The Impact of Cities' Adjacency on Physical and Social Dimensions of Urban Morphology, The Case Study of Cairo and New Cairo Cities, Egypt

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Abstract

In the global south, and in a developing country such as Egypt, the population increases rapidly and requires a rapid corresponding urban development and expansion to accommodate the increasing population and to provide suitable required services. Urban morphology of cities is affected physically throughout time by the changes of cities' shapes. Additionally, social dimensions of users of cities are affected as well through time according to physical changes of urban morphology. This article discusses this issue and tackles the case of two adjacent cities of Cairo, the capital of Egypt, and New Cairo in the Eastern direction of Cairo to distinguish the history of expansion and adjacency in order to highlight both the physical and social affected dimensions of the adjacency. The research methods and tools are physical survey and observations for physical effects well as users' questionnaires for social effect. The main outcome of the research is to monitor and highlight the impact of Cairo and New Cairo cities' adjacency on several physical and social dimensions of urban morphology of cities and communities.

Keywords: *Urban morphology, Urban Fabric, Adjacency, Physical Dimension, Social Dimension, Users, Cairo, New Cairo*

1. Introduction: What is meant by Urban Morphology?

The study of cities as human habitat is known as urban morphology [1]. Urban morphology is also the study of the physical form of settlements. It is, more precisely, the study of the development of urban fabric components and the linkages that characterize their compositions and configurations throughout time. These complicated phenomena may be researched at many different spatial scales and across several disciplines. Urban morphology is of interest to many different scientific areas. Theoretical components include urban geography, history, architecture, and spatial economics. It is an essential component of applied urban design, but it also affects development, urban planning, and urbanization [2]

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Furthermore, urban morphology evaluates a city's urban setting and its many typologies in present conditions and contrasts them across time and the extension of urban fabric. Urban morphology, on the other hand, is the study of urban form that focuses on the formation and transformation of urban forms of cities, towns, and villages over time; their spatial patterns at different scales; and physical characteristics to inform appropriate urban interventions to promote sustainable urban development [3]. Nonetheless, urban morphology is the study of the agents and processes that influence the development of urban fabrics and shapes, encompassing all of the components that make the city, such as streets, public spaces, squares, blocks, land plots, and buildings [4].

2. The Elements of Urban Form

Urban form term is used to describe, analyze, and categorize a city's physical characteristics on all scales. On the regional scale, urban form can be defined as spatial configuration of city's fixed elements such as central business district or shape of urban settlements or a market town [5]. However, Williams mentioned that urban form can be described as 'morphological attributes of an urban area at all scales' [6]. Accordingly, urban form can range from small scale such as architecture style, fenestrations, buildings, and materials to a broader and wider scale such as housing types, streets network and arrangement in a city layout.

On another hand, urban form not only focuses on physical features but also encompasses non-physical aspects and parameters [7]. As an example of non-physical elements, density is considered the calculation of number of residents living in a given area of the urban form. It indicates reflections of social environment and interaction within residential neighborhoods. Apartments and flats are examples of high-density housing and villas, semi-detached or detached town houses are examples of lower housing density. Non-physical aspects such as social, economic, environmental, and cultural are embedded within physical built urban form [7]. Urban form different scales from single buildings to urban block, street network, neighborhood, to a whole city influence how urban form analyzed and ultimately understood. Urban form elements encompass number of non-physical characteristics including size, density, shape, scale, building's types, land uses, urban block layout, and green areas distribution. In the next part, each element of urban form is discussed and elaborated for deeper understand, worth to mention that some elements have more effect in developing countries such as infrastructure more than its effect in developed countries.

2.1. Density

The term density refers to a multiplicity of interconnected dimensions. Objectively, it reflects the number of people who live on a certain piece of land. However, density is seen as a subjective social interpretation that is dependent on individual traits and varies from one inhabitant to the next [8]. Furthermore, density has a cultural signal of urban design since high density places symbolize a certain culture of the people. Density is closely related to other aspects of urban structure, such as land use and access to services. For example, in order to be sustainable and profitable, a service or facility must serve a large number of people in a certain region of a city. Density can be an indicator of the outcome of land use competition within a particular urban transport infrastructure and its accessibility patterns, or it can be an indicator of public space quality (public or private) [7]. As a result, density is used as a tool to assess the quality and efficiency of urban transport infrastructure as well as the viability of certain land uses in urban forms. Many nations' planning policies and practices have attempted to boost density ratios, particularly in new construction and cities. In the Egyptian law context, the Bylaw for Law no. 119 for 2008 on Unified Building Law issued by Decree no. 144 for 2009 defined the term density in two different sub-terms: **Gross Population Density** for a city or a village and **Net Population Density.** Gross Population Density is defined in the bylaw as ***"total number of populations related to total area of urban mass for a city or a village after removing***

areas of cemeteries, desert and agricultural lands, water areas, and lands of regional or national identity". Net Population Density is defined in the bylaw as ***"total number of residential units divided by total residential land areas after excluding areas of roads and public zones"*** [9].

2.2. Land Use

In general, the phrase "land use" refers to the many applications of any urban fabric in a specific land region. The majority of land use in any city is residential; yet each residential settlement requires a variety of functions and uses such as industrial, educational, health, religious, administrative, commercial, and mixed-use services and infrastructure, among others. Micro land use patterns are critical in improving the quality of life through sustainable urban forms such as the presence of green open spaces. On the other side, "locally undesirable land use" includes jails, airports, and landfills [10] are claimed to be undesirable in residential areas [11]. Traditionally, planners attempted to separate different land uses due to undesirable uses, but currently they are more enthusiastic about mixed-use patterns, such as UK planning policies that encourage easily accessible services and land uses for residents on both horizontal ground floor level as well as vertically in city center developments. Instead of a static model, dynamic land use patterns build a strong model for real estate development [7]. According to the Urban Task Force, the provision of local neighborhood services is critical and is influenced by the residential population and its needs [12]. As a result, while urban population density and local urban environment features are crucial for this topic, it is unclear at what spatial scale certain services and land uses should occur. In the Egyptian law context, the Bylaw for Law no. 119 for 2008 on Unified Building Law issued by Decree no. 144 for 2009 defined the term land use as ***"the purpose that a land or a building is planned, organized, or prepared for, or either being occupied or preserved for that purpose or the activity that is allowed to be performed on it according to allowed uses and functions"*** [9].

