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MODERN PROBLEMS IN URBAN LANDSCAPE ARCHITECTURE AND SUSTAINABLE SOLUTIONS

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Abstract
The present study examines pressing issues in urban landscape architecture, particularly the reduction of green spaces in modern cities, the overutilization of recreational parks for amusement rides, and the gradual disappearance of traditional boulevards and promenades. These trends contribute to the degradation of the urban environment and limit public access to natural spaces. The article proposes sustainable urban planning solutions aimed at reversing these effects by promoting the integration of green zones throughout urban territories. Special attention is given to the development of continuous green corridors by increasing the planting of ornamental trees along pedestrian walkways, canal banks, and irrigation ditches. This approach envisions transforming each city district into an interconnected segment of a broader recreational landscape. The paper argues that such measures will contribute to the creation of an ecologically clean and inclusive urban environment, enhancing the quality of life for city residents. The proposed strategies emphasize the importance of preserving and revitalizing natural elements within the cityscape through environmentally conscious and inclusive design practices.

Keywords: Urban landscape, recreational park, water bodies, natural environment, fountain, garden, pond, inclusive approach.

Introduction

Urban environments must allocate at least as much space to greenery, parks, gardens, and public promenades as they do to buildings and infrastructure. Without this balance, the ecological stability of cities is disrupted, leading to environmental consequences that may manifest as severe phenomena such as droughts or heatwaves—referred to metaphorically as "nature's retaliation" against unsustainable urbanization [1].

In recent years, increasing concern has been raised regarding the loss of green areas in our cities. A closer look at major urban centers reveals a dominant presence of concrete structures and asphalt surfaces, with minimal integration of natural elements. The traditional understanding of a recreational park has also shifted significantly. In many cases, parks are now filled with commercial outlets and paid attractions, such as amusement rides and entertainment zones—often with entrance fees—making them inaccessible or unappealing to a significant

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portion of the population. Public green spaces, instead of offering natural respite, are frequently limited to open plots with sparse, often withering coniferous trees, exposed to intense sunlight, and devoid of shade or ecological function [2].

This situation raises a critical question: what should an urban park truly represent? The answer lies not in commercialization but in ecological integrity, accessibility, and sustainable landscape planning. Parks must serve as inclusive, biodiverse spaces that contribute to urban resilience, public well-being, and environmental balance. This study seeks to explore these challenges and propose practical, sustainable solutions to reshape urban landscape architecture in alignment with contemporary ecological and social needs.

The Role of Urban Parks in Contemporary Landscape Architecture

A recreational park is not merely a place where trees grow in clusters or where paid amusement rides for children are concentrated. As urbanization intensifies and the density of constructed buildings increases, the perception of urban landscapes has undergone significant transformation. In the past, nature and the city were seen as opposing entities, with parks representing artificially created pockets of nature within the urban fabric. However, the current trends in urban planning highlight the importance of integrating ecological principles into city design. Parks and the green corridors that connect them—such as boulevards, rivers, and canals—are now regarded as essential elements of urban infrastructure [3].

In this context, recreational parks should form a continuous natural network, with green corridors ensuring ecological connectivity between these spaces. This new vision emphasizes not only the aesthetic and recreational functions of parks but also their ecological and climatic importance.

Landscape architecture, as a discipline, is more intricate and poetic than traditional architecture. In this field, the primary "building materials" are living plants—organisms whose volume, form, color, and structure are in constant flux. This dynamism requires a refined and responsive design approach from landscape architects.

Urban parks can incorporate diverse landscapes using natural features such as rivers, canals, and hills. Sometimes, a subtle transformation of existing elements is sufficient to generate an entirely new visual and spatial experience. Even in winter, urban parks can remain vibrant and picturesque, featuring a palette of white snow, evergreen foliage, dark trunks, silvery bark, and reddish twigs. A limited number of large, branching trees may be sufficient to define the character of a cooling green space, even in dense city areas. Such places need not resemble dense, wild forests but rather curated environments with intentional ecological and aesthetic design [4].

Landscape architects are, in essence, the visionaries of the future landscape. In modern and ideal park designs, even dead or dried trees can be preserved. While it may seem intuitive to remove dried trees for the sake of cleanliness or beauty, they can, in fact, serve as powerful natural elements that illustrate long-term ecological processes. In this way, a dried tree becomes more than just a lifeless trunk—it contributes to the park's atmosphere and narrative.

A dead tree with beautiful branching patterns can serve as an integral part of the park's visual composition, resembling an avant-garde sculpture. Even tree stumps can be retained and

incorporated into the landscape, harmonizing with the overall design. Each tree thus embodies its own life story and contributes to the layered historical and ecological identity of the urban park.

