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Eman Gameel Abu eleneen

Master Student; Department Of Architecture; Faculty Of Engineering, Tanta University, Tanta, Egypt,
Eman_Gameel@f-eng.tanta.edu.eg

Ahmed Aboulsaadat

Lecturer, Department Of Architecture; Faculty Of Engineering, Tanta University, Tanta, Egypt,
Ahmed.aboulsaadat@f-eng.tanta.edu.eg

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Monitoring And Documenting Local Legislation Role In Urban Governance To Keep Green Areas In New Cities

J. Q. Eman Gameel¹, Walaa Ahmed Nour², Ahmad Abouisaadat^{3*}

¹ Master Student; Department Of Architecture; Faculty Of Engineering, Tanta University, Tanta, Egypt – Eman_Gameel@F-Eng.Tanta.Edu.Eg

² Professor, Department Of Architecture; Faculty Of Engineering, Tanta University, Tanta, Egypt – Walaanour@F-Eng.Tanta.Edu.Eg

³ Lecturer, Department Of Architecture; Faculty Of Engineering, Tanta University, Tanta, Egypt – Ahmed.Aboulsaadat@F-Eng.Tanta.Edu.Eg

Abstract Cities that are poorly planned, managed, and controlled, can become centers of poverty, inequality, and conflict. " Good Urban Governance refers to the various ways in which individuals and institutions, both public and private, plan and manage the city's common affairs promoting the concept of "Inclusive City" by advocating "enabling approach" Decentralization, involvement, partnerships, capacity building, and networking. The study discusses urban governance conceptualization and assesses it depending on five principles effectiveness, accountability, equity, participatory and security. Also, it studies green space conservation and investigates the main challenges that faces conserving green spaces and implementing strategies. It explores new Egyptian communities as well as Problems of green areas in Egypt and their causes and calculates Individual share of green spaces m²/individual for each Egyptian new site comparing to minimum Individual share of green spaces that is recommended by World Health Organization WHO considering the urban governance legal framework in Egypt and green area conservation according to the Egyptian law. It discusses good governance as an approach for quality of life focusing on Customer Satisfaction Survey (CSS) as factor for Quality of Life (QOL). In addition, this study will analyze and compare some examples based on Urban Governance Index (UGI) specially (CSS). As a result, the analytical comparison study highlights the importance of integrating good urban governance principles to green space conservation strategies. The study could be helpful within similar urban locales in developing or impoverished countries.

Keywords: Urban Governance, Good Urban Governance Green Space Conservation, Egypt New Communities

I. INTRODUCTION

One of the twenty-first century's critical challenges is managing cities and urban growth. Cities, if well-managed, can operate as engines of growth, providing residents with more work possibilities, better healthcare, housing, safety, and social development. Furthermore, cities can contribute to national sustainable growth by generating more revenue and maintaining political stability, as well as assisting in post-conflict.

Literature Review

One of the twenty-first century's critical challenges is managing cities and urban growth. Cities, if well-managed, can operate as engines of growth, providing residents with more work possibilities, better healthcare, housing, safety, and social development. Furthermore, cities can contribute to national sustainable growth by generating more revenue and maintaining political stability, as well as assisting in post-conflict. On the other hand, Cities that are poorly planned, managed, and controlled, can become important centers of poverty, inequality, and conflict [1].

A. Urban Governance Conceptualizing:

UN-HABITAT is proposing the following definition of governance: Urban governance is the sum of the many ways individuals and institutions, public and private, plan and manage the common affairs of the city.[2]

United Nations Development Programme (UNDP): "The practice of political, economic, and administrative authority at all levels in the administration of a country's affairs."

1) Urban Governance: "Urban governance refers to the various ways in which individuals and institutions, both public and private, plan and manage the city's common affairs." It is a continuous process in which conflicting or varied interests can be recognized and cooperative action taken. It includes both formal and informal institutions, as well as residents' social capital [3].

2) Stakeholder Constellation: A. Governmental, B. Businesses, C. NGOs/CBOs/CSOs (Internationally connected NGOs, Formal civil society organizations, Local, community- based organizations), D. Households /individuals.

3) Urban Governance's Main Challenges: Urban decision-makers face several difficulties due to the increasing rate of urbanisation in developing nations[capacity,Diversity, Financial Resources and Authority][4]

4) Good Urban Governance

UN-HABITAT is promoting the following definition of good urban governance: Urban governance is inextricably linked to the welfare of the citizenry. Good urban governance: all participants, mechanisms, and institutions must work together to reduce urban poverty and promote social inclusion[5] Inclusion is critical for:

- ensuring that the outcomes of economic growth are delivered more equitably.
- maximizing on the productivity of variety, especially creativity and social capital
- enhancing local ownership of development procedures.[6]

5) Good Urban Governance approach for “Inclusive City”

The "Inclusive City" is the main topic of the Campaign on Urban Governance because inclusive decision-making is at the core of good urban governance. There are many approaches that vary from one city to another [7]

6) Principles of Good Urban Governance

The adoption of five principles of Good Urban Governance[8]

