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# THE IMPACT OF OUTDOOR SPACES ON URBAN STRUCTURE: A CASE STUDY OF MASSINISSA NEW CITY

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## ABSTRACT

Outdoor spaces, particularly green areas, play a vital role in urban structure, significantly enhancing quality of life and promoting sustainable environments. Parks and squares encourage social interactions, enrich the city's aesthetics, reflect local identity, and foster community pride. Despite their importance, Algerian cities, especially newer ones like Massinissa, often neglect these spaces, which are frequently poorly planned and overlooked. This lack of proper planning leads to a loss of functionality and the deterioration of public spaces.

This research paper focuses on the importance of public and green spaces in urban environments, specifically addressing the challenges Massinissa faces due to poor implementation of urban planning laws, limited resident engagement, and inadequate community participation in the maintenance and development of these areas.

To address these issues, the study proposes an urban project aimed at revitalizing green spaces in Massinissa, offering recommendations to improve their management and raise environmental awareness among residents. By emphasizing the necessity of integrating well-planned outdoor spaces into urban planning, this research seeks to promote a healthier, more sustainable urban environment for the benefit of the entire community.

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## KEYWORDS

Outdoor Spaces, Urban Area, New City, Urban Environment, Green Spaces

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## Introduction.

The urban fabric represents the physical structure of the city as a system composed of an interplay of various elements, including built environments, road networks, facilities, and public spaces. The harmony among these elements achieves a balance in the urban environment of cities, aiming to enhance sustainable development and provide a healthy environment for residents. Among the most important elements that contribute to well-being in cities and serve as a real respite for residents are public spaces. These spaces are fundamental components of the city, fulfilling various functions related to movement and transportation, comfort and recreation, in addition to social and economic roles that organize and facilitate life within communities. They are also considered a hallmark of advanced societies, reflecting the level of prosperity and well-being within them.

However, despite their significant importance, public spaces suffer from marginalization in Algerian cities, particularly as they are often developed haphazardly after the general planning of the area, resulting in a loss of their primary functions, which has transformed them into abandoned places.

One such city is the new city of Masinissa, which prioritized the housing sector without considering the accompanying public spaces. This has led to neglect and forgetfulness, turning these areas into empty and lifeless spaces. This situation prompted us to raise several questions, the most prominent being: How are the outdoor spaces structured in the new city of Masinissa? Are they well-planned, and do they hold significance for the residents?

In addressing this topic, we adopted a descriptive-analytical approach to describe and analyze the study area and its various components, focusing on the characteristics of the outdoor spaces and clarifying the extent and degree of their connection to the urban environment, as well as their importance for the human element.

Through this research paper, we aim to highlight the role of outdoor spaces and their importance in shaping the urban landscape through their positioning, the functions they provide, and their direct relationship with the surrounding environment.

## **1. Theoretical Framework of the Study**

### **1.1 Definition of Outdoor Spaces**

Public space is a fundamental element in urban planning and development. It refers to open areas that are owned and managed by public authorities and are accessible to everyone, regardless of their social or economic background. This space includes squares, streets, parks, plazas, and sidewalks, as well as public facilities such as libraries and museums. Public space is characterized as a realm for social, cultural, economic, and political interaction, reflecting the collective identity of the community. (Gehl, 2011).

### **1.2 The Difference Between Outdoor Spaces and Green Areas**

There is often confusion between outdoor spaces and green areas, so we would like to clarify the distinction through these two simple definitions:

- **Definition of Outdoor Space:** This refers to any free area located outside what can be described as internal. This space can serve as a zone if designated for a specific type of occupation or activity. It encompasses all free areas and undeveloped spaces associated with absolute times, freedom, and recreation.
- **Definition of Green Areas:** These are spaces where the majority is covered by various plant elements (such as trees, shrubs, and grass). Some may include man-made features (like seating areas, fountains, and artificial water bodies). Green areas represent zones or parts of urban areas that are entirely or partially covered by vegetation within urban settings or areas intended for development.