Functions and Future Vision of Modern Urban Parks

The outdated notion that a city should have only one large central park has been replaced by a more progressive urban planning paradigm. Contemporary urban designers advocate for the presence of multiple small-scale parks dispersed across different neighborhoods. This decentralized approach to green space planning enhances accessibility and ensures that all urban residents benefit from the environmental, social, and psychological advantages of natural areas.

Urban parks fulfill a wide range of functions, including offering aesthetic pleasure, supporting the preservation of natural ecosystems, encouraging physical activity, and contributing to economic development. Importantly, they must accommodate the needs of individuals seeking solitude as well as those looking for social interaction [5].

Today's landscape architects strive to harmonize people and nature through thoughtful design that is both inclusive and ecologically responsive. This is increasingly important given that over half the world's population now resides in urban areas—a figure expected to rise significantly in the coming decades. Urban living environments influence not only physical health but also emotional well-being, and cities are becoming more vulnerable to climate change and other crises. Consequently, designing urban spaces that support a healthy, active, and resilient lifestyle is of growing importance.

American journalist Richard Louv, in his book *"Last Child in the Woods,"* presents research evidence showing that disconnection from nature is associated with attention disorders, depression, and other health issues—a condition he refers to as "nature-deficit disorder." Urban green spaces provide a buffer against the noise and tension of city life. Even short walks in parks have been shown to reduce stress and improve mental clarity. Natural environments bring joy, reduce anxiety, help people cope with daily difficulties, and foster social connection. In essence, nature makes people healthier, happier, and more mentally resilient.

Designing High-Quality Urban Parks

At first glance, a well-designed park may appear similar to other public spaces. However, high-quality parks attract more visitors and create an atmosphere of comfort and safety. Such parks do not necessarily require large, pristine locations—they can be successfully developed in underutilized urban spaces such as roadside areas or beneath rail bridges. The key lies in optimal land use and careful planning. Furthermore, park designers must collaborate with governments, investors, and community stakeholders to ensure that diverse interests are addressed [6].

A successful urban park connects the space with surrounding neighborhoods and serves the entire local population. It is crucial to consider who will visit the park and what activities they will engage in. Most importantly, planners should consult directly with residents and align the park's features with their needs and desires.

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Urban parks should serve all people—regardless of age, gender, race, ability, or profession. This includes elderly individuals, children, persons with disabilities, and even pet owners. Inclusive design ensures that parks are accessible and meaningful to every group. It also fosters interaction between different community members, encouraging shared use and mutual understanding.

Inclusive approaches account for both diverse needs and social dynamics. For example, parks should provide inclusive play environments where children with and without disabilities can interact. They must include barrier-free access to playgrounds and adapt park infrastructure—such as shaded pavilions, seating, and walkways—for users with varied mobility. Other essential features include free and clean restrooms, clear signage, and navigation tools.

Marginalized and vulnerable groups often face discriminatory urban experiences. Urban parks must therefore be accessible and welcoming to everyone—from young children to senior citizens. Parks offer vital spaces for children to engage in developmental play and socialization, while for older adults, they serve as venues for exercise, interaction, and overcoming loneliness. As urban populations age and life expectancy increases, the design of parks must increasingly consider the needs of older adults. Parks support intergenerational interaction, with spaces that facilitate connection and dialogue across age groups. In the near future, demand for parks will evolve, reflecting changing visitor expectations and the emergence of new social behaviors. This will require adaptive park planning that supports environmental, historical, and cultural conservation in more socially integrated ways [7].

In the future, urban parks may also serve as venues for education and entertainment through multimedia technologies. Parks shaped by strong conceptual visions and thoughtful design can become important cultural landmarks, tourist attractions, and even part of a city's brand identity.

Strategies for Revitalizing Urban Parks and Promoting Public Engagement

Urban parks sometimes risk becoming underutilized or even ignored segments of the urban landscape. Rather than serving as vibrant public spaces, they may remain empty and disconnected from daily urban life due to poor accessibility, lack of appeal, or insufficient integration with the city's infrastructure. To prevent this, it is essential to enhance public access to and engagement with these parks.

If parks are not easily reachable by pedestrians, poorly connected to major streets, or inadequately linked to the city's transit and pedestrian networks, they are likely to remain deserted. According to emerging urban development paradigms, pedestrian movement and comfort must be prioritized across all city streets, especially in areas near environmental landmarks. Many cities around the world have already implemented the "10-Minute Walk" model, which ensures that every resident is within a 10-minute walk from a public green space where they can relax, cool down, read, or enjoy nature.