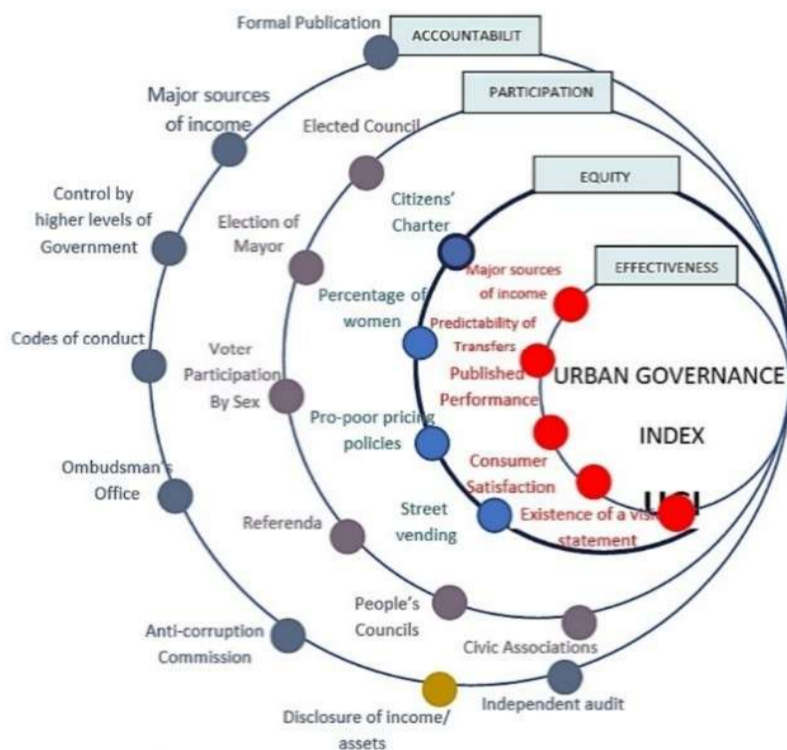


Figure 1. Good urban Governance indicators, source Habitat, U. N. (2005) Field Test Report.

B. Green space Conservation

The WHO defined urban green spaces as "all urban land covered by vegetation of any kind. "It can be defined as any area of land that is partially or entirely covered with vegetation, such as parks, community gardens, allotment

gardens, residential gardens, urban forests, or street trees. [9]The meaning of CONSERVATION is a careful preservation and protection of something. The careful maintaining & protection of something very valuable especially in its natural or original sites. There is a significant disparity between impermeable and pervious areas [10]

Table I.Exiting and New site conservation

	Existing green sites	New green sites
Prospective Accomplishments	This category comprises all currently existing green areas that are mostly found at ground or street level, provided by the public and private sectors, with or without public access.	Planners might place more emphasis on the geometry of the green network and the quality of the vegetation rather than a biased obsession with the amount of green space
Potential Spots	Roadside, road median, lot-frontage, intra-lot, trans-lot, formal venue (public parks and gardens), and remnant enclaves are a few examples of several sorts of ground-level green spaces.	It is preferred that green areas are spatially permeated and connected along new roadways (amenity strips on roadsides and medians), as well as at roundabouts and accidental plots
Potential strategies to accomplish	When creating a management plan, it would be beneficial to have a database of existing and potential green areas that is ranked according to its landscape and ecological qualities.	A comprehensive green plan that includes precise recommendations on the locations, characteristics, elements, and purposes of green spaces that are tailored for various land uses and urban environments is necessary to tie together diverse greening initiatives

1) Main Challenges for conserving green spaces: Conserving parks and green space is no a policy priority: Cities frequently do not make a sufficient commitment of cash and resources that they do to buildings, roads, and other infrastructure.

- Land is frequently rare, expensive, and difficult to get from existing communities:

2) Implementing Strategies

- Planning and careful examination: A thorough review of the current land usage is required before developing open space in an urban location.
- Establish or name a facility for ongoing monitoring and maintenance

- Establish a specific funding source to assist with the ongoing maintenance and development of public green spaces.

C. EGYPTIAN NEW CITIES

The Egyptian government started implementing its new urban policy in the 1970s after realizing that the older, inhabited areas along the Nile valley could no longer support the country's expanding population.[11]. (first, second and third generation)

1) **New Egyptian City Green spaces:** High densities and compacted urban structures, which were influenced by climatic, religious, and cultural influences, have historically been characteristics of Egyptian cities. The capital Cairo lost 910,894 m² of its already meagre green area between 2017 and 2020. The individual share of green space fell from 0.87 to 0.74 m² as the population increased.

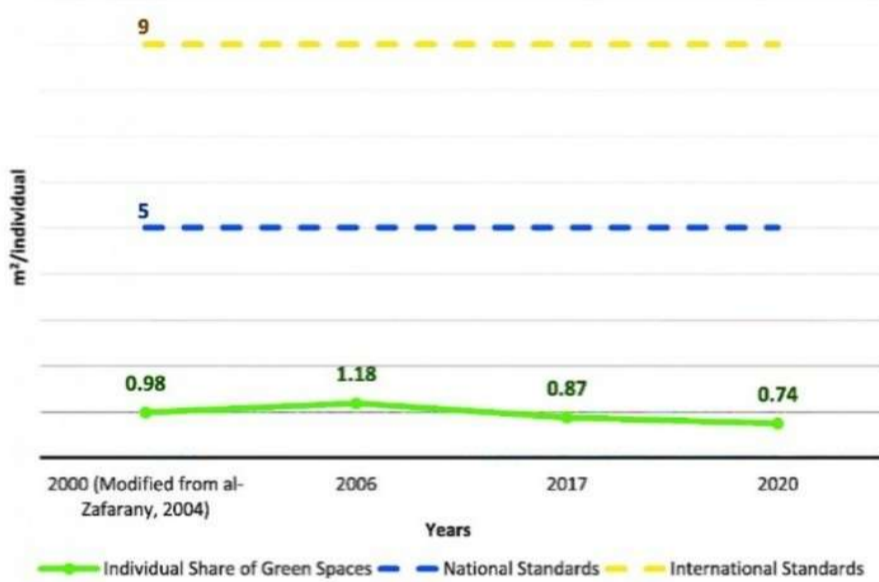


Figure 2. individual share of green spaces at Egypt source, Aly, D., & Dimitrijevic, B. (2022)

