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Investigating the management of public parks and gardens of Abidjan (Côte d'Ivoire)

Problématique de la gestion des parcs et jardins publics à Abidjan (Côte d'Ivoire)

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Abstract

The study highlights the factors of the state of public parks and gardens in Abidjan . This research was based on documentary research and direct observation. The review is completed by the inventory of the physical assets and surveys of municipal services, the district of Abidjan and users conducted in 2015 and 2020. The results revealed that there were 120 public parks and gardens available in the city of Abidjan. These parks and gardens are organised into four main categories: forest parks, classical gardens, and gardens integrated into the housing and road network. Furthermore, our results revealed that the state of the services offered by these green spaces is declining at various levels. This is due to the uneven distribution of public services t to satisfy public demand. The supply of services is also decreasing with the disappearance of 13.4% of public gardens and the degradation of 43% of these spaces. Despite public efforts to manage the heritage directly or indirectly via private partners and through residents, the situation remains problematic. The inadequacy of the funds allocated, the lack of synergy in the action of public services and the incivism of the population are proving to be at the origin of this situation. Moreover, the lack of ecological culture among 40% of the population and global warming.

Keywords: Abidjan, parks and public gardens, green space crisis, management methods

Résumé

L'étude met en exergue les facteurs de l'état des parcs et jardins publics d'Abidjan. Elle s'appuie sur la recherche documentaire, l'observation directe. La revue est complétée par l'inventaire du patrimoine physique et des enquêtes auprès des services municipaux, le district d'Abidjan et des usagers menés en 2015 et 2020. Les résultats montrent que les 120 parcs et jardins publics dont dispose la ville d'Abidjan sont organisés en quatre grands types : les parcs forestiers, les jardins classiques, les jardins intégrés à l'habitat et au réseau routier. Mais, l'état de l'offre de services de ces espaces verts est en baisse et ce à divers niveaux. L'équipement public est inégalement réparti et insatisfaisant par rapport à la demande. L'offre de service est également en diminution eu égard à la disparition de 13,4% des jardins publics et

à la dégradation de 43% de ces espaces. Malgré les efforts publics de gestion directe ou indirecte du patrimoine via des partenaires privés et l'action des riverains, la situation est alarmante. L'insuffisance des fonds alloués, l'absence de synergie dans l'action des services publics et l'incivisme des populations s'avèrent être à l'origine de cette situation. A cela s'ajoute le manque de culture écologique de 40% de la population et le réchauffement climatique.

Mots clés : Abidjan, parcs et jardins publics, crise des espaces verts, modes de gestion

1. Introduction

Urbanisation is a recent process in Africa, although it is old in other parts of the world. Different dynamics characterized it over time. The construction of the city considers several criteria, including the facilities generally provided for in urban planning (Dihouegbeu D.P. p132-137) . With regards to strong industrialization and modernization of cities, the needs of vegetation are valued and encouraged the reflection to define certain fundamental principles, particularly in the nineteenth and twentieth centuries (Bonhomme, M., 2012, p3). New ideas are emerging concerning the design and place of green spaces in the urban environment (M. Bonhomme, 2012, p3). With the awareness of its ecological, economic, social and urbanistic benefits, green spaces are now considered public facilities in their own right and systematically integrated into the urban fabric (M. Bonhomme, 2012, p3). Thus, all over the world, cities are creating green spaces, often of impressive sizes, such as Central Park in New York, Hyde Park in London and the Parc de la Tête d'Or in Lyon (M. Bonhomme, 2012, p4) Hence, new ideas are emerging concerning the design and place of green spaces in the urban.

With the awareness of its ecological, economic, social and urbanistic benefits, green spaces are now considered public facilities in their own right and systematically integrated into the urban fabric (M. Bonhomme, 2012, p 3). Thus, they are being created in cities, often on an impressive scale, such as Central Park in New York, Hyde Park in London or the Parc de la Tête d'Or in Lyon (M. Bonhomme, 2012, p4). Having become an essential component of urban planning, public parks and gardens benefit from defensive and management policies implemented by governments to protect them (L. Coméliau, N. Holec, J.-P. Piéchaud, 2001, p13). With global warming and the concept of sustainable cities in recent years, resilience is taking green spaces more into account (L. Coméliau, N. Holec, J.-P. Piéchaud, 2001, p13).