2.3. Accessibility and transport infrastructure

Transport infrastructure is a critical component of accessibility since it impacts the ease with which different services in a city may be reached. The amount of accessibility shows the places that inhabitants and users can access, as well as the extent to which they may access various activities, zones, and services outside of their immediate surroundings [13]. Accessibility is more than just the location of services. It is a sophisticated and cross-cutting multidimensional components such as various destinations' positions relative to residents' starting places, how the transport system brings the two poles together, how users shall utilize the transport system, and the features [14]. The interaction between house and city center, as well as the relationship between home and employment, is an important accessibility and transportation infrastructure feature. In a larger sense, it includes what is accessible within walking distance of house "pedsheds" or access in terms of transportation [15]; [16]. Accordingly, it is highly connected to layout and land use, the fabric of connection, services, open spaces, facilities and how they are connected to neighborhoods all contribute in judging the accessibility of an urban form and its transport infrastructure [7]. In the Egyptian law context, the Bylaw for Law no. 119 for 2008 on Unified Building Law issued by Decree no. 144 for 2009 defined the term **general infrastructure** as ***"preparations, services, structures and their significant equipment and attachments that fulfills general needs such as vehicular and pedestrian movement systems, rain drainage network, water supply network and its distribution, water drainage and drainage treatment network, solid and liquid waste disposal and treatment facilities, and communication and energy networks and facilities and so on in all needs"*** [9]

2.4. Urban Layout

Urban layout describes the spatial allocation and physical distribution and configuration of several elements such as streets, blocks, buildings, open public spaces, and coherent mixed-use zones, often referred to street network type such as grid, organic, radial, spontaneous, or tree-like patterns. Layout has a significant effect on pedestrian movement and ways of connections between places and spaces and users' distribution [17]. The layout controls the access and movement of pedestrian and influence urban form in land use and density [18]; [19]. Layouts in recent times represents large artifacts of building regulations and historical development. The distribution of streets, uses, configuration of blocks, vehicular and pedestrian mobility patterns and connectivity affect the ideal functioning of a city by affecting the intensity of its services zones for example [20]; [21]; [22].

The permeability and connectedness of urban forms layouts determines the mechanism of movement and nature of routes and spaces in a city, that leads to the liveliness, well-using, and vitality of public spaces through movement bulks distribution of pedestrian [23]. As Gehl argues, streets with highly connectivity with services and facilities and have more pedestrian movement patterns easily are more frequently used than the quiet and deserted options [24]; [25].

2.5. Housing and Building Characteristics

The different characteristics of housing type has a noticed effect on residents' daily lives as for example life of people in a low density attached or semi-attached dwellings with large gardens and back yards areas are having much distinctive experience of urban form and urban environment rather than residents who live in high density city center dwellings in high rise buildings or studios. Moreover, the building characteristics have more influence rather than housing density, as different building uses, heights, conditions, construction system and architecture and urban harmony and styles as well orientation and exposure to sunlight and day light may have an effect on different issues [7]; [26]. Additionally, other factors such as amount of living areas in dwelling, number and type of rooms, level of living spaces can have a noticed effect on building in terms of consumption, embedded and operating energy life cycle [27].

In the Egyptian law context, the Bylaw for Law no. 119 for 2008 on Unified Building Law issued by Decree no. 144 for 2009 defined some terms related to housing:

- **Residential housing neighborhood**: "a complete group of houses with its' general infrastructure and essential services including an elementary school and must provide easy accessibility of services for residents and users without any discomfort" – "residential project that includes inside its residents' basic services according to their needs and requirements and to depend on surrounding services in fulfilling other needs".
- **Residential unit**: "the place that provides accommodation, daily basic life needs for residents and includes toilet, kitchen and minimum one bedroom".
- **Residential room**: "the room that is prepared for living and stay in excluding halls or lobbies, and the main hall that is used as living room is considered a living prepared room".
- **Residential building**: "the building that is used just for residential purpose, consists of one floor or more, contains one residential unit or more, and has a separate entrance. Could host commercial or administrative uses in ground or first floor and it can be a stand-alone building or attached to other buildings".
- **Residential group**: "a group of residential buildings in one site area with specific entrances and exits".
- **Residential block**: "one building with several residential units in it and consists of several entrances and exits" [9]

As a holistic understanding, the next diagram Figure 1 shows an illustration of the understanding and compilation of the system of urban morphology effect circles starting from the fundamental physical elements which are plot, building, street, and open space reaching the wider aspects of effect.