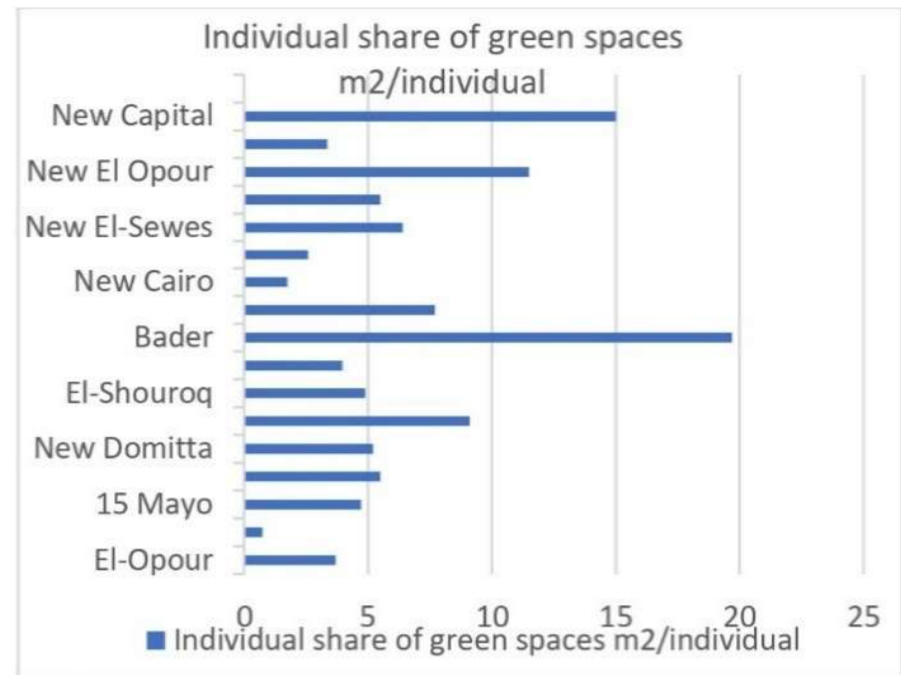


Figure 3. individual share of green spaces at Egypt Source: Author According to data of New Urban Communities Authority

Egyptian New cities individual share of green space in comparative with the minimum share of green space according to the World Health Organization (WHO)]

2) Main Problems of green areas in Egypt and their causes[12]

Table 3. Main Problems of green areas in Egypt and their causes, source: author

Problems	Reasons:
<ul style="list-style-type: none"> The absence of dimension and man scale in the design of the existing open areas. Transforming cities into concrete forests that destroy their natural environment, losing their landscaping Green: the only lung and outlet for the population. Poor distribution of green areas. The control of the automated movement over the formation of the urban fabric in an unfair violation of the resident's needs. [13] 	<ul style="list-style-type: none"> The absence of a comprehensive concept of the network of open areas, which led to the poor distribution of locations and lack of connection with each other. Lack of environmental awareness among visitors and users of open areas and lack of application Laws and regulations for its maintenance and preservation. Negligence of the few existing open areas and lack of periodic maintenance.[14]

Table 2. Egyptian New cities individual share of green space in comparative with minimum share of green space according to the (WHO)] source: New Urban Communities

City	Current Pop. 2022	Target Pop. 2030	Total space (Acre)	Green space (Acre)	m ² /Capita
El-Opour	661000	1 million	13416.9	900.9	3.7
10 Ramadan	500000		948000	90	0.756
15 Mayo	335000		18331.27	377	4.726
El Sadat	470000	1.5million	121368	1972	5.5
New Domitta	245000		12798.31	303.6	5.2
New Salhia	60000		1617	130	9.1
El-Shouroq	385000		52991.83	450	4.9
El Shiek Zaid	398000		21285.68	377	3.97
Bader	280000	840000	18545.43	3955	19.7
New El-Noparia	35000	125000	1816	231	7.7
New Cairo	2.5 million		85580	1051	1.76
New Sohag	15000	1.5million	30351.04	929.8	2.6
New El Minia	77000	648000	31106.35	860	5.5
New El Opour		1054000	58914.4	2906.1	11.5
Hadaik October	250000		41780	200	3.36
New Capital		6.5 million	170000	23214.28	15

Table 3. Two interpretations of green space
Source: General Authority for Urban Planning

Assembly Type	Rates of green areas in the New Valley		Average green areas in desert areas		Current situation
	Min m ² /Capita	Target m ² /Capita	Min m ² /Capita	Target m ² /Capita	
Existing Cities	7	10	5	7	0.5-1.5
New Cities	15	20	10	15	7.0-13

3) Urban governance legal framework in Egypt

We are now in a transitional phase until the system for issuing building permits is governed, and the new technical and legal framework for an integrated digital system is established, explaining that there is a golden opportunity to control and govern urbanization, and achieve Egypt's first national goal, which is doubling the Egyptian urban area.[15]The building laws in Egypt have witnessed considerable changes since the 1952 Egyptian Revolution but, the legislation 119/2008 which was enacted during President Mubarak's administration[16] made a small step toward more decentralization by giving local governments the power to decide on all other aspects of building construction, modification, or restoration.

4) Egyptian Law 119: Green Space Conservation from Good Urban Governance perspective

Table 4. Egyptian Law 119: Green Space Conservation from Good Urban Governance perspective

N m	Participation and social engagement
Article 13	The strategic plan is required to find proposals to develop popular participation and the role of the local administration, the local council, the city council, and civil society.
Article 87	The agency is allowed to agree with governmental or public agencies, companies, civil society organizations, or individuals to prepare cultural coordination projects and studies as a specialized investment body in return for a fee.
Article 13	The strategic plan is required to find proposals to develop popular participation and the role of the local administration, the local council, the city council, and civil society It is necessary to formulate a future vision over a specific period of time and define its goals and strategies
	Effective legal conserving framework
Article 46	It addresses the details of the infrastructure and requires the provision of a horizontal and a vertical plan showing the locations of the drainage and supply pipes and clarifying their inclinations and depths (these verses must be taken into account to preserve the roots of plants and trees - green areas must be considered part of the infrastructure)
Article 52	It is obligatory to preserve the natural environment in land division projects (the planner must be obligated to include the network of trees that already exist in the areas to be divided)
Article	It is required to preserve individual large trees and wooded areas at the zoning site.
Article 54 to	The law deals with land division projects from the beginning of the preparation stage until approval and announcement.
Article 136	The Technical Inspection Authority is responsible for monitoring and following up on the work of the competent administrative authorities for planning and organizing affairs in the administrative units

Article 137	Procedures of the Grievances Committee: The concerned party has the right to appeal the decisions of the administrative body to the Grievances Committee - the committee reviews the grievances received to decide on them in accordance with the provisions of the law. A weekly meeting is held at the local unit headquarters to consider grievances The committee will notify the administrative body and the concerned parties will be notified.
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5) Green spaces planning standards according to law 119.