In Africa, urban greening policies are carried out remarkably. The cases of greening operations in Yaoundé in Cameroon in 2005, Cairo in Egypt, and Kigali in Rwanda (A. R. J. ASSAKO, 2012, p10-11) are examples of others. In Côte d'Ivoire, green spaces constitute a crucial criterion of urban development. This sector benefits from policy marked by the setting up of public structures conferring on these facilities a public service status. Urban centres are then endowed with green spaces, which are particularly numerous in large cities, including Abidjan. The city of Abidjan has many public gardens and two parks. However, despite the actions of the state and all these green facilities that have been purposely developed, there is a crisis of parks and gardens in cities in general. The disappearance and degradation of public parks and gardens is the concern investigated by this study. The disappearance of these facilities, particularly in Cocody (A, Nassa 2009), Treichville (A. Abalé 2014 and 2016) or their deterioration, particularly in Adjamé (Toure et al, 2016, p5768) are illustrations of the issue. In the case of Abidjan, several communes have reflected on the issue. Nevertheless, the literature remains sparse on the issue at the city level, i.e., Abidjan. It is therefore urgent to investigate the issue in Abidjan.

what are the factors of the state of public parks and gardens in Abidjan ?

The objective of this study is to highlight the factors of the state of public parks and gardens in Abidjan. The general hypothesis is that the parks and gardens in Abidjan have entered a general process of reduction and degradation due to inadequate management. To carry out this study, the methodology will be presented, followed by the results and finally a discussion.

2. Materials and Methods

2.1. *Presentation of the study area*

Located in the south of Côte d'Ivoire, Abidjan covers an area of 2,119 km^2 and is spread over a plain to the south with a hilly plateau to the north. The city hasten (10) communes namely Abobo, Adjamé, Attécoubé, Cocody, Plateau, Treichville, Port-Bouët, Marcory, Koumassi and Yopougon. The city has a population of 4,395,243 inhabitants (RGPH, 2014). Cosmopolitan, this population is mainly composed of nationals and immigrants from the West African sub-region. The population works mainly in the private and informal sectors. The city's original habitat includes a range of public parks and gardens.