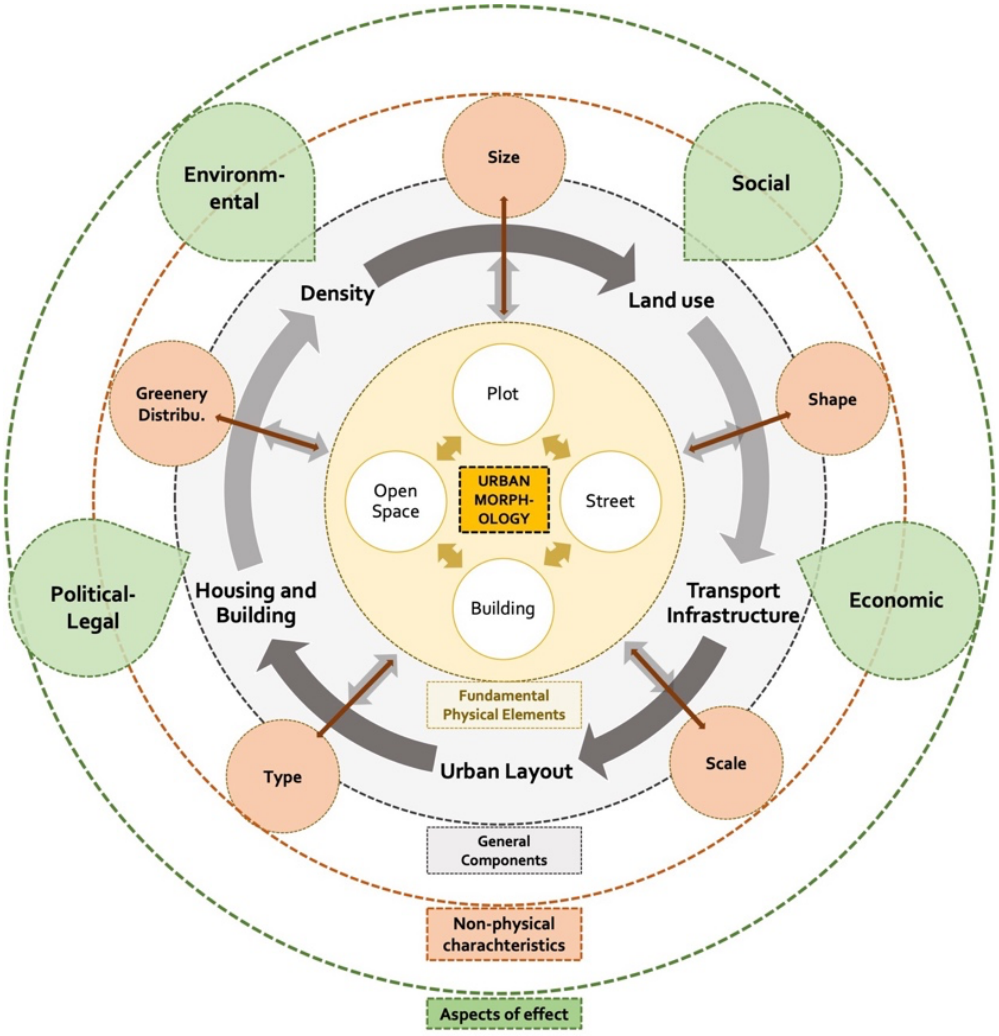


Figure 1. Compilation of elements, components, and aspects of effect of urban morphology in cities

Source: The Author, 2023

3. The case of Cairo and New Cairo cities

This part of the research studies the historical urban expansion of Cairo and New Cairo regarding the development of urban fabric through time focusing on the adjacency area of them as well as the effects on physical and social dimensions.

3.1. Cairo

Cairo is the largest city and the capital of Egypt and the largest city in Africa and the middle east in area and population. It is located in the northern part of Egypt and southern the Delta of Egypt overlooking the Nile River which is the longest river worldwide. With a population

reaches 20M users daily, Cairo is a complex of different uses, fabrics, cultures, users, and typologies.

According to Egyptian CAPMAS (Central Agency for Public Mobilization And Statistics), total population of Cairo city in 2017 was 9539673 inhabitants (over than 9M people) and total population of all Cairo governorate in 2019 was 22975430 inhabitants (over than 22M people) [28]. The city has witnessed enormous physical and social formations and transformations in the past decades due to several changes in the ruling regimes, state plans, future visions, population increase, international crises and situations, the adjacency of new built cities such as the New Administrative Capital in the east and the expansion and completion of New Cairo city -the most adjacent new urban community to Cairo from the eastern side- and internal immigration and the home-work daily trip patterns of inhabitants. All that and more additional aspects caused a noticed change in infrastructure, housing, services, regulations, and other crosscutting aspects. Figure 2 shows the existing situation of Cairo governorate boarders.

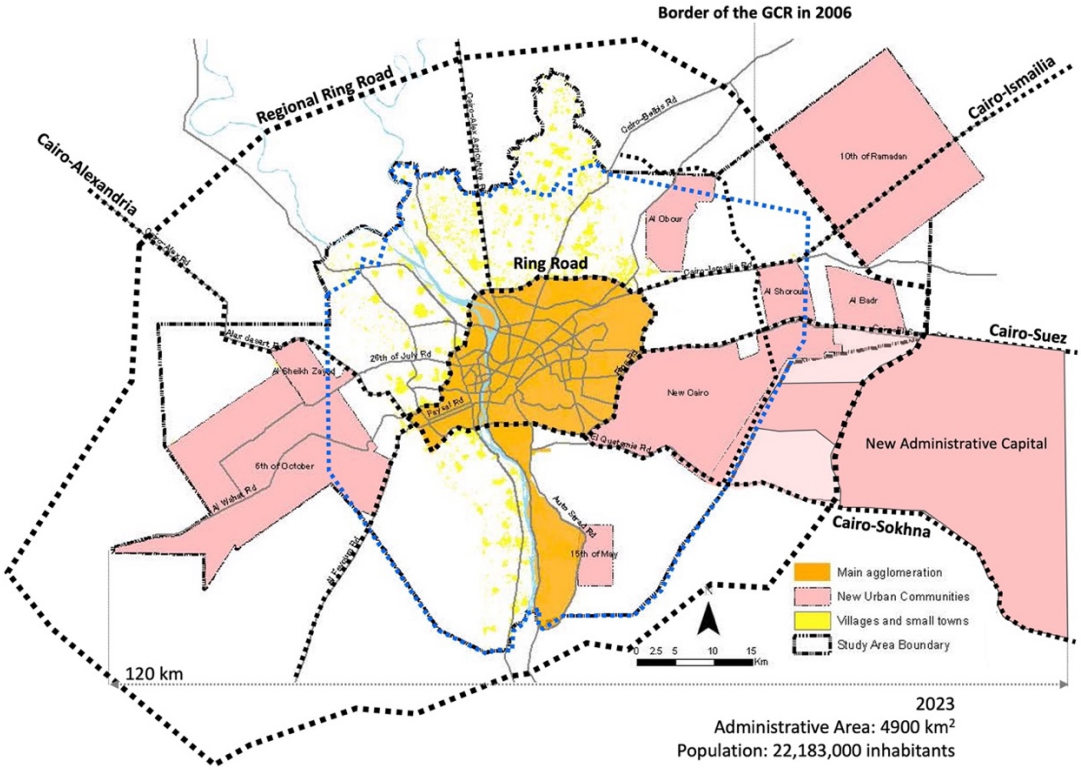


Figure 2 Administrative boarders of Cairo Governorate in 2023

Source: [28] with authors edit

The next timeline, Figure 3 shows the urban expansion of Cairo throughout history.