Each city, neighborhood, or community has its own regional variables that determine what are the planning standards for the local green areas.[17]

a. national level (National Parks):

They are spaces with special attractions, and contain natural elements such as a mountainous area or natural waterfalls, water springs, and sulfur water. [18] Its uniqueness can represent an entertainment attraction at the international level, such as the gardens of the Palace of Versailles in France, or a cultural attraction, such as the zoos in Giza, and heritage gardens such as those in the Montazah Palace and Sayyida Zeinab Children's Garden.[19]

b. regional level (Regional Parks): These areas are often natural areas that are converted into parks. They are large enough gardens to isolate them from the urbanization of the city, and their visitors usually seek to enjoy the natural scenery and the accompanying static activities[20]

Table 5. regional level requirements Source: General Authority for Urban Planning

Quantitative requirements:	Functional requirements:
There must be at least one green open area in every city over 100 acres, or 20% of the city's open areas, whichever is less. It serves the population of the region or province.	There must be places for gathering, recreational activities and necessary services in these areas.

c. City level (City Parks) [21]

Quantitative requirements: Green and open areas must be provided in the city, so that the per capita share of the city's population is not less than the minimum stipulated in the following table provided that the area allocated to

the public for free or with low fees is not less than 50% of this area. [22]

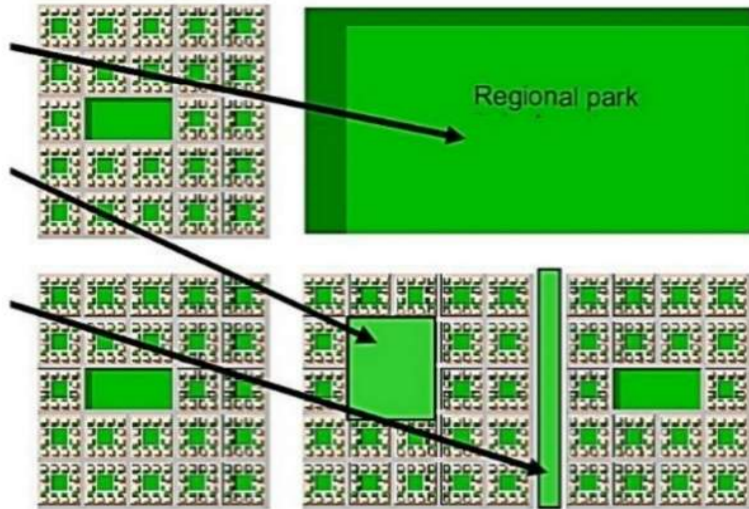


Figure (3) Open areas at the city level
Source: General Authority for Urban Planning

d. District level (District Parks)

Each park of this type serves a group of residential communities in the neighbourhood. [23] Every citizen of the neighbourhood has the right to access the open area in his neighbourhood, provided that it is not more than one kilometer away from his house (a quarter of an hour on foot)[24] The built-up area of the local open area should not exceed 5% of its total.

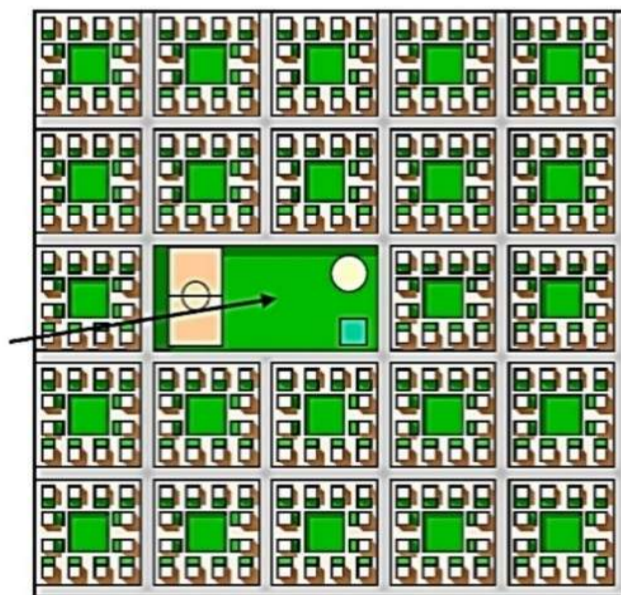


Figure (4) Open areas at the district level
Source: General Authority for Urban Planning

e. Neighbourhood parks

Every citizen of the city has the right to access a local open area that is not more than 400 meters away from his house and whose area is not less than an acre. [25] At least 30% of the city's open areas must be local.

f. Open areas at the level of cluster parks

They are gardens located between a group of buildings of above average density, in order to soften the atmosphere and serve the residents.

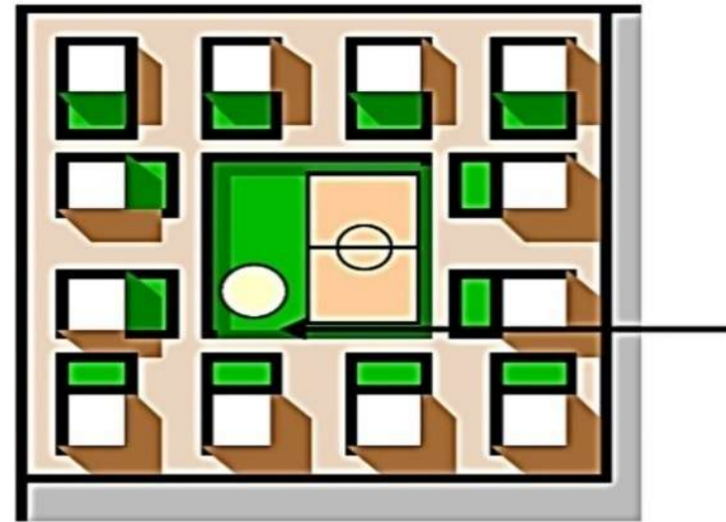


Figure (5) Open areas at the level of Neighborhood parks
Source: General Authority for Urban Planning

These areas serve residential groups whose population ranges from 900 to 1,200 people The individual is between 0.08 – 0.3 m2. Each residential group has its own area, and it is within a service area of no more than 200 square meters.

