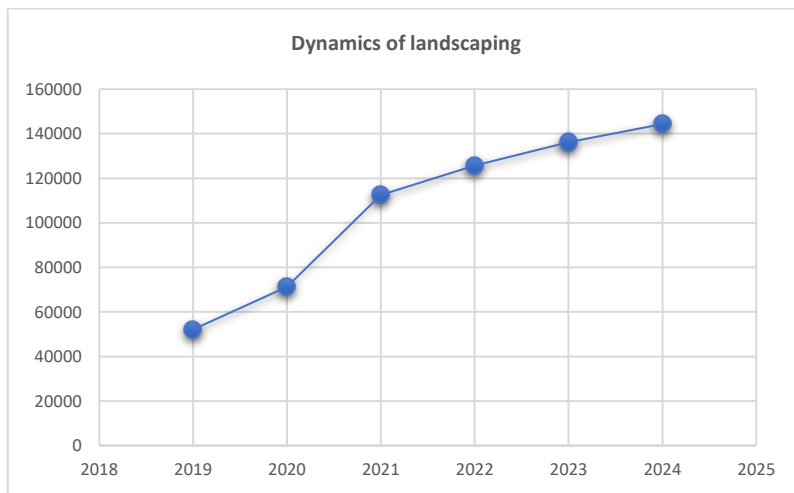
	Districts (cities)	Poplar	Elm	Spruce	Pine	Rosehip	Mulberry	Larch	Total:
1	Bukhara st.	1250	1800	1150	1500	175	2000	400	8275
2	Kagan st.	1000	600	1080	900	150	2050	360	6140
3	Bukhara d.	3400	1200	1250	1200	190	3000	250	10490
4	Jondor d.	3800	1065	1140	1100	125	4500	280	12010
5	Vobkent d.	4200	1200	1130	1150	180	4800	300	12960
6	Romitan d.	3900	1150	1142	1220	165	5000	320	12897
7	Peshku d.	4000	1180	1100	1100	165	5600	360	13505
8	Karakul d.	3800	1130	1100	1200	135	4900	180	12445
9	Alat d.	3200	1140	1100	1230	145	4500	150	11645
10	Kagan d.	2000	1100	1100	1000	155	2600	200	8155
11	Gijduvan d.	4500	1220	1150	1300	250	4700	250	13370
12	Shafirkan d.	4200	1200	1150	1000	210	5200	230	13190
13	Karaulbazar d.	2500	1120	1130	1000	135	3100	260	9245
	<b>Total:</b>	<b>41750</b>	<b>15105</b>	<b>14722</b>	<b>14900</b>	<b>2180</b>	<b>51950</b>	<b>3540</b>	<b>144327</b>



**Fig. 1.** The indicators

The indicators presented in this table reflect the degree of planting of trees and shrubs that release a lot of oxygen in the process of landscaping in the Bukhara region (fig.1).

As a result of the work carried out in the region on the basis of the national project “Green Region”, one can observe the dynamics of landscaping work over the years. Since the implementation of the decree of the President of the Republic of Uzbekistan “Concept of environmental protection of the Republic of Uzbekistan until 2030”, approved in 2019, the number of planted trees and plants is increasing every day. The diagram below shows the dynamics of greening in 2019-2024 (fig.2).



**Fig. 2.** The dynamics of greening

### 3 Research results and discussion

Not everyone knows, but the world actually has established a norm for green area for cities. It was established by the World Health Organization (WHO). In addition, in our country there is a set of urban planning rules for the planning and development of urban and rural settlements - it also stipulates the norms that determine the area of greenery, which both large municipalities and smaller ones must meet. The emergence of such standards is due to the fact that plants are of enormous importance to city residents.

According to data approved by WHO (according to the world standard), per local resident in the city there should be 50 m<sup>2</sup> of urban green spaces, as well as 300 m<sup>2</sup> of suburban ones. It is precisely this area of greenery that can provide a person with an optimal rate of oxygen. According to this standard, cities in which green cover occupies less than 10% of the area can be considered poor in terms of landscaping conditions. At the same time, for a good level this figure rises to 40-60%.