To integrate parks into the social life of the city, it is essential to establish a meaningful connection between the parks and the people. The first step is to attract people to visit the parks. The next is to provide such a high level of comfort and engagement that these parks become beloved community destinations.

These strategies are particularly critical for cities without large historical parks. In cities where park culture is well-established, green spaces are considered essential for emotional well-being, and their absence is almost unthinkable. In such places, rather than discussing park demolition, urban planners focus on building even more inclusive, freely accessible, and innovatively designed green spaces—making these parks a point of civic pride.

Tree Conservation and Park Identity through Green Mapping

To make urban parks more engaging, unique approaches such as assigning names to old and visually striking trees or promoting tree-related local legends can be implemented. These can be integrated into city history and culture, enhancing public interest. Volunteer programs can also be established to involve citizens in tree and park maintenance—many people are willing to support nature and participate in positive urban initiatives.

For example, the Czech NGO *Hnuti Brontosaurus* has developed an innovative method of drawing attention to urban trees. Through an interactive audio tour, residents can download maps and narration to explore the city's unique trees—such as ancient oaks (recognized as official natural monuments), exotic species like ginkgo, or preserved trunks of massive plane trees.

What Is a Smart Urban Park?

Contemporary urban parks are no longer merely pleasant recreational spots—they are also hubs of technology and environmental data collection. A *smart park* integrates Geographic Information Systems (GIS), sensor networks, and other digital technologies to manage the space effectively.

Data on microclimates, visitor flows, infrastructure maintenance needs, and environmental conditions can be collected and analyzed to optimize park management. For visitors, smart systems provide mobile access to information about the park, online ticket purchasing, feedback mechanisms, and interactive guides. Many modern parks also offer digital maps and species identifiers for trees and birds, enriching the educational experience [8].

In the age of smartphones, particularly among youth, these tools are not distractions but opportunities. Parks can host *augmented reality* tours, allowing visitors to learn about the local history, biodiversity, and geography through mobile applications. This makes the experience both interactive and educational.

Sometimes, the use of technology yields unexpected benefits. In Melbourne, for instance, every tree in the city was registered on an online map, allowing the public not only to identify them but also to leave messages. Initially designed as a monitoring tool to report damaged trees, the project surprisingly became a form of public storytelling—residents began sending heartfelt messages to their favorite trees, strengthening emotional connections to the urban forest.

A City Not Just Green, But Deeply Blue-Green

Urban areas must focus not only on greening but also on water provision. For instance, in terms of landscape design, Minsk is often cited as a model due to its blue-green system, where water bodies and greenery are interwoven. The green zones surrounding Minsk's water reservoirs

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stretch from the northwest to the southeast of the city, encompassing parks, boulevards, and public squares.

To draw public attention to these spaces, Igor Korzun, a coordinator at a landscape business company, proposed a citywide route passing through the most interesting parks and green areas. The initiative is called the “City Walking Marathon,” and the route itself is the length of an actual marathon.

A striking example of how a river can serve as a connector of parks is visible in Seoul. In South Korea’s capital, the Cheonggyecheon Recreation Park is located along a river. In the past, this site was neglected, blocked by collector drains, and covered by an overpass. Water once flowed through underground pipes, which disrupted the river’s natural cleansing ability and ecological balance.

In Seoul, the river was reopened and its banks were converted into a public promenade. This not only provided aesthetic pleasure for citizens but also had a strong positive impact on ecological processes. The river's natural flow through the city improved the environmental condition of the area, and flora and fauna significantly recovered. For instance, many fish, insects, and birds returned to the area, increasing biodiversity.

The creation of this park brought great benefit to city residents, who began enjoying recreation around the water bodies. In addition, investments in these riverside areas stimulated the urban economy. Today, part of the river is artificial, fed by a tributary diverted from a nearby river. Bridges—suspension, underground, and small stone bridges—connect the two banks. The total length of the park is 5.8 kilometers. The river park project was initiated by former South Korean President Lee Myung-bak, who was mayor of Seoul at the time. The project was opened in 2005, after nearly $1 billion in investment.

The park features very diverse flora—about 250 species of plants are present. Many of the planted trees and shrubs remain green year-round, giving the park a lush appearance in all four seasons. All plant species, shrubs, and trees have been catalogued, allowing visitors to explore and learn as they walk.

The creation of this park also increased the value of the surrounding land, leading to the emergence of small businesses. Moreover, the microclimate of the city center improved: the air was purified, and the temperature along the river corridor decreased by 3–6°C compared to neighboring districts.