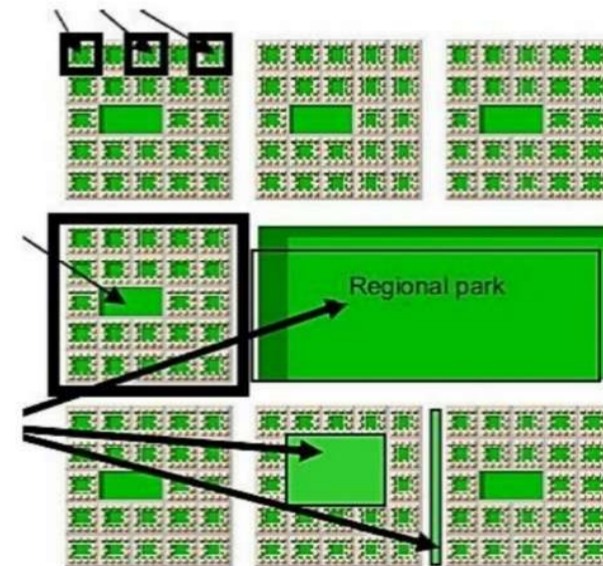


Figure (4) Open areas at the level of cluster parks
Source: General Authority for Urban Planning

g. Street gardens and squares

Its area depends on : the width of the island, the function and degree of the road, and the fact that the garden is for watching and relaxing, or for separating and isolating between directions of movement. As for the squares, in addition to regulating the traffic, they add an aesthetic dimension to the cities. [26]

The World Health Organization defines quality of life (QOL) as "a person's view of their place in life in relation to their objectives, expectations, standards, and concerns in the context of the culture and value systems in which they live."

1) QOL Access to Government Decision-Making

Recent events have enhanced awareness of a number of persistent problems and disparities that have an impact on peoples' quality of life. Yet, there has been a growing international push to take a wider range of quality of life data and facts into account. [27] GDP is not the only metric.[28]

2) Quality of life framework

The framework covers the five broad pillars of quality of life—prosperity, health, environment, society, and good governance—that were discussed previously in this study and are consistent with data and citizen’s opinions. These domains are meant to encourage a holistic approach to all the various factors that affect quality of life.



Figure (8) Quality of life impact, Source: Review of Department of Finance Canada’s Toward a Quality-of-Life Strategy

4) Customer Satisfaction Survey (CSS) as factor for Quality of life (QOL):

Customer satisfaction is a different idea that has been applied to include human factors in decision-making. Additionally, the method of assessing CS and other relevant consumer opinions can be utilized to assist performance evaluation that is more widely geared towards quality of life[29]

5) Social Equity Impact on Quality Of Life

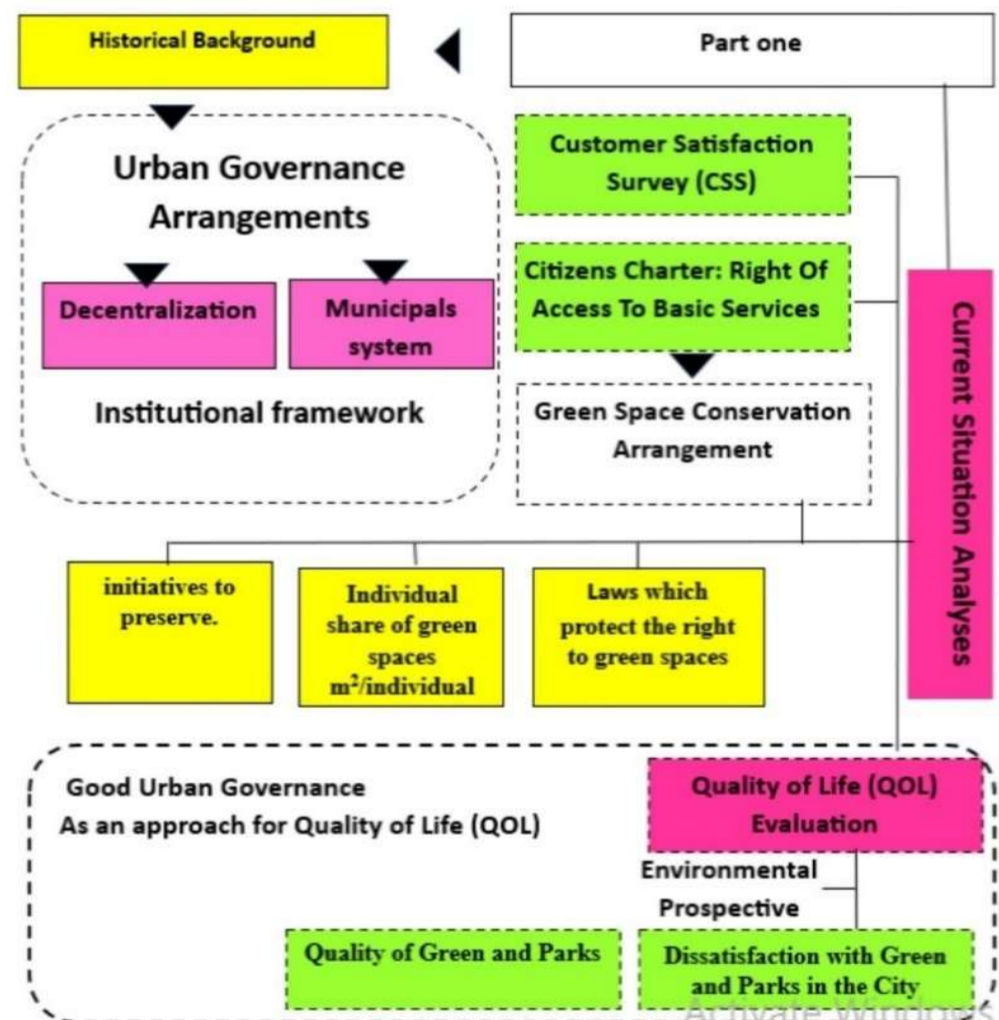
On the other hand, underlying ideals like social fairness can have a significant impact on quality of life; countries with higher inequalities in the level of life satisfaction among their residents tend to have lower average life satisfaction. [30]Ultimately, a community's living conditions are directly impacted by the standard of goods and services available to it.