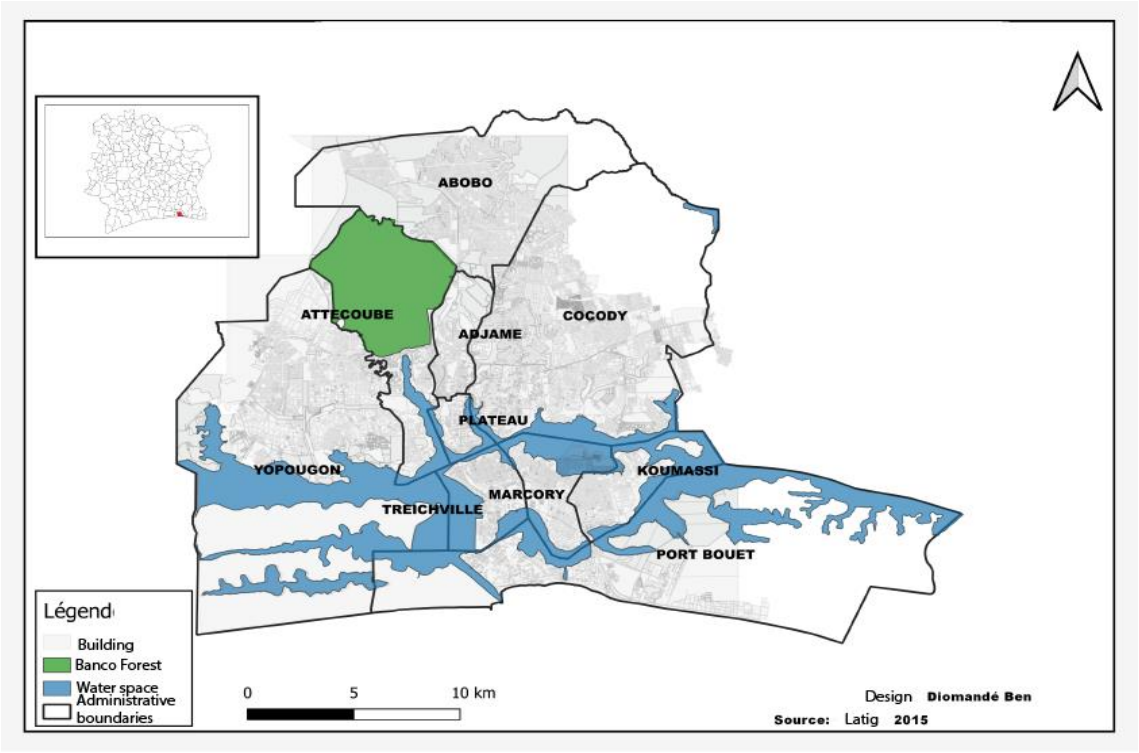

Figure 1: Presentation of the city of Abidjan

2.2. Methodological approach

-Data collection

Data was collected through direct observation, literature review and a survey. The literature review was done using policy documents related to parks and public gardens. That allowed us to list parks and gardens, and classify them. The policy documents were collected from various public services, namely the Directorate of Parks and Public Gardens in Abidjan of the District of Abidjan, the Ministry of the Environment and Sustainable Development and the town halls of the various communes of Abidjan. Consultation of maps relating to land use in the city of Abidjan enabled the study area to be delimited and the maps relating to the study to be produced. Direct observation via a field visit equipped with a

GPS was used to identify and locate public parks and gardens, and then to describe the state of provision of these services in the city of Abidjan as well as their use by the population.

The survey was carried out in 2015 and 2020. The questionnaire was aimed at the population to find out their appreciation, of activities in public parks and gardens and their management action. A sample size of 354 households was selected and surveyed based on the formula of William G. COCHRAN :

$N = T^2 \times P (1-P) / E^2$

With N= sample size, T = 95% confidence level (standard value: 1.96), P = characteristic proportion of the population (population growth rate = 3.6% standard value: 0.36) and E = 5% (standard value: 0.05)

$N= (1, 96)^2 \times 0, 36 (1-0,36) / (0,05)^2 = 354$

This sample of 354 was proportionally distributed amongst the 10 communes as per Table 1 below.

Table 1: Distribution of the sample by commune of Abidjan

Municipality	Population	Sample
Yopougon	1 071 543	86
Abobo	1 030 658	83
Adjamé	372 978	30
Attécoubé	260 911	21
Cocody	447 055	36
Koumassi	433 139	35
Marcory	249 858	20
Plateau	7 488	1
Port-Bouët	419 033	34
Treichville	102 580	8

Source: General population and housing census, 2014

In these communes, these people were interviewed. The questionnaire, open-ended, focused on the management methods of public parks and gardens.

- Data analyses

The collected data were analysed using statistical tools Excel software), cartographic tools such as Adobe Illustrator software), and iconographic and analytical tools as well. Excel was used for descriptive statistics while Adobe Illustrator was used to producing maps. The analysis was based on Ludwig Von Bertallanfy's systems theory, which postulates that any type of phenomenon must be considered as a system, i.e. a complex set of interactions. According to this theory, all phenomena can be explained by the interactions between the various elements involved. This theory is adapted to the understanding of transformations and changes concerning a space such as gardens or parks. The systemic analysis adopted in this study considers these green spaces in Abidjan, and the actions of the different stakeholders (the populations, the town halls, the Ministry of the Environment, and the District of Abidjan) to understand the state of the service offered at these places. The results are discussed below.

3. Results

This section describes the results of the study.

3.1. *Description of the public parks and gardens of Abidjan*

3.1.1. Features and spatial distribution of public parks and gardens

The policy of greening cities, especially Abidjan has been around since the colonial era. The parks and public gardens are scattered throughout the 10 communes of Abidjan and are listed in table 2 below.