## **2. Second: Introduction to the New City of Masinissa**

### **2.1 Situation**

The city of Masinissa is one of the cities in the Wilaya of Constantine. It is located east of the city of Khroub, at the intersection of National Roads 03 and 20. Masinissa is 24 kilometers away from Constantine and is administratively part of the city of Khroub, located 16 kilometers from it. To the north, it is bordered by vast agricultural lands; to the south, it is adjacent to National Road 20, which connects Constantine, Guelma, and Annaba. To the east lies the Tomb of Masinissa and privately owned agricultural lands, while to the west is National Road 03 (the highway), which separates it from the city of Khroub and connects Constantine with the Wilayas of Oum El Bouaghi and Batna.

The city of Masinissa covers an area of approximately 463 hectares, consisting of land with low agricultural productivity, making it suitable for construction and urban development according to geotechnical studies. Additionally, its strategic location between National Roads 03 and 20 facilitates its urban integration with the cities of Khroub and Constantine.

### **2.2. Phases of the Establishment of the New City of Masinissa**

The decision to establish the new city of Masinissa as an expansion area for the city of Khroub was made to help address the housing crisis that Khroub has faced since 2000, following Presidential Decree 2000/224(Ouchen. s, All.2015). The city was planned to accommodate 106,800 residents and approximately 17,800 housing units. According to the technical services of the municipality of Khroub, the population of the city was estimated at around 30,000 in 2004(Technical Report on the New City of Massinissa , 2009).

The first constructions in the area began in the early 1980s as part of the main urban planning scheme for the Constantine region. In the early 1990s, the Mila Study Office (BEM) was commissioned to study Land Use Plan No. 01 for the city of Masinissa in 1993, covering an area of 235 hectares. This plan was approved in 1995 and updated in 1997, followed by Land Use Plan No. 02, which spans 90 hectares and was approved in 1998.

After the decision to create the new city of Masinissa, Land Use Plan No. 03 was added to the previous plans, covering an area of 138 hectares located east of the highway (National Road 03). The study for this plan was initiated by the same study office (BEM) in 2003.



*Fig. 1. Situation of the city of Massinissa*

### 2.3. Spatial Division of the New City of Masinissa

The study area has been divided into three land use plans as follows (Abed. M,2015):

- **Land Use Plan No. 01:** This plan covers an area of 235 hectares, located in the southeastern part of the city, representing 50.76% of the total area. It is designed to accommodate approximately 12,000 collective housing units and is divided into:
  - **Neighborhood No. 01:** This neighborhood spans 100 hectares with a capacity of 5,800 housing units, accounting for 42.55% of Land Use Plan No. 01 and 21.60% of the total city area.
  - **Neighborhood No. 02:** This area covers 135 hectares and can accommodate 6,200 housing units, representing 57.45% of Land Use Plan No. 01 and 29.16% of the total city area.
- **Land Use Plan No. 02:** This plan covers 90 hectares, located in the northeastern part of the city, representing 19.44% of the total area. It designates 60 hectares for residential purposes with a capacity of 3,000 housing units, while 30 hectares are allocated for activity zones.
- **Land Use Plan No. 03:** This plan spans 138 hectares and is situated to the west of the new city of Masinissa, adjacent to Highway 03. It accounts for 29.80% of the total area and includes individual housing allocations, which consist of: Hayat, Masinissa Al-Shorouk, Riyadh, Sidi Omar, Al-Mouna, and Al-Manar.

### 2.4 Structural Axes of the New City of Masinissa

Roads are among the most important structural axes of the city, facilitating easy access and permeability. The new city of Masinissa is situated between two major intersections: National Road 03 and National Road 20. Additionally, it is connected by secondary and tertiary roads, as illustrated in the accompanying map.