6) Access to basic services as factor for enhancing quality of life:

Public services play a crucial part in ensuring a high quality of life. 2004 saw the release of the European Commission's White Paper on Services of General Interest and emphasized once more "the critical significance of well-functioning, accessible, affordable and high-quality services of broad interest for the quality of life of citizens, the environment, and the competitiveness of firms.

E Analytical Studies

A comparative study of three cities: Montreal, Canada - Khartoum, Sudan- New Cairo, Egypt that focuses of the urban governance role in green areas conservation. The three cities were chosen according to the UGI Scores (high-moderate- low) taking to account their close sizes and Population.



Figur (9) Analytical Methodology source: Author

Case study 1: Montreal, Canada

The Montreal example is crucial because it put out a rather new strategy that involved concurrent actions at three different scales: at the metropolitan, central city, and neighborhood levels.

1. City profile The capital of the province of Quebec, Montreal is the second-most populous city in Canada. Three-quarters of Montreal Island (Île de Montréal), the largest of the 234 islands in the Hochelaga Archipelago, one of three archipelagoes close to the confluence of the Ottawa and St. Lawrence rivers, is occupied by the city of Montreal. 365 square kilometers, or 141 square miles.

Population: 1.78 million (2017) United Nations[31]

Table (6) City of Montreal, source, Author

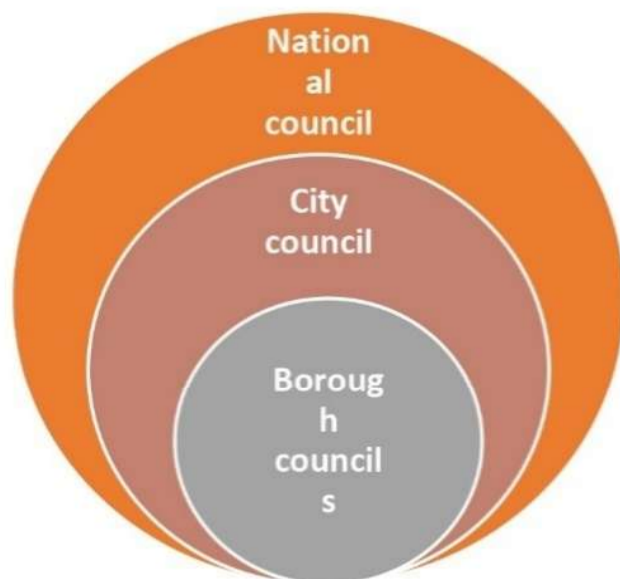
Name	Population [2021]	Area km ²	Density /km ²
Montreal	1,762,949	431.50 km ²	4.8

2. Urban Governance Arrangements Rescaling: The implementation of a combined Montreal, with its decentralized borough system, has been characterized by the evident contradiction between the constant reference of regionalization and the region's crucial proximity in the implementation of municipal urban public policy.[32]

3. Amalgamation for Montreal within a new three-tiered model of governance: Beginning in the 1960s, both the provincial and municipal levels of government in Canada have given municipal reorganization a lot of consideration.[33]

4) Counting on Decentralization

In order to give the boroughs more fiscal and budgetary autonomy and more control over the management of human resources, the city of Montre'al has been searching for a



Figur(10) a new three-tiered model of governance source: Author

tailored organisational model based on decentralisation and their independence .[34]



Figur (11)the three pillars of the reform source : Author

5)UN Habitat Urban Governance Index, Monteral, Canada

Table(7) Urban Governance Index And Components

Source: UN Habitat

CITIES	Montreal
Effectiveness sub-index	0.96
Equity sub-index	0.83
Participation sub-index	0.80
Accountability sub-index	0.95

6) Green Space Coservation, Montearl

A new city was founded on January 1, 2002. The newly united city of Montreal was governed by a newly elected council headed by Mayor Gérald Tremblay. One thousand citizens were invited to participate in the forum and design policies to direct the incoming administration and chart a route for Montreal to become one of the world's great cities. [35]

Table (9) Conservation efforts ,Montreal city source : Oljemark, S. (2002)

Conservation efforts	Significant changes threaten Saraguay
Wealthy landowners banded together in 1914 to formally establish the Village of Saraguay as "a separate village municipality" in order to preserve the community's distinctive rural character and, let's face it, to keep out the "riff-raff".	For the purpose of building homes, fourteen apartment buildings, two retail malls, Twin Towers on Gouin Boulevard, and the Port-Plaisance Marina Complex on the waterfront, the entire Saraguay Forest was to be levelled.
Birth of the Green Coalition	\$500 million MUC Green Space Policy
The Green Coalition (Coalition Verte) was chosen. The tree-shaped buttons bearing the Coalition's insignia quickly appeared	suburban mayors remove it from the agenda. The meeting of the MUC Planning Commission was eagerly anticipated by the grassroots

Revised MUC Green Space Policy guarantees activists \$200 million	Bois-de-Liesse concrete plant is being considered
MUC Planning Commission revealed its modified Green Space Policy, which replaced the \$500 million proposal that had been rejected by suburban mayors with a plan to spend \$200 million on obtaining and administration of the territory's green areas.	A redevelopment bylaw enabling the establishment of a concrete plant at the entrance to Bois-de-Liesse Regional Park was being discussed.

7) quality of life in Montreal

Mercer's Quality of life Index[36] and the Economist Intelligence Unit [37] both named Montreal as the 20th most livable city in the world. Additionally, it has a varied urban fabric that includes traditional suburban development, high-rise downtowns, row housing, and dense historic cores.