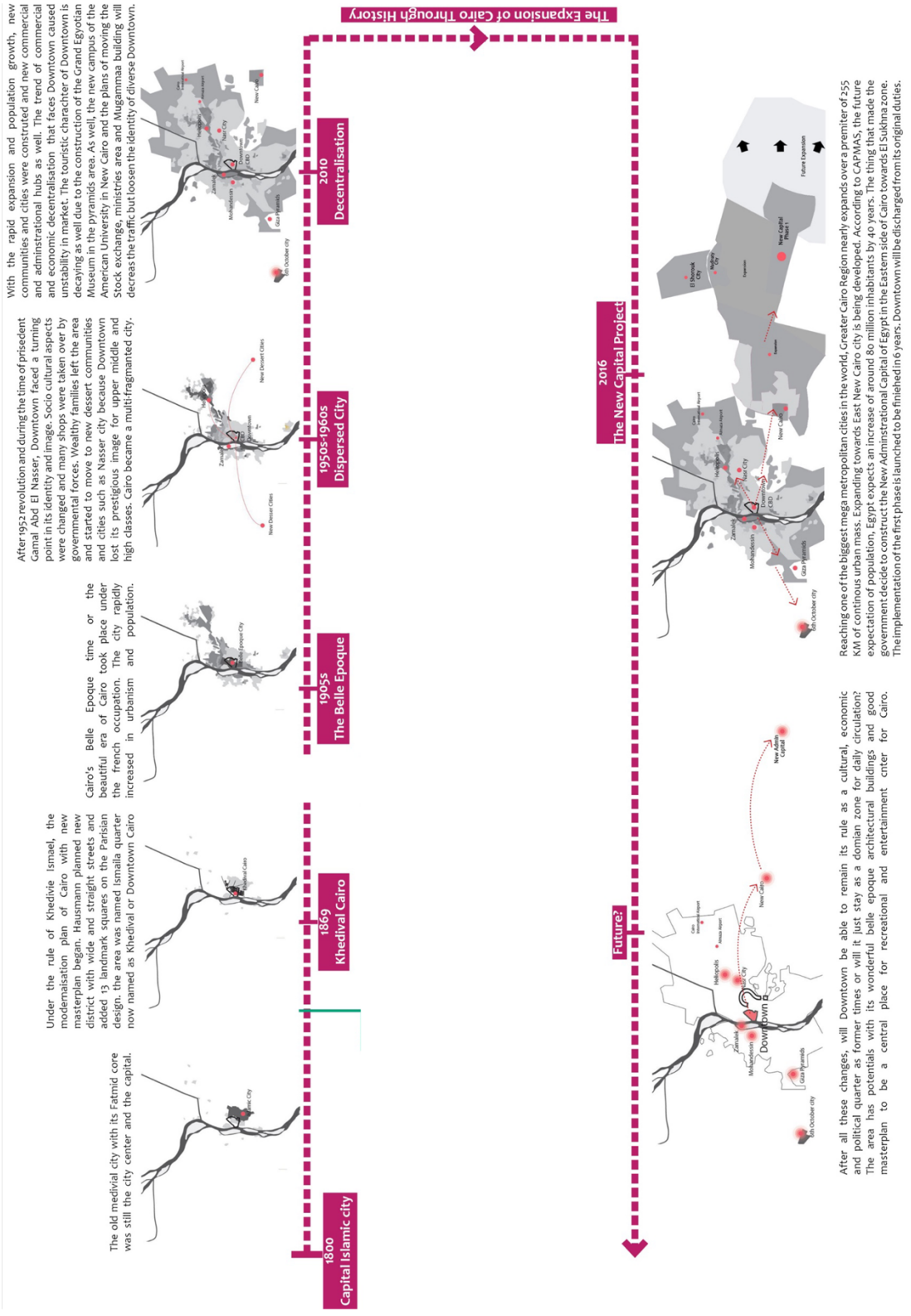


Figure 3 The urban mass expansion of Cairo city throughout history

Source: [29] with author's edit

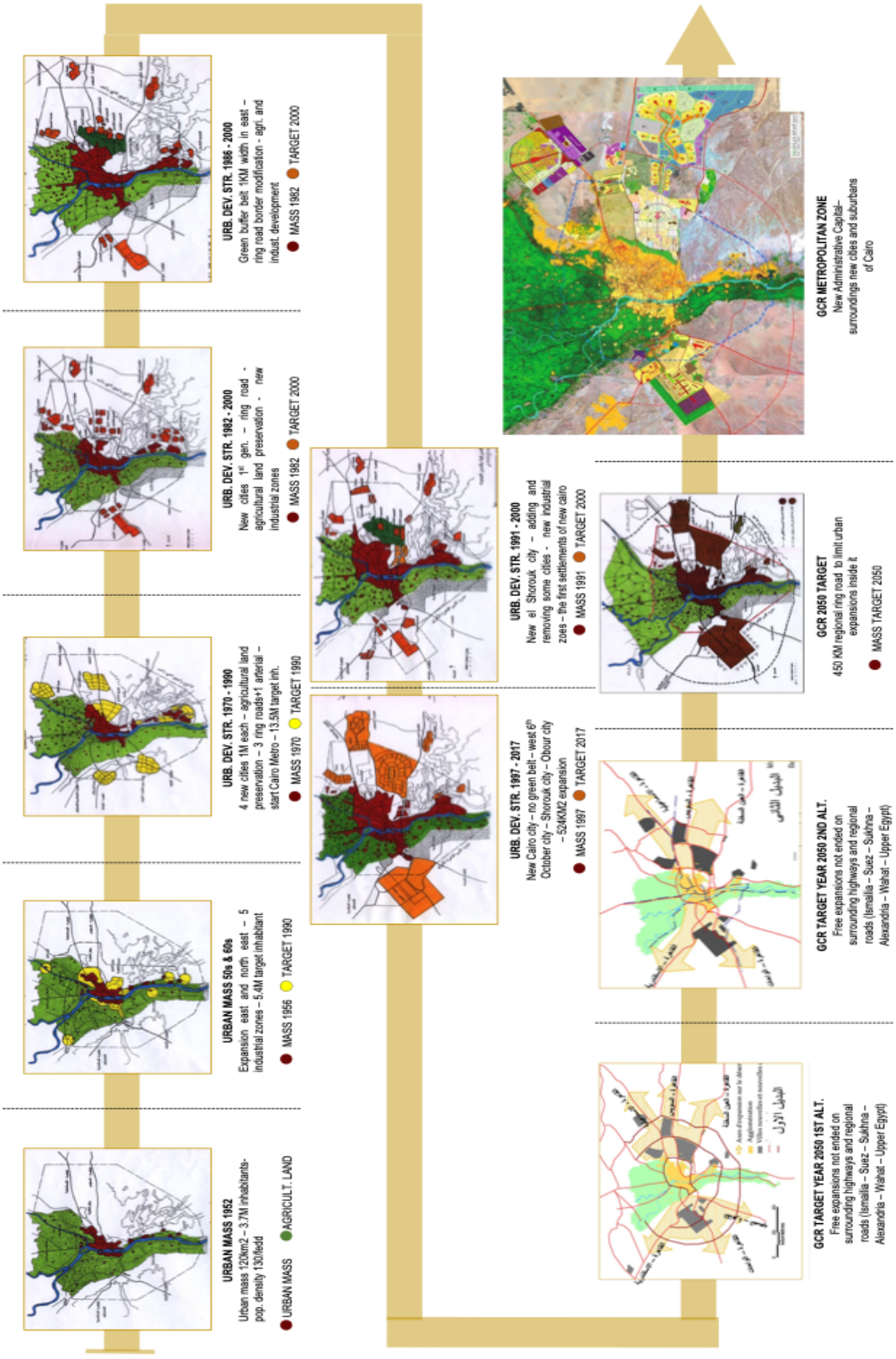


Figure 4 Timeline for urban development strategies for Cairo governorate since 1952 till recent times

Source: [29] with author's edit

3.2. New Cairo

Cairo city has a population of more than 18 million people, making it one of the most populous cities in the world, ranking third in the Islamic world behind Jakarta and Istanbul (Nazmy, 2016). Greater Cairo Region comprises the governorates of Cairo, Giza, Qaliobeya, Helwan, and 6th October (Hassan & Salheen, 2010)(Nazmy, 2016). The character of the urban society influences the urban approach. In terms of goal, way of management, and so forth, new urban communities differ from existing cities. New-Cairo City, as a new urban community, blends the characteristics and indicators of existing urban communities dating back to the 1970s with those of new urban communities where the goal is development. New urban communities were built on the outskirts of Cairo, in desert uninhabited areas to the east and west, constituting an expansion of Cairo metropolis. These satellite cities are mostly utilized to create additional residential communities in order to reduce population density in the primary metropolis. Cairo city is surrounded by eight new cities, New-Cairo to the east (New-Cairo city, El-Shorouk city, 15th May, Badr, 10th Ramadan, and El-Obour City), and El-Shiek Zayed to the west (6^{th} of October, El-Shiek Zayed). Residents are continually looking for an environment that matches their wants and goals; so, the objective is not only to provide a physical place to live, but also to provide a healthy atmosphere.

The first generation of Cairo's new settlements were economically independent towns, with luring residents being one of the key concerns, whilst the subsequent ones relied on the first generation and were placed near the urbanised region. Residents were drawn to them, and high suburban settlements replaced low-income neighborhoods; this occurred in several cities as part of 6th of October city, New-Ciro city and El-Shorouk city.(The Ministry of Housing- Utilities and Urban Communities (MHUC), 2012).

On the eastern direction of Cairo and on an area of 85580 Feddans, New Cairo is considered one of the third-generation new cities. It was first established in 2000 by presidential law number 191. The area was originally 70580 Feddans and another 15948 Feddans were added in 2016 by ministry legislation number 499 [30]. New Cairo idea was to be built to absorb the congestions and overcrowded urban fabrics of Cairo and to limit the population increase of Greater Cairo. It is bordered by Cairo-Suez road in the north, Ring Road in the west, Qattamya-Sukhna road in the south and it is far 15km from Maadi area and 5 km from Nasr City and it is inhabited by 2.5M inhabitants in the recent times. New Cairo has five main residential settlements which are first, third and fifth settlements in addition to eastern and southern extensions with several services and mixed-use complexes distributed among the city [30].