The trees planted in the park also serve to visually and acoustically shield the road and its traffic. The noise of the city is effectively blocked. The park also includes nurseries for growing trees, shrubs, and seedlings, which are then transplanted to other city parks.

The park has several thematic zones: an area with stone art exhibitions, another reflecting the works of 18th-century painters, and a section that depicts the historical lifestyle of ancient Seoul residents. A portion of the park is allocated for modern artists. There is also a “Wall of Wishes” where visitors can write their dreams. On weekends, the park hosts festivals, parades, and markets, serving as a central cultural venue for the city.

Every detail in the park has been carefully thought out: drinking fountains, shaded areas, and access points to the river. Notably, 75% of the materials used in the park's construction and river restoration came from recycled infrastructure, particularly from the old overpass.

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Parks in Industrial Landscapes

Historically, many large cities had industrial zones located in their central areas. Today, one of the most effective methods for revitalizing these zones is to convert them into public spaces that support economic and cultural activity. This represents a fresh and innovative approach to post-industrial urban heritage.

One notable example is Domino Park in New York City. This park was built on the site of a former sugar refinery that had operated for over a century and had stood abandoned for six years. The goal of creating the park was to widen the street along the riverbank and reconnect the area to the city, transforming it into a vibrant public space.

Because it is located on the waterfront, the park also serves as an urban "filter" that absorbs dust from the air and as the first line of defense against storms and floods coming from the sea. Additionally, the park connects streets of varying elevations, with no stairs at all (except for a few observation platforms), making it fully accessible to all.

Domino Park is designed with distinct zones for both quiet and active recreation. It includes facilities for beach volleyball, bocce courts (a family sport similar to bowling), playgrounds, dog training areas, mini cafes, fountains, lawns, shaded resting spots, and secluded quiet zones. Visitors can stroll through the park, swim at the beach, or relax on the grass.

The park also contains a preserved industrial area, housing historical artifacts from the old sugar factory. These include internal building elements, spiral assemblies, bucket and screw conveyors, syrup tanks, cranes, and storage columns. There are also industrial-themed playgrounds for children. These allow them to explore the entire sugar production process—from cane processing to final packaging. Each section is designed to replicate actual stages of the refinery's operations.

Most of the materials used in the construction of the park were reclaimed from the former refinery. Designers repurposed wood and metal wheels that once served as building components. Various signs and direction boards were made by reworking signs used in the sugar plant. The park's amenities—such as pet and visitor drinking fountains, mobile phone charging stations, and winter-friendly heated benches—demonstrate a thoughtful and user-centric design philosophy.

Conclusions

In recent decades, the urban environment has undergone profound transformations—often at the expense of natural systems. Elements that once seemed abundant and taken for granted, such as clean air, cool microclimates, and shaded rest areas, are now becoming scarce and highly valued, particularly in rapidly urbanizing regions. This scarcity is not only a symptom of unchecked development but also a warning sign of the deepening disconnect between urban planning and environmental resilience.

In cities where construction is relentless and green infrastructure is limited, climate-related challenges—droughts, heat waves, and biodiversity loss—are intensifying. These phenomena reflect nature's declining capacity to regenerate under the pressure of human-induced stress. As a result, enhancing urban green spaces is no longer a luxury or aesthetic preference, but a

strategic imperative. It is essential for public health, climate adaptation, social cohesion, and long-term economic stability.

The case studies of Cheonggyecheon Stream Park in Seoul and Domino Park in New York clearly demonstrate that integrating blue-green infrastructure into urban landscapes produces tangible benefits: improved microclimates, restored ecosystems, increased biodiversity, strengthened public engagement, and revitalized local economies. These models show how nature-based solutions can redefine the city not as an ecological burden, but as a platform for regenerative living.

Looking forward, it is critical that urban development strategies prioritize the creation of accessible, inclusive, and climate-responsive green networks. These should not be limited to isolated parks, but rather form continuous ecological corridors that thread through residential, commercial, and industrial zones—supporting urban biodiversity and promoting human well-being.

We strongly hope that cities in our own region will invest in the creation of large-scale, interconnected, and publicly accessible green areas—boulevards, pocket parks, tree-lined walkways, water-retaining wetlands, and shaded gathering spaces. These interventions must be free of charge, equitably distributed, and responsive to community needs.

If societies fail to heed nature's warnings and continue to degrade urban ecosystems, the consequences may be dire. Inaction may lead us to a dystopian reality where, much like in parts of China, clean air becomes a commercial commodity, sold in cans as a symbol of what was lost. This scenario underscores the urgent need for proactive, science-informed urban policies that treat nature not as an afterthought, but as the foundation for sustainable and livable cities.

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