Case Study 2: Khartoum state Localities

Sudan is a developing country where many people have left their countryside and now live in cities. The capital city of Khartoum, for example, is suffering from severe urban poverty, which is made worse by the embargo imposed by the international world. Urban poverty and development are topics that international donor organizations like UNDP and the World Bank are paying more attention.[38]

1) City Profile

Table (10) Khartoum State, source, Central Bureau of Statistics

Location	Pop. [2018]	Area	Density
at the confluence of the White Nile, flowing north from Lake Victoria	7,993,900	22,142,000 km ²	360/km ²

2) Urban Governance Arrangements:

There is broad agreement among the scientific community on the role of governance for reducing urban poverty, acknowledging that “the form and procedures of city government have substantial implications for whether and how urban poverty is addressed.”[39]

3) UN Habitat Urban Governance Index application:

Table (11) Urban Governance index, Khartoum, Sudan source, Hamdto, I. H. A. (2014).

CITIES	khartoum
Effectiveness sub-index	0.63
Equity sub-index	0.32
Participation sub-index	0.48
Accountability sub-index	0.53

4) Green Area Conservation Khartoum, Sudan

Urban Green Space (UGS) and Urban Open Space (UOS) are of particular importance in the effective land management plans that have developed because of the advent of powerful urbanization and advancements in space uses. [40]It is one of the current environmental problems in cities. The amount and quality of green spaces in Khartoum are developed, but they are still rated poorly, which means that the majority of the green spaces are not distributed according to population density.[41]

5) Destroying Plants :frightening retreat into the green cap and a warning of the worst: Over the past three decades, Sudan has lost more than 60 percent of its tree cover, as forest areas are rapidly eroding due to excessive logging to obtain quick profits from high-yield timber. On the other hand, The green spaces were negatively affected by the successive population increase in the country, as the country's population increased from 19 million people in the early 1990s to more than 40 million at the present time.[42]

6) Sunut forest, Khartoum, Sudan

The rate of deforestation in Sudan is estimated at 2.5 percent annually 2013 has the highest rates of deforestation in the world [43] In the middle of Khartoum state, the nation's capital and largest city, sits a natural forest called Al-Sunut. Due to its unusual location, Sunut forest is suffering because of human activity, particularly development.[44]

7) Quality of Life in Khartoum, Sudan

Khartoum ranks 226 in the Mercer Quality of Life Index, which was based on an extensive study in assessing the quality of life, including the quality of services, prices, electricity, public transportation, green spaces, and air and water quality.

Very Low



Case Study 3: New Cairo, Egypt

New Cairo is a new Egyptian city, one of the third-generation cities, located in Cairo Governorate, and administratively affiliated with the New Urban Communities Authority. It is located on the eastern side of Greater Cairo, adjacent to the Ring Road, and surrounded by the Katameya/Ain Sokhna Roads and the Cairo-Suez Desert. The city is 15 km from Maadi and about 5 km from Nasr City.[45]

1) City profile

Table (12) New Cairo City, source, New Urban Communities Authority

Name	Population [2022]	Total Area km ²	Density /km ²
New Cairo	1.5million	359	4.4

2) City new settlements:

It consists of 5 residential neighborhoods, the most important of which is the Fifth Settlement, in addition to the First Settlement, the Third Settlement, the Eastern Extension, and the Southern Extension.[46]

A. Distinctive services and facilities: including the main city center and regional and central investment and service projects.

B. Investment projects: concentrated on the ring road front and consisting of an entertainment area and a project area Investment areas, recreational sports areas, two golf courses, and a restaurant area.[47]

C.-Other uses: It already existed, such as the Petrified Forest Reserve, the Police Academy, and activities. Craftsmanship on Katameya Road

3) Urban Governance Arrangments:

We are now in a transitional phase that will last for 6 months until the system for issuing building permits is governed, and the new technical and legal framework for an integrated digital system is established, explaining that there is a golden opportunity to control and govern urbanization, and achieve Egypt’s first national goal, which is doubling the Egyptian urban area.[48]

4) UN Habitat Urban Governance Index, New Cairo, Egypt

Table 13. UN Habitat Urban Governance Index, New Cairo, Egypt Source: Author based on UN Habitat Index

CITIES	New Cairo
Effectiveness sub-index	0.825
Equity sub-index	0.778
Participation sub-index	0.58
Accountability sub-index	0.73

5) Green spaces planning standards according to law 119

A.Regional Level

Table (14) regional level requirements Source: General Authority for Urban Planning

Quantitative requirements:	Functional requirements:
There must be at least one green open area in every city over 100 acres, or 20% of the city's open areas, whichever is less.	There must be places for gathering, recreational activities and necessary services in these areas.
Family park Area : 327.829 km ² more than 100 acres	low fees park with static activities , open exhibitions, kids areas

C. District level

Quantitative requirements: Every citizen of the neighbourhood has the right to access the open area in his neighbourhood, provided that it is not more than one kilometre away from his house (a quarter of an hour on foot)

- Public access park less than 20%(it suppose to be more than 50%)



Figur(10)District park of New Cairo city Source: author by GIS

D. Neighborhood level

- Almost all neighborhoods (gated communities and park housing) have a central gardens more than 3 Acres area with services . The gardens also serve the required distance (400 meters)

- every garden serve from 3,000 to 5,000 inhabitants.



Figur (11) Neighborhoods in new Cairo, Source: Author by GIS

F. Open areas at the level of cluster parks:

-There are gardens located between buildings designed to soften the atmosphere and serve the residents. It acts as a transitional area between indoor buildings and public green areas.