Table 2: Distribution of public parks and gardens in the District of Abidjan by commune in 2015

Communes	Number of public gardens	Number of public parks
Attécoubé	2	1
Abobo	3	-
Koumassi	3	-
Marcory	5	-
Yopougon	6	-
Port-Bouët	7	-
Treichville	17	-
Adjamé	10	-
Plateau	15	-
Cocody	50	1
Total	118	2

Source: Field survey, 2015

Abidjan has 120 green spaces, including 2 forest parks and 118 public gardens, unevenly distributed over the 10 communes of the city. Predominant in the city, public gardens (98%) are the main green facility in Abidjan. Grassed, flowered or wooded areas, can be classified into four categories: administrative gardens, gardens integrated into the road network, gardens integrated into the housing estate and classical gardens. Administrative gardens are located on the sites of administrative departments. They are usually small grassed and flowered areas. Classical gardens are large or medium-sized recreational areas for collective use that are detached from public administration. These gardens are both grassed, flowered and wooded. The gardens integrated into the housing are rather included in the housing developments for residential use. They are generally small in size, with grass and flowers. The gardens integrated into the street consist of aligned trees and grass along or within the street. These are median gardens, roundabouts or along the pavement, and wooded gardens around the interchanges. In the city of Abidjan, gardens integrated into the roadway predominate with 46% of the total, followed by gardens integrated into the habitat and then classic gardens representing respectively 27% and 16% of the total. Finally, gardens integrated into the administration represent 2% of the total.

As for the forest parks, the two listed are the Banco National Park (3474 hectares) and the floristic park (11 hectares) of the University of Cocody. The Banco National Park was created in 1929 and is a combination of primary forest and planted forest. The park has been developed with offices and administrative housing and various services and is used for ecotourism and recreation. It has a variety of species, including the "Kossopo", a tree with a diameter of 2.5 m that is over 500 years old. The park of the University of Cocody, known as the national floristic centre and a research centre on floristic diversity, includes administrative offices and research laboratories and 60,000 species of trees.

The spatial distribution of these green spaces highlights a skewed distribution in Abidjan (see figure 2). Most of these green spaces are located in the northern part of the city of Abidjan (78%) and 22% in the south. With regards to the communes, there is a high concentration of these green spaces in Cocody, which accounts for 40% of the total. Treichville and Plateau follow with 13.7% and 12% respectively. The other communes are poorly equipped, with less than 10% in each commune. These are 8.1% in Adjamé, 5.6% in Port-Bouët, 4.8% in Yopougon, 4% in Marcory, 2.5% in Koumassi, 2.5% in Abobo and 2.5% in Attécoubé.

