

Genesis of Public Green Spaces Through Different Phases of Urbanization in Tunisia: Case Study of Greater Tunis

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Abstract

Recognized as an essential urban component, vegetation plays multiple roles in cities, not only in urban planning and landscaping but also in social, ecological, and environmental aspects. This article explores the evolution of the role of vegetation in urban environments in Tunisia through different phases of urbanization, shedding light on the influence of these transformations on the genesis of public green spaces. From the construction of the first major cities to the present day, this research examines the events and factors that have shaped the emergence of vegetation in urban public spaces, as well as the evolution of the relationship between city dwellers and vegetation. Using the advent of the French protectorate as a reference point, this article provides an in-depth look at urban organization and its relationship with vegetation, thus highlighting the importance of understanding this evolution for contemporary urban planning and the preservation of natural resources in urban environments.

Keywords: public green spaces; green spaces planning; urban vegetation; genesis of urban green spaces, Tunisia

1. Introduction

The urban history of Tunis, the capital of Tunisia, reflects a remarkable evolution in the relationship between the city and vegetation, shaped by a diversity of cultural, political, and environmental influences. From its origins as a traditional Arab-Muslim city to its contemporary development marked by sustainability and quality of life imperatives, Tunis has undergone various phases of urbanization and urban planning. This complex evolution bears witness to the challenges and opportunities encountered in managing vegetation within the urban space.

In this article, we will explore this evolution through an analysis of the various key periods in the urban history of Tunis, highlighting the changes in the perception and integration of vegetation within the urban fabric. We will also examine contemporary policies and initiatives aimed at promoting sustainable and resilient cities, with a particular emphasis on the growing importance of urban green spaces in modern urban planning. Finally, we will underscore the significance of a holistic and collaborative approach to addressing current challenges related to urban vegetation management in Tunis and beyond.

2. Tunisian cities before the protectorate: urbanization governed by Islamic precepts.

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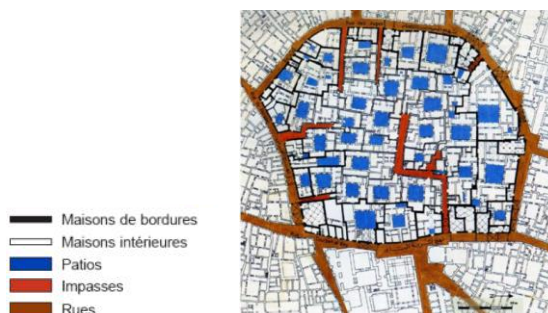


Figure 1: Organization of a residential core in the Medina

Until the end of the 8th century, Tunis was a typical Arab-Muslim city built according to very precise urban planning rules, attaching great importance to the privacy of family life as advocated by Sharia¹ which strongly influenced the organization of individual property, and even the entire functioning of the city². Thus, to preserve family privacy, households were mainly oriented towards a central patio, with all windows opening onto it (Fig. 1)³.

As a result, contact with the outside world was extremely limited. Adopting such a lifestyle meant that the medina was mainly composed of dwellings, with public space confined to dead ends and alleyways primarily used for the movement of people and goods, also serving as souks: the main economic hubs of the city. Another characteristic of medieval cities, including Arab-Muslim cities, was the surrounding wall. Its primary and essential purpose was to protect the city from external attacks.

This defensive measure directly resulted in extreme construction density. With limited space within the city, there was no alternative but to optimize land use, build and rebuild the city "on itself," and minimize public space. The aerial image in (Fig. 2) below highlights this extreme construction density.

Thus, in this urban configuration, there was no space for vegetation in the public space.



Figure 2: Aerial photograph of the Medina of Tunis, author unknown

¹ Set of legal provisions according to Islamic religion.

² Bennour Azouz M., 2014 under the supervision of Rejeb H. and Bettaieb T., 2014 "Heritage valorization of urban trees, case of the city of Tunis", doctoral thesis, ISA Chott Meriem.

³ Abdelkafi J., 1989, La Médina de Tunis: Historical Space, CNRS Press, in-4, 279 p., p. 166.

However, during this time, Arabs and Muslims had developed an art of gardens blending artistic and scientific genius, resulting in works that captivated and enchanted travelers of the time such as the Brugesian Adome, the Egyptian Abdel-Bassit Ibn Khalil, and the poet Ad-Dammimi⁴.

While there was no place for vegetation in the public space of the medina, it held a privileged place within the extra-mural princely palaces. Indeed, within the confines of the private space, the Arab-Muslim-inspired garden was a space dedicated to tranquility and the contemplation of nature's beauty. According to Quranic tradition, the garden one creates aspires to recreate the image of paradise as described in the holy Quran.