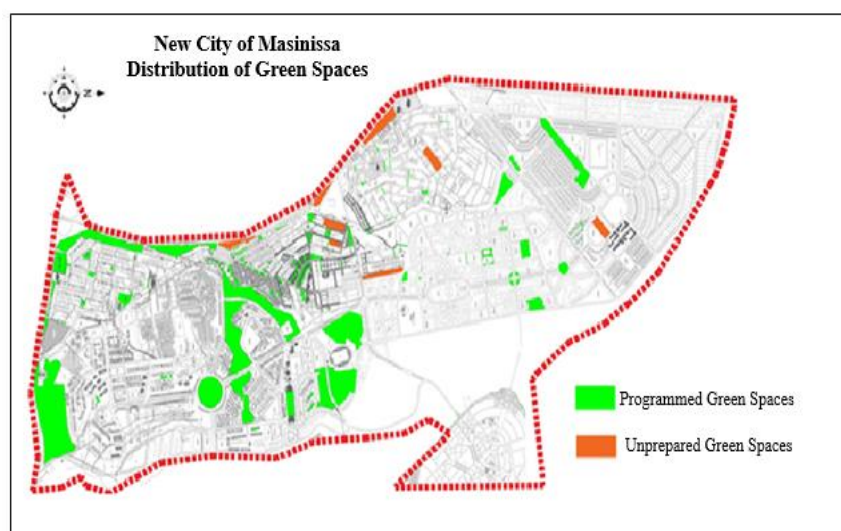


### 3. The Reality of Outdoor Spaces in the New City of Masinissa

#### 3.1 The New City of Masinissa: Planned vs. Reality

After reviewing the plan for the new city of Masinissa issued by the Directorate of Construction and Urban Planning, a map (Map No. 03) was created that includes only the programmed green spaces in the land use plan and the unprepared green areas.

However, in practice, field visits revealed that there are no developed green spaces. Additionally, the standards of the national equipment system, which stipulate 10 square meters of green space per individual, are not being met. In contrast, the global average for individual allocation of green space is 15 square meters, as illustrated in the accompanying map.



#### 3.2. Obstacles to the Creation of Green Spaces and Recreational Areas in Masinissa

Through our field study, we observed that the city of Masinissa suffers from a lack (if not a complete absence) of green spaces and recreational facilities. This issue arises from several problems and obstacles, including:

- The prioritization of land for housing projects at the expense of green space development, despite their inclusion in planning documents.
- Neglect of the few existing green areas, leaving them undeveloped.
- The absence of specialized authorities to implement these spaces.
- A lack of awareness among residents regarding the importance of preserving green spaces and recreational facilities, leading to a perception of their unimportance by relevant authorities.
- Some undeveloped green spaces have become havens for delinquents and are often used as garbage collection sites.

After conducting an analytical and field study of the new city of Masinissa and assessing the reality of outdoor spaces, specifically green and recreational areas, it is clear that there is a significant shortfall. The designated areas are often in poor condition and not adequately developed.

In response to residents' pressing demands for such spaces in the city, I believe it is essential to create an urban project aimed at enhancing the area and benefiting the community, specifically by developing a recreational park.

#### 3.3 Urban Project: Amusement Park in the New City of Massinissa

- **Reasons for Site Selection:** Due to the urgent need to implement this project and to allocate a significant area for it, the eastern part of the new city of Massinissa was proposed as the site. This location was identified in the city's land-use plan, where 9 hectares were designated for sports-related purposes, including a stadium and sports facilities. We have decided to integrate an amusement area within this space, covering 4 hectares. It is worth noting that the space allocated for the stadium and its sports-related equipment remains vacant and undeveloped.

- **Location of the Amusement Park:**

The urban project, the amusement park, covers an area of 4 hectares and is located in the eastern part of the new city of Massinissa, between Neighborhood 01 and Neighborhood 02, within Land Use Plan No. 01. To the east, it is bordered by the plateau of the Massinissa Tomb, to the west by Land Use Plan No. 03, to the north by Neighborhood 02, and to the south by Neighborhood 01.