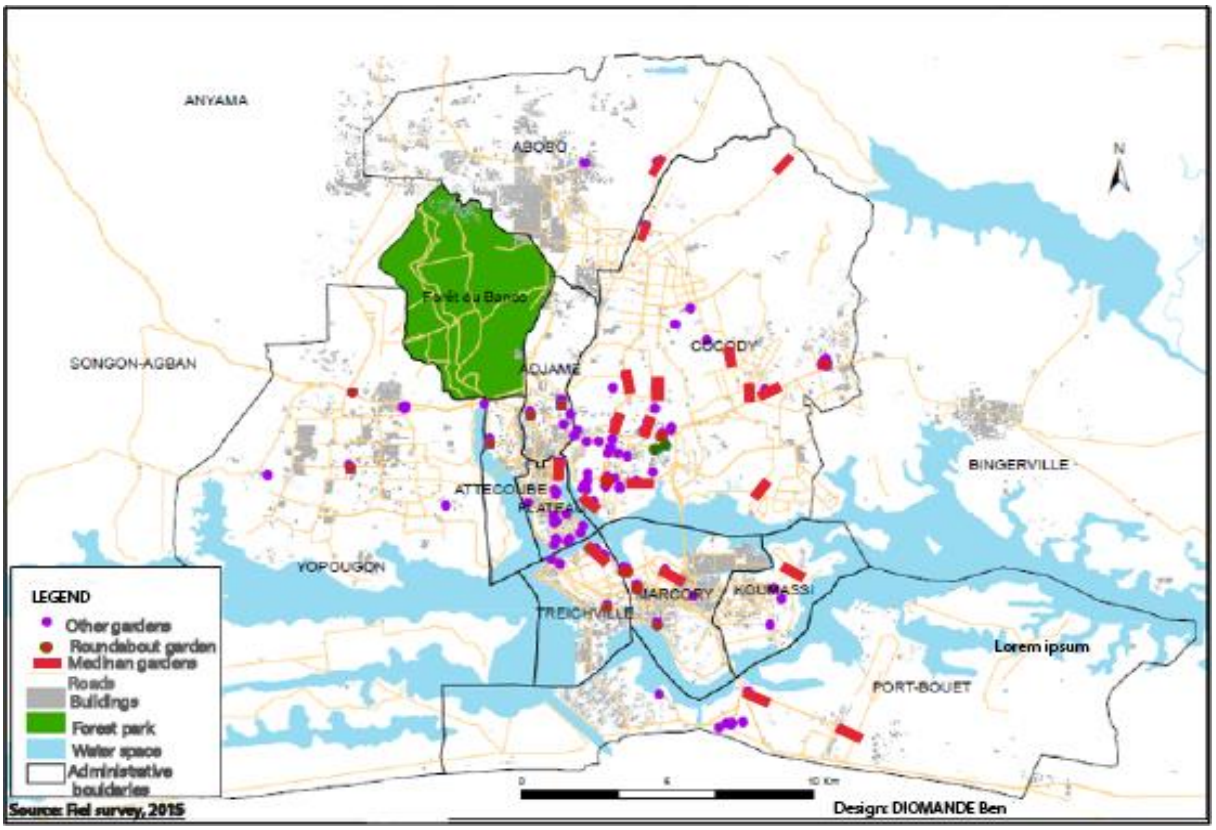

Figure 2: spatial distribution of public parks and gardens in the city of Abidjan

2.1.2. State *of public parks and gardens in Abidjan*

2.1.2.1. Offered services of public parks and gardens and the actors involved in their management

The provision of services at the public parks and gardens in Abidjan is characterized by some quality issues. In terms of services, these facilities are recreational spaces. Most of the respondents (78%) reported that they are dedicated to beautification and entertainment. In addition, Over 60% of the respondent classify these spaces as relaxational and for resting. Furthermore, 56% argued that the places are for walking. The parks are used by tourists and as well as for studies on biodiversity.

The different structures (agencies) are responsible for the management of these areas. They are the District of Abidjan and the town halls in charge of the management of public gardens, the Ministry of the Environment and neighbourhood associations. The Ministry of the Environment and Water and Forestry is responsible for the management of forest parks. The District of Abidjan manages part of the public gardens through the Directorate of Parks and Public Gardens (DPG). A total of 64 public gardens are maintained by the DPG, the majority of which are gardens integrated into the road network, representing 76% of the total. The town councils are

responsible for the management of 29 public gardens, which are mainly integrated into the housing and administration sectors, i.e., 41.3% of the total number. The maintenance of these gardens is done by the municipalities (90%), which is known as direct management. About 3% are maintained by private companies and municipalities, which is known as mixed management. Town halls (7%) entrust the maintenance of the parks and gardens to private structures (indirect management). The Ministry of Environment manages the Banco National Park through the Ivorian parks and Reserve Office. In some housing developments, residents' associations are responsible for the maintenance of public gardens.

