

LANDSCAPE DESIGN OF EXISTING GARDEN-PARK AREAS IN THE CITY OF TASHKENT: ANALYSES AND IMPROVEMENT METHODS.

<https://doi.org/10.5281/zenodo.18007605>

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Abstract

This article is devoted to the analysis of the landscape design of existing garden and park areas in the city of Tashkent and to ways of improving them. The historical heritage, current condition, as well as the ecological and aesthetic issues of urban green spaces are examined. Based on scientific literature and empirical data, analyses are conducted and proposals for the development of green areas in urban planning are presented. As a result, it is emphasized that improving Tashkent's parks can enhance the urban environment and increase the quality of life of the population.

Keywords

Urbanization, empirical data, geometric designs, non-geometric designs, integration, urban landscape, green space.

Introduction. Tashkent, as the capital of Uzbekistan, is undergoing a rapid process of urbanization. While the city's population was approximately 2.5 million in 2021, the level of urbanization is close to 50%. This process places significant pressure on urban green spaces, as urbanization intensifies problems such as air pollution, noise, urban heat islands, and soil erosion. Landscape design plays an important role in improving the urban environment, as green areas help maintain ecological balance, provide recreational spaces for residents, and enhance the aesthetic quality of the city.

Main Part. Uzbekistan's green spaces have a rich historical heritage, as evidenced by the gardens of the Amir Timur period (14th century), which were integrated into urban planning through geometric and non-geometric designs (Figure 1).



Figure 4. Central Park



Figure 5. Anhor Lokomotiv Park

Research on urban landscape design in Uzbekistan emphasizes the ecological and social significance of urban green spaces. Studies on the historical heritage and sustainability issues of city green areas indicate that forests cover only 7.2–7.5% of the country’s territory, contributing to desertification and climate change. Distinct features of contemporary urban landscapes include providing shade in hot climates, cooling through evaporation, and integration with water bodies. Research on green spaces for summer cooling in Tashkent shows that parks play an important role in reducing urban heat islands, but design shortcomings—such as small shrubs and lawns—often reduce cooling efficiency. Other studies suggest that optimizing urban landscapes can improve the environment, for example, by introducing a variety of plant species and dividing parks into functional zones.

The study employed a mixed-methods approach, including literature analysis, empirical observations, and statistical data. Thirty green areas in Tashkent (parks, squares, and boulevards) were examined, with measurements of temperature, humidity, and wind speed conducted from June to August 2022. Landscape design elements—such as trees, shrubs, lawns, and water bodies—were assessed. The distribution of green spaces was analyzed using GIS and remote sensing techniques.

Analysis: Historical and Current State. The landscape design of Tashkent’s parks is based on national gardening traditions, employing tree forms such as pyramidal, spherical, and clustered shapes (e.g., silver poplar, Japanese acacia, and tulip tree). Large areas like Alisher Navoi National Park and Tashkent City Park are located in the city center and are intended for recreation and cultural events. However, due to urbanization, the number of green spaces is decreasing, leading to ecological problems. Summer temperature analysis shows that temperatures in

parks can be up to 2.7°C higher than forecasts because small shrubs (e.g., junipers) do not provide effective shade. Areas with more than 75% tree canopy coverage (e.g., zones with large trees) ensure effective cooling.

Main Problems:

- Scarcity and uneven distribution of green spaces.
- Climate change, desertification, and illegal tree cutting.
- Design shortcomings: hard surfaces and ineffective plantings.
- Lack of data and absence of monitoring.

To address these issues, the following proposals are offered for improving Tashkent’s parks:

1. **“Improving Plant Selection”**: Increase large shade trees (e.g., sophora, oak) to achieve 75% canopy coverage and raise density to 111 trees per hectare (for large trees).
2. **“Creating Green Networks”**: Connect parks through green pathways and corridors, applying principles of ecological urbanism.
3. **“Functional Design”**: Divide parks into zones (recreation, sports, cultural), integrate water bodies, and introduce new plant species.
4. **“Policy Measures”**: Implement a moratorium on tree cutting, establish GIS monitoring, and involve the public.
5. **“Sustainability”**: Enhance economic and social benefits through nature-based solutions (NBS), such as creating green jobs.

Conclusion. The landscape design of garden and park areas in Tashkent plays a crucial role in improving the urban environment. Analyses indicate that addressing existing issues—such as design shortcomings and ecological pressures—can enhance the quality of parks. The proposed measures contribute to sustainable development in Uzbekistan and improve the health and well-being of the population.

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