Al-Mustansir⁵ created, for his prestige and pleasure, north of the capital, the garden of Abu Fihir, enthusiastically celebrated by Ibn Khaldun, who described it in these words: *"Near the capital, Al-Mustansir formed a garden to which he gave the name of Abu Fihir, and whose fame had crossed borders. There was a forest of trees, some of which served as trellises, while the rest grew freely. Between these groves, flower beds, ponds, and green fields adorned with small monuments were spread out, all of which charmed the eye [...]. In the midst of these meadows, a large park surrounded a basin so extensive that it seemed to be a sea."*⁶

At that time, the pleasure of enjoying the beauty and tranquility of a garden was reserved for the affluent population, limited to kings, princes, and high dignitaries. It was a symbol of wealth, a place for meditation, a space where one could relax and be entertained away from prying eyes.

3. The city of Tunis under French protectorate: Influence of the hygienist movement and emergence of the first public green spaces and planted roads in Tunisia

With the advent of the protectorate, colonial authorities implemented a strategy of urban development to create a European-style city to meet the expectations of its new overseas occupants. Indeed, following the signing of the Treaty of Bardo, the bey, administrator of the regency of Tunis, was compelled to delegate all his powers in the areas of foreign affairs, defense of the territory, and reform of administration to the French resident general⁷. It was thus the colonizer's task to build the new city that would meet all the imperatives of European life according to, of course, the urban planning standards of the time, heavily influenced by the hygienist movement.⁸

To better understand the urban transformations that Tunisia experienced during this particular moment in its history, and consequently to grasp the principles behind the birth of the idea that vegetation in cities is a "benefactor" both in urban and social terms, it is necessary to have a clearer understanding of the hygienist urban planning movement.

Indeed, between 1830-1892, as a result of the industrial revolution, among the numerous infectious diseases that ravaged Europe, six cholera pandemics occurred. Medicine at the time was powerless against these epidemics: *"it was believed that they originated from putrid miasmas stagnating in the corrupted air of cities, resulting from the decomposition of all kinds of refuse and waste—organic or otherwise—resulting from urban activities, discarded into urban space. For the doctors and hygienists of that era, it was necessary to rid the city air of these pestilential odors responsible for the epidemics by sanitizing the urban*

⁴ Douali A., "Water Supply in Tunis during the Hafsid Period (13th-16th centuries)", Report edited by the National Heritage Institute, Tunis, 8p

⁵ Abû `Abd Allah Muhammad al-Mustansir is the third Hafsid Sultan of Tunis. He ruled over Ifriqiya between 1249 and 1277

⁶ IBN Khaldoun - "History of the Berbers and Arabs in North Africa - Muslim Kingdoms and Dynasties from the 1st to the 8th Century of the Hijra

⁷ The official representative of the French government in Tunis during the French protectorate of Tunisia (1881-1956)

⁸ Fatmi H, 2017 "Requalification of urban green spaces for the benefit of a multifunctional green network, case of the city of Kasserine" Doctoral thesis

environment: airing out, ventilating, reducing density, purifying the air by dispelling foul odors, and cleansing the environment through a series of hygienic actions and measures that would lead to a variety of experiences and the invention of urban planning"⁹.

The solution to these urban problems, though of a medical-sanitary nature, was not found in classical medicine but rather in urban planning and the way cities were conceived. Indeed, it was in the field of urban planning that hygienist theories saw the most applications: facing the transformations induced by the industrial revolution, they advocated opening up cities "*intra muros*" often delimited by ancient fortifications to allow better air circulation and a reduction in population density.¹⁰

It is important to note that the "thinkers" of the hygienist movement developed their theories in reaction to the urban situations of their time. This very period when the French colonizer settled in Tunisia. Hygienism thus quickly imposed its "rules" in Tunisian cities, starting with the capital Tunis, which geographer Pierre-Arnaud Barthel described as follows: "*The evocations of the miasmas of Tunis by the French (settlers and travelers), linked to the pestilential odors of the lagoon, especially in summer, particularly forged the dominant image of a sick, threatened, and threatening city, which legitimized in advance the action of the colonizer. The watchword was, indeed, to ventilate, drain, sanitize, and dry up.*"¹¹

Thus, a completely new city developed outside the walls of the Medina, designed to meet the needs of modern life, including automobile traffic and the creation of public spaces. In contrast to its predecessor, the lower city, so named in contrast to the Medina built on a hill, aimed to be open to the outside and facing the sea. Tunis then welcomed a number of infrastructures, including wide streets and avenues designed on an orthogonal plan (fig4), as well as public spaces such as urban parks and promenades.