2.1.2.2.State of parks and gardens: strengths and many weaknesses

The current state of Abidjan's public parks and gardens is of mixed character. Strengths and weaknesses are recorded on the ground. Regarding strengths, several parks and public gardens are in good condition and have been developed to promote environmental aesthetics and recreation for the population. About the layout, they are equipped with electricity, except for the gardens integrated into the road system, the others are equipped with concrete seats, alleys, sometimes toilets and even fountains. The management efforts of the various actors have given many green spaces a satisfactory state. The structures in charge of the maintenance and protection of these facilities work to ensure quality service to users. In addition, it is for the embellishment of the city and better development of the population, which are essentials for a good environment. Other objectives are to ensure biodiversity, tourism and the decontamination of the urban air. Thus, the two parks are a condensed collection of trees displaying vibrant greenery. The administrative gardens and those integrated into the road network (representing 48.6% of the green spaces) are almost all green, regularly mown, healthy and pleasant to look at. As for the gardens integrated into the housing, some are in good condition, still have their grassing intact and are healthy. These are the gardens of recent housing developments, mainly built in the commune of Cocody, which benefit from the good maintenance of the residents.

Parks and gardens suffer from many deficiencies. Public gardens integrated into the habitat and classic are spaces in crisis in general. Firstly, these spaces have low spatial coverage. They are glaringly inadequate. There are only 2 forest parks for a city of 2119 km^2. All of them are in the northern part of the city, while the southern part of Abidjan has no parks. Concerning public gardens, the ratios of inhabitants per garden according to the city's communes are disconcerting. Table 3 below shows these ratios.

Table 3: the ratios of inhabitants per garden according to the city's communes

Communes	publics gardens	number of inhabitants	Ratio of inhabitants per garden
Abobo	3	1 030 658	343 552,6
Adjamé	10	372 978	37 297,8
Attécoubé	2	260 911	130 455,5
Cocody	50	447 055	8941,1
Koumassi	3	433 139	144 379,6
Marcory	5	249 858	49 971,6
Plateau	15	7 488	499,2
Port-Bouët	7	419 033	59 861,8
Treichville	17	102 580	6 034,1
Yopougon	6	1 071 543	178590 ,5
Total	118	4 395 243	37 247,8

Source: Field survey 2015

As shown in table 3, public gardens are more than needed. The ratios show thousands of inhabitants per garden in almost all the communes of Abidjan. The shortfall is greatest in the commune of Abobo with a ratio of 343,552.6, followed by Yopougon with a ratio of 178,590.5 inhabitants per garden, then Koumassi and Attécoubé with ratios of 144,379.6 and 130,355.5 respectively. In addition, despite the efforts of the state services, many of the gardens and those integrated into the habitat are in a state of disconcerting degradation. 80% of these spaces are poorly maintained, and unhealthy, with a lawn that is almost non-existent or destroyed. Photo 1 illustrates the insalubrity of a typical garden in the Plateau commune. These spaces are littered with solid or liquid waste scattered here and there, and some have become rubbish dumps. This degradation affects the gardens integrated into the road system and administrative gardens to some extent. Several of these green spaces have disappeared due to their transformation into spaces dedicated to other uses, either as sports areas, commercial areas, *woro-woro* stations, car parking or places of worship. Some are even occupied by the administration. This disappearance affects 40% of the classic gardens. In Cocody, for example, there is a garden that has become an embassy, and in Yopougon another that has been transformed into a town hall. Small shops selling various items, telephone and restaurants (photo 2) are registered on these sites. About 10% of the gardens integrated into the administration and 20% of the gardens integrated into the housing have disappeared according to our surveys. Overall, the provision of services is decreasing due to the deterioration of 43% of public gardens and the disappearance of 13.4% of these spaces according to our surveys. Various factors explain this situation.



Photo 1: An unhealthy alley in a classical garden in the Plateau, photo by the authors, 2020



Photo 2 : A degraded lawn in an interchange ear in Yopougon, photo by the authors, 2020



Photo 3 : a restaurant built in a classical garden in the Plateau, author's photo, 2020



Photo 4 : a town hall annex built in a former public garden in Yopougon, photo by the author, 2020

- Explanatory factors for the decrease and the degradation of public parks and gardens

The decrease in the supply of green spaces in Abidjan, reflected in the deterioration of 43% of public gardens and the disappearance of 13.4% of these gardens, stems from various factors. It

results from the mismanagement of these places by various actors. There are failures at different levels that are affecting these places.

