



DOI: [10.5958/2249-7137.2021.02020.6](https://doi.org/10.5958/2249-7137.2021.02020.6)

THE ROLE AND IMPORTANCE OF PLANTS IN ENVIRONMENTAL PROTECTION

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ABSTRACT

This article analyzes the role and importance of plants in protecting the environment and improving the ecological situation in cities. The increase of green space in cities solves many important environmental problems, creates a favorable ecological environment for the population, as well as its positive impact on the social, political and economic situation of the country. The total area of cities in the world is 0.5 million. sq. km. 0.3% of the globe's surface area. 49% of the world's population lives in cities with a population of more than 100,000. There are many large cities in the world with dense population, developed industry and transport. A necessary condition for solving these problems is the formation, development and preservation of the ecological system of green areas of the city.

KEYWORDS: *Environment, Urbanization, Green Areas, Landscaping, Conifers And Deciduous Trees, Microclimate, Phytoncide.*

INTRODUCTION

For the whole world, the protection of the environment, the formation, development and maintenance of a favorable ecological environment for the urban population is a pressing issue. The role and importance of green areas (parks, botanical gardens, forests, vulvar and squares...) as a solution to this problem is great. There is no scientific research on this problem in the field of landscape architecture of the republic. However, this topic was discussed by A. S. Uralov, K. D. Rakhimov in "Landshaft arxitekturasi ob'yektlarini loyihalash" (Tashkent, 2015), A. S.

Uralov, L. A. Adilova in "Landshaft arxitekturasi" (Tashkent, 2014) and A.E. Jonuzoqov, B.B. Scholars such as Mustaev have expressed their views in other publications.

Research style

There is a comprehensive scientific approach to the problem, which includes the following specific research methods. The comparative analysis of the collected materials from the study of scientific and specialized literature on the problem involves the study and generalization of the role and influence of plants in the formation of a favorable ecological environment for the protection of the environment.

Main part

Today, issues related to the development of urban planning systems have a direct impact on the ecology of urban and rural settlements. As a result, the growth of heavy industry, the shrinking of green spaces, has a negative impact on the ecological state of the environment in which human society exists.

Due to human activities, atmospheric air contains more gas, dust, dry matter, and solid particles than urban and rural areas. As early as the first century CE, the Roman philosopher Seneca wrote: The weather in the city is really bad, no matter where you are on the surface. In recent times, the process of all-round development, humanity is harming nature by providing itself with various amenities. As a result of the rapid urbanization process on the planet, new cities are emerging. The total area of cities in the world is 0.5 million. sq. km. 0.3% of the globe's surface area. 49% of the world's population lives in cities with a population of more than 100,000. There are many large cities in the world with dense population, developed industry and transport. For the next 100 years, the air of the world's largest cities will be monitored at meteorological stations, TV towers, on the roofs of high-rise buildings on the basis of daily observations and special photographic data from satellites. It turns out that in large cities, the temperature is higher than in the surrounding area, which creates a kind of "heat island".

Urban air pollution and increased dust levels reduce the transmission of ultraviolet light, which can lead to the growth of disease-causing bacteria in the air. In large industrial cities, sometimes the lack of wind and the stagnation of polluted air for several days results in a "smog", a bitter haze of toxic gases and dust.

Various toxic gases in the city's air, especially anthropogenic dust, come from vehicles, heavy industry, heating, and construction sites. Due to poor air circulation in cities, dust with a diameter of 4-10 microns rises to a height of 1 km and spreads over an area with a radius of 10 km. Dust with a larger diameter (greater than 10 microns) does not rise very high, spreads around, flies at an altitude of 300-500 m, and then returns to the city as dust. [5]

As a result of the development of production, a lot of waste and harmful gases pollute the city, affecting not only the urban population, but also the environment. there is no solution to prevent diseases caused by gases.

The results of the study show that the negative impact of humanity on the environment, and especially on green spaces, is growing. The problem of green spaces (gardens, parks, forests, botanical gardens...) is one of the most important environmental problems of the city. A necessary condition for solving these problems is the formation, development and preservation

of the ecological system of green areas of the city. Plants, as a system of environmental restoration, perform such priorities as providing favorable environmental conditions for urban residents, reducing the gas content of the air and its pollution, regulating the climatic characteristics of urban areas. It is a source of aesthetic pleasure for people, keeping the noise. It is also necessary to create green zones around busy streets. Because these plant barriers absorb toxic gases from cars and dramatically reduce noise. That is why we can see a lot of coniferous and deciduous trees all over the country.