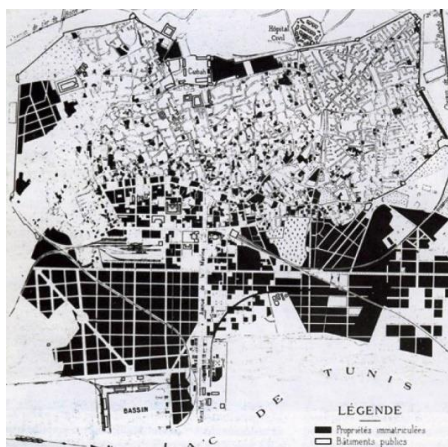


Figure 4: Contrast, Medina / Orthogonal city



Figure 3: Postcard of Tunis, Avenue Jules Ferry circa 1930

⁹ Levy A. , September 2014 "Urbanisme et santé: les trois révolutions", Les Cahiers de l'IAU îdF n° 170-171, pp. 11-12

¹⁰ Fatmi H, 2017 op.cit

¹¹ Barthel P.A., 2006, "Developing the Tunis lagoon: a model of urban planning and sustainable development?", Autrepart (no. 39), pp. 129-146

The Marine Avenue (fig. 3), which was renamed Jules Ferry Avenue in 1900, was from the outset conceived as a public space. The Marine Avenue thus served as a planted promenade lined with *Ficus nitida* trees. Later, the entire city would evolve around this axis.

The promenade is mentioned in numerous texts and by several French writers. Chateaubriand spoke of it: *"From the shores of the lake, to reach Tunis, one must cross a terrain that serves as a promenade for the French."*¹² The vegetal element, then unprecedented in the Tunisian public space, was an integral part of the European city at that time. The first urban gardens and public parks open to the public were then planned for the first time in Tunis.

Thus was born on a hill north of Tunis the first urban park in Tunisia, named the Belvédère Park (fig. 5 and fig. 6). Its design was entrusted to Joseph Laforcade, architect-landscape gardener chief of the city of Paris. The development plan was approved by the Tunis municipal council in 1892, and work was immediately launched, finishing in 1897.



Figure 5: Belvédère Park 2012 - Author Unknown



Figure 6: Postcard - Belvédère Park - circa 1930 - Author Unknown

In 1920, the municipality entrusted the realization of a development, beautification, and extension plan to the architect V. Valensi¹³, who planned large avenues, intersections punctuated by monuments and fountains, esplanades, and public gardens that were to create a set of public spaces on the scale of a capital. Although his plans were never implemented¹⁴, the municipality nonetheless carried out landscaping developments in the public space such as urban parks, squares, and planted roads (fig. 7).



Figure 7: Postcard showing Avenue de Paris adorned with a double row of *Jacaranda mimosifolia* trees circa 1930 - Author Unknown

¹² De Chateaubriand F. R., 2024, "Chateaubriand, The Complete Works," pp. 430.

¹³ Victor Valensi Tunis (1883-1977), architectural consultant for the city of Tunis in 1920

¹⁴ Samia AMMAR, 2022, "The garden city in Tunis: A new urban form in the immediate vicinity of the city" - Maghreb History, Archaeology, and Architecture Review - Issue No. 13

4. The post-war urban vegetation, under the modernist influences, shifted from a purely aesthetic aspect to a more holistic consideration.

In the 1940s, after World War II, Tunisian cities faced a deplorable urban situation characterized by extensive destruction and a proliferation of spontaneous housing, including ten "gourbi towns" around the capital¹⁵, without any control by the authorities. This situation was even more worrying considering that even before the war, urban development occurred without planning, simply based on the decree of January 25, 1929¹⁶, regarding the planning and extension of urban agglomerations.

The reconstruction policy attempted to address these urban dysfunctions by proposing a master plan for the city of Tunis capable of accommodating 30,000 inhabitants, designed by Zehrffuss and his team. It was in this context that the El Menzah 1 neighborhood was erected in Tunis. The initial nucleus of this neighborhood, designed by Bernard Zehrffuss, reflects the modern urbanization of the 1940s-1950s¹⁷.

This reconstruction process marked a turning point in how urban authorities perceived and managed urban space. The introduction of master plans and modernist urban concepts, such as those implemented in the El Menzah 1 neighborhood, signaled a shift towards a more planned and systematic approach to urban construction.

¹⁸A notable characteristic of this new approach was the renewed relationship with vegetation in urban spaces. While previously, vegetation in the city was mainly considered for its aesthetic aspects, modernist urban planners integrated vegetation in a more holistic manner, recognizing its essential role in creating a healthy and pleasant urban environment for residents. Thus, the integration of nearby public gardens and tree-lined streets in the El Menzah 1 neighborhood reflects this evolution towards a more comprehensive and functional consideration of vegetation in urban design.