A key factor in this situation is the lack of funds and equipment allocated to maintain these areas. According to the public services surveyed (the town halls and the Parks and Gardens Department), the funds granted by the State barely cover the needs for carrying out maintenance work. According to the Director, "*The Directorate of Parks and Gardens does not have a budget as such. We are given a monthly allocation of fuel for the ten (10) Communes of Abidjan in addition to the Communes of Bingerville, Songon and Anyama. Every year, Governor Robert Beugré Mambé makes it a point of honour to set up this allocation. He does not forget, also, the equipment and personnel*". The deputy director of the DPG (2016) is unequivocal: "*Green spaces are budgetary because they require a lot of investment. These are high costs*". Few municipalities have the means to clean them up. In addition, the lack of communication between the different public actors in charge of managing these areas hinders efficient maintenance.

Moreover, the incivism of the population is a cause of the crisis of green spaces in the city. A large part of the population has limited respect for green spaces and limited awareness of their importance. About 44% of the respondents reported that they "*did not know what to say*" regarding a question on the feeling of the population about parks and public gardens. All kinds of abuses on their part were observed in these places, namely insalubrity, the destruction of lawns and the use of these spaces for other purposes (small businesses, small trades, stations etc.). The Director of the DPG even affirms that "*Abidjanese do not yet have a culture of gardening, of green spaces. Lawns, flowers, trees, they have no respect for them. There are some among them who do not hesitate to make them their places of relief of any kind. It is ridiculous to see domestic animals roaming around and destroying plants and flowers. A great deal of awareness-raising is still needed to make people aware of the importance of green spaces. The lack of eco-citizen behaviour is so detrimental that it undermines our efforts. While trees are being planted, some people cut them down because they don't want them to be planted in front of their houses*".

In summary, the crisis in Abidjan's green spaces stems from the inadequate management of state services due to the lack of resources allocated and administrative problems. In addition, the incivism of the population and the lack of awareness of their importance contribute to this crisis of public parks and gardens in Abidjan.

4. Discussion

The unavailability of data from the General population and housing census 2021 and the discretion of public structures on the amounts of funds allocated to the management of public parks and gardens are some limitations to this study. However, the non-obtaining of these data does not put into question the results. With 2 forest parks and 118 public gardens, Abidjan is experiencing maintenance problems in several of these facilities despite the management efforts of the various public and private actors. These green spaces is decreasing due to the state of deterioration (43%) and the disappearance (40% of classic gardens, 20% of gardens integrated into the habitat and 10% of administrative gardens) of these facilities. The incivism of the population and the inadequacy of the funds allocated, added to the lack of communication between the public structures that are the main actors in this management, are at the origin of this situation. Several studies confirm our results.

The crisis of green spaces is an issue in various urban centres around the world. In the cities of north-eastern Tunisia, several parks and gardens are in a state of degradation. However, 86% of the parks and gardens are managed by the State, 66% of which are managed directly by the town halls, 20% by a private company hired by the town hall or the Ministry of the Environment, and 12% by private partners managed indirectly (Besma L. et al, 2012, p. 4). Although public parks and gardens, particularly those close to the presidential residences in Tunis, are in good condition, the insalubrity and degradation of lawns are striking in the green spaces of cities such as Kana. Marked by the presence of empty alcohol bottles littering the area, the insalubrity of these spaces is alarming in the cities of north-eastern Tunisia (Besma L. et al, 2012, p. 3). In Nogent sur Mame, some parks have lawns that have disappeared in places (Stephen et al, quoted by Fares Z, 2021, p15). This deterioration concerns both natural and artificial components (Fares Z., 2021, p 16). Several tools installed in public parks and gardens, namely benches, games, electricity, and waste bins, are degraded and even become non-functional (Fares Z. 2021, p16). These green spaces with numerous social, environmental and economic functions (Fares Z. 2021, p10) are also unevenly distributed in the northeast of Tunisia (Besma L. et al, 2012, p 3). In Algeria, we are witnessing a decline in green spaces threatened by degradation in the image of Landon Park in Biskra; they continue to sink into oblivion and abandonment (FARIDA N. 2007, p118).