New Cairo has witnessed several steps of formation and legislation of master planning steps from the Egyptian government since the early start of the city master plan passing through different changes reaching the final existing situation and land use plan of it. New Urban Communities Authority NUCA under the coordination of General Organization of Physical Planning GOPP started to strategize the urban expansion outside Cairo with the support and collaboration with French urban experts in the 1980s. The idea was to absorb and handle the increase of population and the uncontrolled land expansion by construction a 100KM long ring road surrounding the GCR and to subdivide the lands surrounding the ring road into homogeneous zones (10 to 15) to absorb the population increase and to achieve self-sufficiency of neighborhoods, suitable transportation and mobility networks, enough and satisfying mixed use services and that each zone should has its own character and activities according to each zone’s potentials and assets [30]

New Cairo through 4 main stages. It started as

1) **Eastern extension of Cairo from Nasr City side**: after ring road construction, the Nasr City company housing and development in 1950s and 1970s were handed the privilege right of the eastern side expansion of Cairo with approximately **13600** Feddans and these expansions were:
    - First and Second settlement, along the Suez-road.

- The third and Fifth settlements, along the ring road.
- Forth settlement was added later to New Cairo city.

After many changes and alternatives, it has been decided the establishment of the First, Third, and Fifth settlements.

2) **New Cairo city master plan:** The main reason to reorient the urban and real-estate strategy during the 1990s was to adapt and modify the urban development orientation in order to deal with the real estate economy, especially in the new communities in Cairo. This led to the modification of some residential and service projects at these settlements in order to service different economic levels as well as link the three settlements forming the first core of "New Cairo."
3) **New Cairo and its eastern extension (El-Lotus):** this area was proposed due to the high demand increase on housing and services specially the mixed-use services and high-class schools and universities. El Lotus area was proposed at the east of the investors area which is called (El Mostasmeren) to end the possibility of other extensions with various plots and lands for individuals and large lands and plots for investments.
4) **New Cairo and the inclusion of all external projects:** in 2007, and with the ongoing expansion and development of the city, several governmental entities such as ministries, courts, companies, and others were moved from Cairo to New Cairo and several commercial and administrative hubs were as well. Consequently, the attraction to the city increased and new cities were built surrounding it such as Mostaqbal city southern Cairo-Ismailia Road facing Shorouk city.