Landscaping standards also exist in our country. The numbers there are a little more modest, but also more expanded. They are spelled out in the set of rules "Urban Planning. Planning and development of urban and rural settlements." Thus, in large cities, at least 21 m<sup>2</sup> per person should grow per inhabitant, or 2.1 hectares per 1000 people. For small settlements in which the number of inhabitants does not exceed 50 thousand people, the norm can be reduced in accordance with the geographical location.

So, we found out that landscaping has a huge impact on the health of city residents. The more greenery there is in a city, the cleaner its air becomes. With the increase in green areas, people have more desire and opportunity to play sports outside and relax with their family in nature. In addition, the city automatically reduces noise and dust levels.

In order for the urban environment to be as comfortable as possible, it is important for local governments to follow the standards of landscaping and landscaping.

Currently, about 40 species and more than 90 varieties of poplar are grown in various climatic and soil conditions of our country. Poplar is the best air purifier among all tree species. By absorbing carbon dioxide, coniferous trees produce 10 times more oxygen than conifers. At the same time, it also produces phytoncides that kill harmful microbes. In total, 41,750 poplar bushes were planted in the region, i.e. 28.9%. In addition, due to the adaptability of pine to the climate of Bukhara, resistance to drought, growth in deserts and

steppe regions, life expectancy of 300-400 years, 15,105 bushes were planted, i.e. 10.5% pine trees. project "Green Region".

Spruces and pines belong to the family of coniferous trees and shrubs, but pine does not grow wild in Uzbekistan. Pine is a heat-loving, light-loving plant. It is grown as an ornamental plant on city streets and alleys. 14,722 spruce and 14,900 pine trees were planted in the region, and if we consider these results as a percentage, then spruce accounts for 10.2%, and pine – 10.3%.

Mulberry is a group of trees belonging to the mulberry family; 5 species are grown in Uzbekistan. It is mainly used for cocooning and feeding silkworms. Mulberry grows quickly and is resistant to drought and cold, so in all regions of the Bukhara region great attention is paid to the cultivation and care of this plant. At the same time, as part of the national project, more mulberry trees were planted than other plants - 51,950 bushes (36.0%).

Based on the results of the research, the effectiveness of the dynamics of landscaping work in the region within the framework of the national project "Green Region" was noted. This happened thanks to the correct selection of trees or plants, taking into account the conditions, water resources and geographical location of all regions of the Bukhara region.

## 4 Conclusion

Gardening is an important component of preserving the environment and improving the quality of life of people. It is the process of introducing plants and trees into urban or rural environments to create green areas and parks. One of the main benefits of landscaping is improved air quality. Plants absorb carbon dioxide and release oxygen through the process of photosynthesis. A large amount of greenery in cities helps filter the air and reduce the concentration of pollutants. This is especially important in a modern urban lifestyle, when the air is saturated with slag particles and harmful substances emitted by cars and industrial enterprises. Greening also helps combat climate change. Trees absorb solar energy and provide shade, which helps reduce temperatures in urban areas. In addition, green spaces help reduce the so-called "heat island effect", which occurs due to excess asphalt and concrete in cities. Tall buildings and sidewalks reflect solar radiation, raising ambient temperatures. Green areas absorb the energy of the sun, creating a more comfortable and pleasant microclimate.

In addition to environmental benefits, landscaping has a positive impact on people's health. Greenery reduces stress levels and improves mood, and also reduces the spread of noise. Research shows that people who live surrounded by vegetation are in better physical and mental shape. Landscaping also helps strengthen community and create attractive, well-used public spaces. Green parks and squares become meeting places for people, help to form connections between them and promote an active lifestyle.

In general, the environmental situation in Bukhara requires immediate and effective measures. It is necessary to improve air quality, rationally use and conserve water resources, carry out large-scale greening of the city, and create an effective waste management system. Achieving these goals requires not only the efforts of the authorities, but also the active participation of citizens and public organizations. Only united efforts can lead to real changes and the creation of an environmentally friendly future for Bukhara. From this point of view, a huge amount of work is being done in the Bukhara region to implement the National Project "Green Region" based on information from the State Committee for Ecology.

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