In Ivorian cities, the issue of green space management is a concern. ”The framework law 62-253 of 31/07/1986 in its section 3, article 69 of title IV stipulates that the State and local authorities must ensure the creation, maintenance and upkeep of green spaces”(Kouassi et al, 2017, p55). However, the efforts of state services remain insufficient, and the state of public gardens in the commune of Treichville in Abidjan is not very good. These spaces are subject to anarchic occupation by informal trade, car garages, shops, precarious housing, the mentally ill, street children and animals (Kouassi et al, 2017, p57). In addition, the equipment (benches, lighting, plant irrigation system) is vandalised. In the green space known as *'canal au bois'*, this equipment is even stolen (Kouassi et al, 2017, p58). In the commune of Adjamé, the parks and gardens have several faces. "The first category still has a functional infrastructure and provides a service of embellishment and recreation, notably the gardens and the interchange ears along the *Indénié lagoon boulevard* to the pedestrian bridge that spans the expressway and provides a link between the neighbourhoods of Bracodi and Williamsville (Toure M. et al., 2016, p. 5768). On the other hand, the Gourou garden is unhealthy but still has its facilities, including benches and lighting (Toure M. et al, 20216, p5768). The green space opposite the train station has been turned into a car park. The Wrangler interchange on Boulevard Nangui Abrogoua is occupied by transporters, scrap dealers, car parts sellers, advertisers and a multitude of retail traders (Toure M. et al, 2016, p5771).

The degradation and disappearance of green spaces in urban areas are due to various factors. The inadequate management of public parks and gardens can be explained firstly by the lack of financial resources. Indeed, the budgets allocated to the maintenance of public gardens do not cover the needs. Thus, there is limited management and the non-repair of many degradations, particularly in the cities of the North-East of Tunisia (Fares Z. 2021, p18; Besma et al, 2012, p4). There is even a disparity in municipal budgets allocated to residential and working-class areas (Besma L; et al, 2012, p4). In Ivorian cities, financial constraints hinder the action of public services in charge of green spaces. With low financial allocations in Treichville and Adjamé, for example, the various services struggle to fully carry out their missions (Kouassi et

al, 2017 p57; Toure et al 2016, p5772). In addition, the lack of synergy between public services limits their effectiveness (Kouassi et al, 2017, p59).

Moreover, the crisis of green spaces emanates from the incivism of the population (Fares Z. 2021 p 18) and the public administration (Besma et al, 2012, p 5). The vandalism of the natural and artificial components of public parks and gardens by a fringe of the population undermines these spaces. The populations are responsible for the insalubrity, the destruction of the equipment of these spaces and even their disappearance in Adjamé and Treichville for example (Kouassi et al, 2017, p58; Toure et al, 2016, p5772). Within the administration, the employment of unskilled labour for the development of gardens, as is the case in Tunisia, contributes to the degradation of green spaces (Besma' L. et al, quoted by Fares Z. 2021, p19). Natural causes are also to be noted. Global warming contributes to the degradation of green spaces (Fares Z, 2021, p16).

To alleviate this crisis of green spaces, another study of the site and the development project should be carried out before the creation of green spaces (Fares Z. 2021, p34). More efficient management requires the employment of qualified personnel, notably landscape architects (Fares Z. 2021, p34) and the improvement of allocated funds. Given the above, the problem of managing public parks and gardens is a reality in many African cities. The factors at the origin of this situation are economic, social, administrative and natural.

Conclusion

Ultimately, the study aims to shed light on the factors behind the management problems in Abidjan's public parks and gardens. The analysis confirms the hypothesis put forward. Public parks and gardens is declining in Abidjan. While many of these spaces are in good condition, 43% are in a state of degradation. 40% of traditional gardens have disappeared, as have 20% of gardens integrated into the habitat and 10% of administrative gardens. Despite the efforts of the public services, which are the main management actors, green spaces are in crisis in Abidjan. This situation is linked to the insufficient management of public services due to the weakness of allocated funds and budgetary disparities. Added to this are the lack of synergy in the action of public services, the incivism of the population and the hazards of global warming on nature. Coercive measures are needed to remedy this situation.

Conflict of interest

The authors declare no conflict of interest.

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