Parks and alleys made of trees and shrubs are an essential part of the world around us and serve to preserve and improve the natural environment in our harsh continental, hot and dry climate. Green areas moderate the temperature and humidity, green areas covered with trees and shrubs are colder by 7-10 ° C than the ambient temperature in hot weather, and humidity is 20-30% higher. minladi. These features of trees are of great importance, especially in our hot climate. Coniferous and broad-leaved trees are also very important in the process of gas exchange in the air. Nitric oxide, sulfur, hydrogen fluoride, and acid vapor are also important in maintaining the balance of trees and shrubs. But the process of gas exchange takes place differently in all plants. Especially in broad-leaved plants, this process is more intensive than in conifers. the negative impact of wind on the environment is huge. Under such conditions, the dust-retaining properties of trees and shrubs are used. The denser the trees, the larger the leaf surface, the more dust they retain. Especially when the leaves of the trees are at the beginning of the growing season, the intensity of dust retention is strong and decreases towards the end of the growing season. Studies show that conifers trap an average of 40 tons of dust per hectare per year, while broadleaf trees trap up to 100 tons. Trees like these clean the air and keep out dust and noise. Performs sanitary-protective function. Urban planning norms recommend planting 350-400 trees per hectare to create shady green spaces in cities and villages of Uzbekistan. This is almost twice as much as in cities with temperate climates. Trees are capable of releasing enough oxygen for 200 people to breathe through the process of photosynthesis per day, and at the same time absorbing 8 kg of carbon dioxide, which is released from the lungs of as many people per hour.

Establishment of broad-leaved forests and green areas in areas with strong atmospheric dusting also increases the relative humidity of the atmosphere, while increasing the relative humidity reduces the release of dust into the atmosphere. Therefore, in large cities, the establishment of large coniferous and deciduous trees in conjunction with green areas in a radius of up to 500 meters from industrial areas near industrial centers increases relative humidity and reduces the amount of dust and various aerosols and gases in the atmosphere. The sanitary and hygienic properties of trees and shrubs are also characterized by the production of phytoncide, a substance that kills microorganisms that cause severe pain. Conifers, on the other hand, rank high in phytoncide production. 1 hectare of juniper produces 30 kg of bactericidal substances per day, spruce and pine 20-25 kg. This amount of phytoncides is enough to kill all the germs in big cities. Of the ornamental trees, white acacia, fake chestnut, common birch, Tatar maple, elm, willow, and apple are the main sources of phytoncides. The phytoncide properties of trees are enhanced during the budding and flowering phases and under the influence of heat and sunlight. It is also very important that conifers act as a green filter in the biological purification of the atmosphere. For example, the amount of chemical trace elements such as zinc, cobalt, chromium, copper and molybdenum increases in the atmosphere due to poor air circulation, densely populated areas, transport and various wastes. Exceeding the permissible levels of these elements

leads to environmental pollution. This can lead to various diseases. Planting in such areas reduces the amount of harmful microelements, especially in reducing the amount of iron and manganese in the atmosphere, fake chestnut and linden, and reducing the amount of iron and arsenic in poplar, arsenic and sulfur. In general, a set of conifers and deciduous trees, green compositions made of them, are the best means of purifying the atmospheric air. Creating large parks in the center of large cities is one of the most ecologically important tasks. Therefore, in the design of public buildings in cities and villages, especially educational institutions and public buildings, the formation of various complexes of trees and shrubs on green areas and the proper organization of the system of greenery, environmental health and ecological perspective is of great importance.

Landscaping is a natural way to protect the environment. Increasing the number of green spaces in cities solves many important tasks. It has a positive impact on the health of the population, creating a favorable ecological environment for the residents of the city. Landscaping can be done in several ways.

1. Volumetric landscaping (done by trees and shrubs.)
2. Parterre landscaping (with the help of lawns and flower beds).
3. Dimensional and parterre landscaping (both types of plants are used).
4. Vertical landscaping (carried out with the help of creeping and creeping plants).

When it is not possible to plant plants directly on the ground, it is becoming a tradition, especially in densely populated cities. Containers are widely used for landscaping. Nowadays, roof gardens are also becoming more popular. Such gardens reduce the amount of heat entering the building and extend the service life of the building. Parks play an important role in landscaping the city. Parks and alleys made of trees and shrubs are an essential part of the world around us and serve to preserve and improve the natural environment in our harsh continental, hot and dry climate.

CONCLUSION

Emissions of harmful substances into the atmosphere, saturation of the soil with heavy metals, pollution of water bodies, destruction of green areas - all this ultimately has a negative impact on the health of people living in cities. In recent decades, the negative impact of humanity on the environment, and especially on green areas, has been growing. The problem of green areas is one of the most important environmental problems of the city. A necessary condition for solving these problems is the formation, development and preservation of the ecological system of green areas of the city. In the design of buildings and structures for the urban environment, it would be expedient to develop a plan for landscaping its environment, along with the construction of buildings and the formation of green areas. Environmental status of cities, socio-economic status of the country is a "mirror" that reflects the level of Therefore, the release of information about the ecological situation of countries, their attitude to nature to the general public will have a positive impact on the social, economic and political situation in the country, especially in the field of tourism.

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