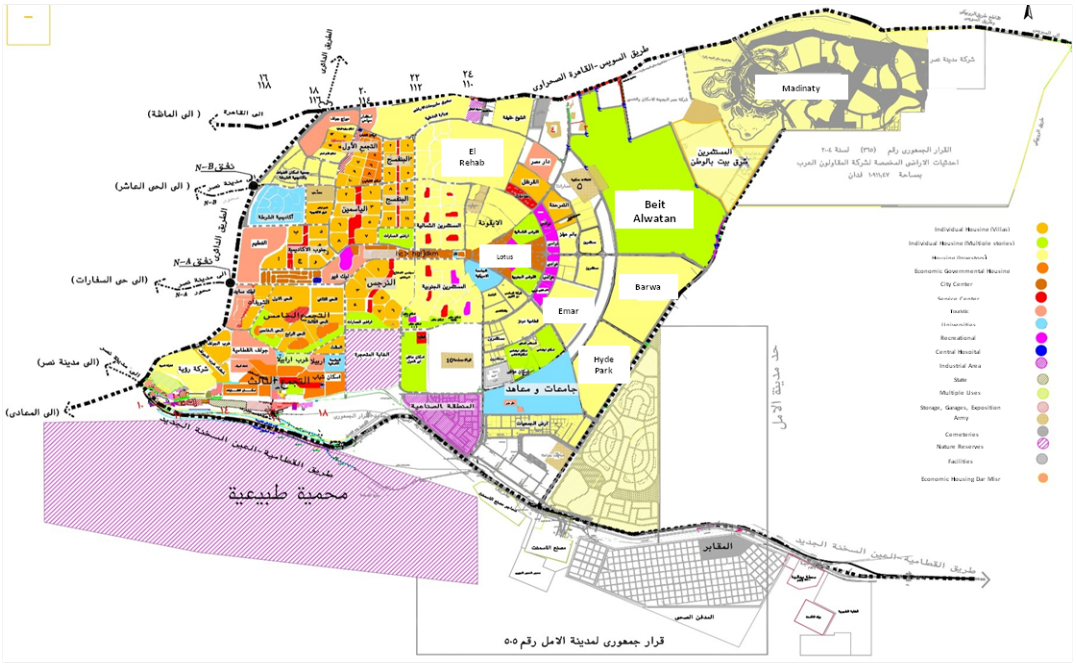


Figure 5 Land Use map of New Cairo city

Source: [30]

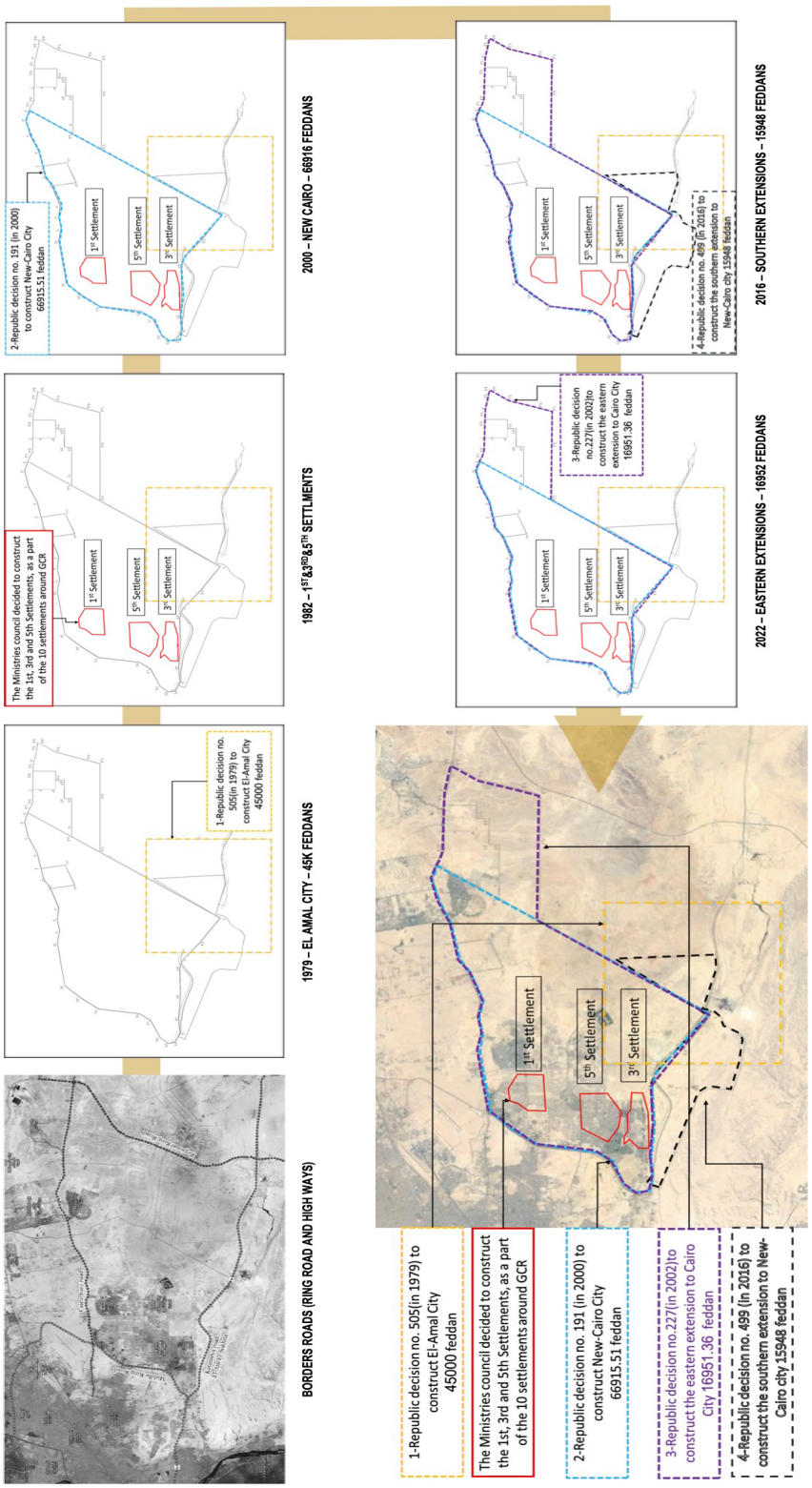


Figure 6 Expansion of New Cairo

Source: [30]