Figure 8: Public garden within a large-scale development project, Menzah 1, 1960. Source: Gharbi S., 2023.

¹⁵ SEBAG P. 1998, « Tunis histoire d'une ville »

¹⁶ This refers to the French legislative measure known as the "Malraux Law" or "Law on the preservation and enhancement of safeguarded sectors, historic monuments, and protected spaces", enacted in 1962 under the leadership of André Malraux, then Minister of Culture. This law aimed to regulate and oversee the development of urban areas in France, creating a system of subdivisions that caused discontinuities and ruptures in the urban fabric.

¹⁷ Gharbi S., 2023. "The modern urban heritage of the 20th century through the lens of sustainability: case study of the El Menzah 1 and Mahragène neighborhoods" in Proceedings of Engineering & Technology-PET-Vol 81

5. Green Spaces and Urban Vegetation Post-Independence: Between Regulatory Texts and Public Greening Policies

5.1 Development Policies and Socio-Spatial Impact (1960-1980)

Post-independence urbanization in Tunisia was characterized by a dynamic process marked by legislative reforms and urban development policies aimed at meeting the growing needs of the urban population, particularly following massive rural-to-urban migration in search of better economic opportunities.

These legislative reforms and urban development policies were intrinsically linked to economic development policies that had a significant impact on population redistribution throughout the Tunisian territory. Firstly, the import substitution development model (1960-1970) resulted in a major rural exodus towards the country's major cities, leading to their significant densification. Secondly, the export promotion development model (1970-1980) required the implementation of urban policies aimed at housing development, urban planning, and urban transport.

In the early 1970s, a new housing policy was instituted based on the creation of three land agencies, among which the Housing Land Agency (A.F.H.) was tasked with acquiring, developing, and selling plots to households or developers. In 1974, the profession of real estate developer was established, long monopolized by the state. Finally, housing financing was entrusted to a National Savings and Housing Bank (C.N.E.L.).

This new housing policy implemented from 1975 resulted in the exclusion of economically modest populations unable to access the new housing provided by the state. This led to residential migration from the city center to the periphery, resulting in the de-densification of major urban centers such as Tunis, Sfax, or Sousse.

Among the essential regulatory frameworks established to organize urban production, the Land Use Planning and Urbanism Code (CATU), promulgated in 1979 and revised in 1994, plays a central role. Urban green space planning is also taken into account. Indeed, Article 12 of the CATU stipulates that "urban development plans (PAU) determine the locations reserved for green spaces, in accordance with an equipment grid set by decree."¹⁹ Thus, the equipment grid is the reference tool for green space planning in urban areas. It specifies, in terms of square meters of green space per inhabitant, the amount of green space to be provided on a city scale.

These various political and social events have resulted, since then until today, in the production of regulatory urbanization where the creation of green space is part of any new urban operation, alongside the proliferation of unplanned and spontaneous urbanization where greenery rarely finds its place.

5.2 Contribution of adopting sustainable development principles

In Tunisia, the creation of green spaces in urban areas has become a recurring slogan in the discourse held by the public authorities, parallel to the adoption of "sustainable urban development" and "quality of life" principles since 1987.

With the aim of preserving natural spaces and contributing to increasing the ratio of green spaces - around 4.4m² per inhabitant in 1994 - a National Program for the creation of 100 urban parks (NPCUP) was established and launched in early 1996. This option was supported by the President of the Republic at the time, who, as part of his electoral program in 2004, emphasized the need to reach, by 2009, an average of 10 m² of green space per inhabitant. This value has since become the established norm for any new development operation.

¹⁹ Law No. 94-122 of November 28, 1994, Land Use Planning and Urbanism Code, 1994, Article 12

6. Conclusion

In conclusion, the evolution of Tunis, spanning from ancient times to the present day, manifests a significant transformation in the city's relationship with vegetation. From the inception of the traditional Arab-Muslim city, where public green spaces were virtually absent, to the period of French colonization, which introduced new urban paradigms including the integration of green spaces, and finally to the post-independence era marked by the adoption of sustainable development principles, there has been a discernible evolution in the regulation and planning of urban green spaces.

However, notwithstanding these advancements, lingering questions persist regarding the tangible efficacy of these policies in terms of enhancing urban quality of life and ensuring environmental sustainability. It is imperative to meticulously evaluate the socio-spatial impact of these policies and explore avenues to optimize their implementation to meet the evolving needs of present and future urban populations.

In essence, the management of vegetation in Tunis' urban development stands as a critical challenge in the quest to construct sustainable and resilient cities. Achieving this objective necessitates a comprehensive approach and collaborative efforts among policymakers, urban planners and environmental.

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