- **Access Roads to the Amusement Park:**

The park can be accessed through a network of roads, which branch into main roads (two main roads leading to Neighborhood 01 and Neighborhood 02) and secondary roads (two secondary roads from Neighborhood 01 and Neighborhood 02). It is also proposed to provide public transportation and taxis for easier visitor mobility.

- **Proposed Facilities in the Amusement Park:**

As illustrated in Map No. 04, 60% of the project's area is dedicated to green spaces and facilities, while the remaining 40% is allocated for amusement facilities. Among the proposed facilities within the park are :

- A management office to oversee the park's operations
- A restaurant and kiosks
- A women-only café
- A special area for the elderly, which includes a bath and a kiosk
- A treatment room
- Public restrooms
- Benches for seating
- Public lighting
- Trash bins
- Fountains, water features, and shaded green spaces with trees and various types of flowers
- Different types of pergolas

Additionally, the amusement facilities will include a wide variety of rides and games for both adults and children, such as:

- A Ferris wheel
- Adventure rides
- Horse rides
- Water wheels
- Slides, etc.

The park will also feature modern and distinctive urban furnishings.

## **4. Results and Solutions**

### **4.1 Results :**

- Failure to enforce laws related to the creation of green spaces and amusement facilities, particularly Law 07-06 regarding the management of green spaces, and Law 22-17, which amends and supplements Law 07-06.
- Lack of prioritization for the creation of green spaces in urban planning.
- Absence of specialized authorities to implement these spaces, in addition to the lack of a dedicated budget.
- A lack of knowledge on how to create such spaces and how to distribute them around residential neighborhoods.

### **4.2 Solutions**

Despite the aforementioned obstacles, a set of solutions has been proposed to improve the dire state of green spaces. Based on Law 07-06, several measures have been put forward for their development, including:

- Ensuring the enforcement of laws related to green spaces, particularly Article 17 of Law 07-06, which prohibits the disposal of waste in these areas outside designated spaces. Violators will face a financial fine, as stipulated in Article 36. Additionally, Article 39 states that those who damage, degrade, or uproot plants in green spaces will face imprisonment of two to three months, along with a fine.

- Allocating a budget for the creation, development, and maintenance of these green spaces.
- Expediting the development of green spaces already included in city land-use plans.
- Providing various facilities and equipment in these areas (small kiosks, benches, public toilets in some locations, etc.).
- Repairing the existing walkways within these green spaces.
- Planting various types of trees along sidewalks and near seating areas, such as pine and jasmine trees for shade, as well as different types of flowers and plants, especially given the suitable climate.
- Installing water features, including artificial ones, and fountains in green spaces to enhance the well-being of visitors, along with seating areas.
- Establishing small playgrounds for children in some areas.
- Installing different types of pergolas to provide shade and add aesthetic value to the space.
- Hiring workers, particularly gardeners and cleaners, to maintain these spaces.
- Providing parking spaces.
- Integrating green spaces, their locations, and management into an accurate information system.
- Supplying waste bins throughout these areas.

## 5. Conclusions

Outdoor spaces hold great significance in the lives of residents, serving as essential places for relaxation and recreation. They are part of the urban fabric and should be prioritized in urban planning due to the many environmental, social, and health benefits they provide. As such, these spaces play a vital role in enhancing the quality of life in cities.

However, the green spaces, particularly in the new city of Massinissa, face numerous challenges and shortcomings. These issues stem from the failure to enforce laws related to the development and management of green spaces, a lack of awareness and care from the public, and minimal community participation and engagement in their improvement and maintenance.

This study was conducted with the aim of improving the current state of green spaces by proposing an urban project in the new city of Massinissa. Additionally, a series of proposals and recommendations were made to address the evident deficiencies, with the goal of achieving a better environment and fostering environmental awareness, leading to a more balanced urban setting.

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