3.3. The adjacency of Cairo and New Cairo

Cairo and New Cairo have an adjacency sector of approx. 14 KM long separated by the first ring road of Greater Cairo Region and surrounded by various functions and land uses, flyovers, and different public transportation modes. The adjacency sector had rapid changes in the last 10 years since 2014 till recent times with noticeable change in vacant lands areas and multi-functions distribution and changes. The upcoming three figures Figure 7, Figure 8, Figure 9 show the changes in the adjacency area between Cairo and New Cairo

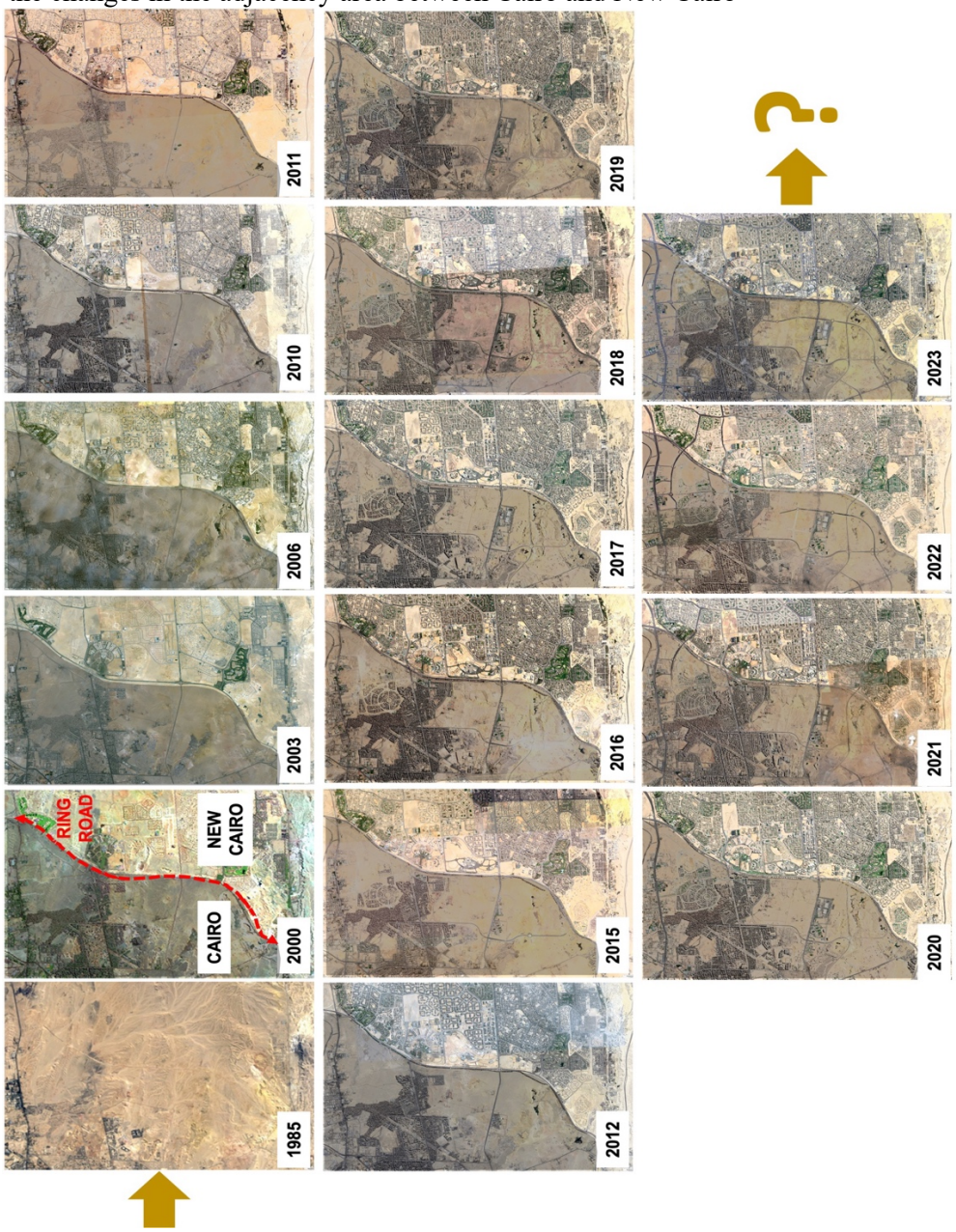


Figure 7 The expansion of the adjacency zone on the two sides of the ring road between Cairo and New Cairo from 2000 till 2023

Source: The author based on Google Earth Pro, 2023

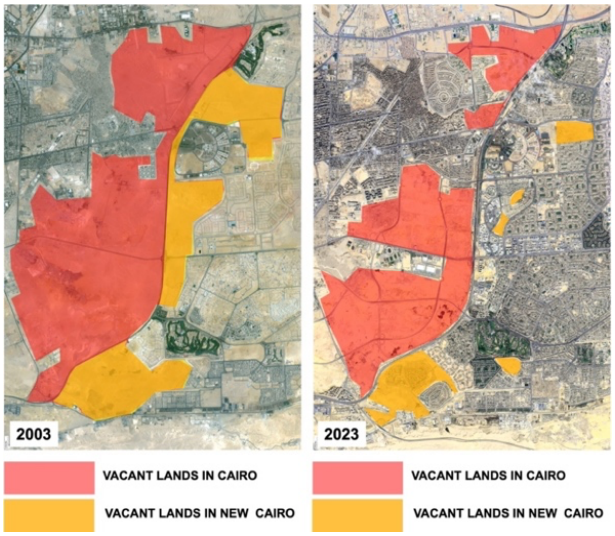


Figure 8 Vacant lands comparison in 2000 and 2023 between Cairo and New Cairo shows the faster rate of development on the eastern side of the ring road (New Cairo) comparing to the older city in the west (Cairo)