-shared greenspace /per individual rang (0.08 – 0.3)



Figur (12) Residential cluster in new Cairo, Source: Author by GIS

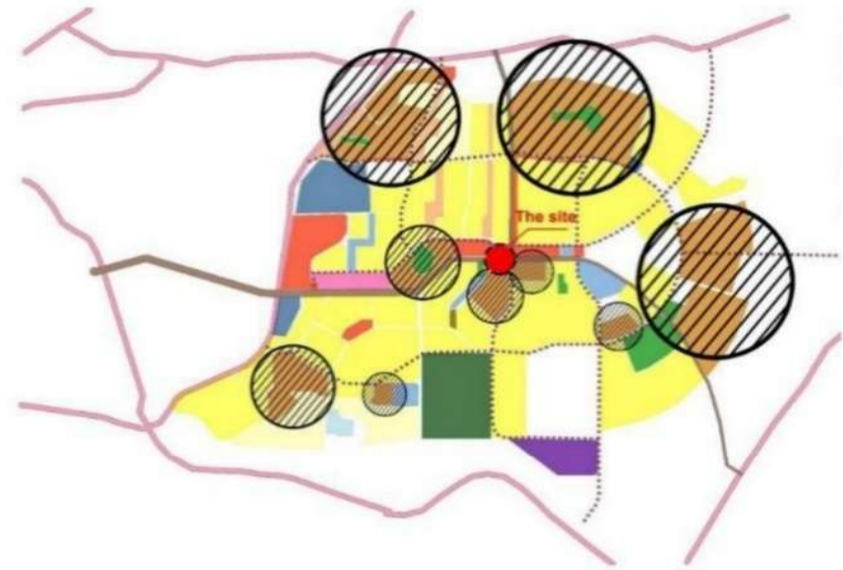
G. Street gardens and squares

- There is a safe path for pedestrians to reach every (100-250) m The area of the connected unit(30-8)Km²
- Streets Width range 50-20 m (not less than 10 m)

³ Marafi, S. (2011). *The neoliberal dream of segregation: Rethinking gated communities in Greater Cairo, a case study, Al-Rehab city gated community.*

6) New Cairo Green Space Availability and Equaluitable Accessibility:

The new Cairo green space has a total area of 4305938-meter square and 537470 -meter square under construction. At the Regional Level the family park area 327.829 km2 more than 20% of the city's open areas. It serves the population of the region or province.



Figur (14)New settlement gated communities, New Cairo source; Abdellahy, A. (2018). Open The Gates: New Cairo City, Egypt.

6) Quality of life New Cairo

The Greater Cairo Region's recent migration of citizens looking for a higher standard of living has led to the establishment of new settlements, particularly Gated Communities, which have been a response to this problem. People have recently been flocking to gated communities in search of a better, healthier life and escaping the decay and pollution of the city centre, according to statistics and local observation

over the past ten years.³

Moderate





Comparison	Khartoum, Sudan	Montreal, Canada	New Cairo, Egypt		space expansion.			
Location	at the confluence of the White Nile, flowing north from Lake Victoria.	Close to the confluence of the Ottawa	located on the eastern side of Greater Cairo.		Effective empowerment of local authorities in conserving green areas	0	1	0.5
Area	1010 km ²	431.5 km ²	343 km ²		Ombudsman for greenspaces as a respond to the requirements of the citizens.	0	1	1
Population 2020	6.3million	1.78million	1.5million		Existence of Trees database	0	0	0
Density/ Km ²	360/ km ²	44828.3/ km ²	4400/ km ²		Anti corruption commission assess officials in charge of green space	0	1	0
Total Urban Governance Index	0.49	0.8	0.726		Independent audit accountable of taxes and other financial resources that specialized for expanding greenspaces	0	1	0
Effectiveness Sub-Index	0.6	0.96	0.825		Greenspaces Referenda for gathering public opinion on redevelopment or expanding green area	0	1	0
Equity Sub-Index	0.32	0.83	0.778					
Participation Sub-Index	0.48	0.8	0.58					
Accountability Sub-Index	0.53	0.95	0.73					
Quality of Life(QOL)	66.45/240	154.06/240	143.4/240					
Measuring Indicators								
	Existence of Green spaces planning standards	1	1	1				
	vision statement adopts green	1	1	1				

	8-Existence of citizen councils where the public can effectively voice their opinions.	0	1	1	Quality of life	Dissatisfaction with Green and Parks in the City	0.6	0.18	0.5
						Quality of Green and Parks	0.3	0.81	0.5
	9-People’s initiative laws that guarantee people participation	1	1	1		Green Space Connectivity	0	1	1
						Weight	Yes=1		No=0
Social cohesion	Consumer satisfaction surveys about greenspaces quality and availability	0	1	0	<p>Recommendations</p> <ol style="list-style-type: none"> Set minimum standards for the allocation of green areas, including parks, gardens, and open spaces, based on the population density and projected growth of each new city. Adopting green space expansion in the vision statement demonstrates a commitment to prioritize the quality of life of residents by providing them with accessible and well-maintained natural environments. Considering green spaces as part of the basic infrastructure according to the text of the law to ensure their preservation and provide the necessary funding sources. Creating a comprehensive database of current and potential green areas, tree locations and their environmental characteristics is extremely important for preserving these trees. Consumer satisfaction surveys for basic services are an essential tool for assessing and improving the quality of services provided to consumers. Collaborate with Local NGOs and Volunteer Groups: Foster partnerships with local non-governmental organizations (NGOs) and volunteer groups that have expertise in environmental conservation and green space development. Their involvement can bring valuable insights, resources, and manpower to enhance the preserving of green spaces. Establish an Independent Audit for Green Space Funds so that urban governance can demonstrate its commitment to transparency, accountability, and efficient resource utilization. Implementation of Greenspaces Referenda for Public Opinion on Redevelopment or Expanding Green Areas. performing consumer satisfaction surveys about green spaces, valuable feedback from the public and tailor improvements can be gathered to meet citizen expectations. 				
	Green space’s role in social cohesion	1	1	0.5					
	Greenspaces Referenda for gathering public opinion on redevelopment or expanding green area	0	1	0					
	existence of green alliances	0	1	1					
	Ombudsman for greenspaces as a respond to the requirements of the citizens.	0	1	1					
	Attracts private sector for greenspaces innovations.	0	1	0					

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