Source: Google Earth Pro with author's edit

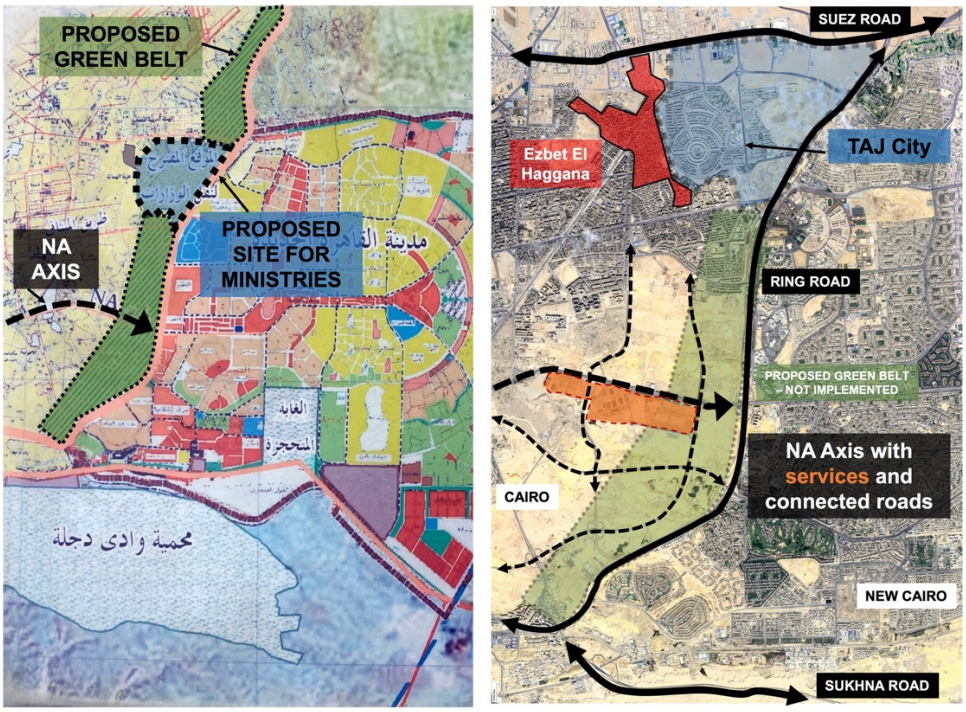


Figure 9 Comparison between proposals of ministries re-allocation and green belt in 2004 masterplan and the existing situation of the mentioned areas

Source: [30] with author's edit, 2023

4. The effect on physical dimension of the two cities

Cairo and New Cairo are different cities in shape, urban governance systems, cultural and socio-economic aspects, as well as managerial structure. However, the adjacency of them and the highly connected mobility network of roads and public transportation that the government has been focusing on in the last decade, increased the attachment and resulted in physical effects in both cities. Nevertheless, and as being the author a native resident of Cairo and recently New Cairo, it is highly noticed that Cairo, the older and the larger city is more affected physically rather than New Cairo. The physical survey of the research depends on highlighting the physical dimensions according to the elements of urban from mentioned above in 2) as follows:

Effect on density

According to Atlas of Urban Expansion powered by UN habitat, the Built-up Area Density in Cairo in 2013 was 169 persons per hectare, decreasing at an average annual rate of -4.4% since 2003. The built-up area density in 2003 was 262 persons per hectare, decreasing at an average annual rate of -2% since 1992 when the built-up area density was 323.78 persons per hectare. The Urban Extent Density in Cairo in 2013 was 115 persons per hectare, decreasing at an average annual rate of -5.7% since 2003. The urban extent density in 2003 was 205 persons per hectare, decreasing at an average annual rate of -1.2% since 1992 when the urban extent density was 234 persons per hectare [31].

Figure 10 Change in Built-up area density and Urban Extent density of Cairo

Source: [31]

Effect on Land Use

The past decade witnessed enormous changes in Land uses in Cairo city in some zones due to the powerful investment power that Cairo attracts and as well as the renovation projects Cairo faces in different sectors, the thing that led to conquer the open green areas as majorities for different projects. Some of the changes in different districts and neighborhoods are shown as follows:

- **Transformation of green open areas (recreational entertainment) into commercial uses (in 5 years)**


Tahra garden, 2018

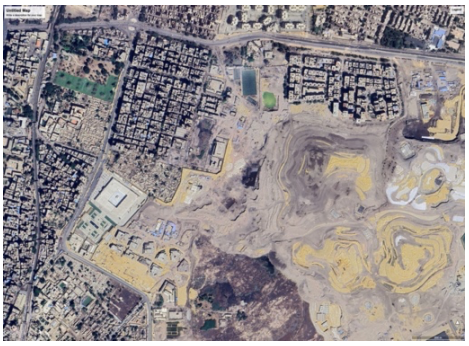

Tahra garden, 2023


Merryland buildings garden, 2018


Merryland buildings garden, 2018

- **Transformation of informal settlements (housing) into formal housing with commercial and admin and mixed uses (in 5 years)**


Ezbet Abu Qarn, 2018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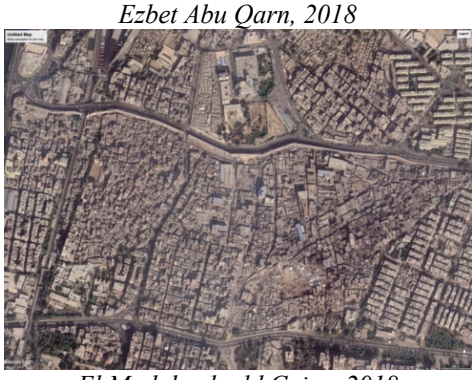
El Madabegh old Cairo, 2018


El Madabegh old Cairo, 2023

- **Transformation of vacant lands into residential commercial complexes or mixed use projects (in 5 years)**

Ain El Sira lake surroundings Old Cairo, 2018

Ain El Sira lake surroundings Old Cairo, 2023

Vacant land in Old Cairo, 2018

Vacant land in Old Cairo, 2023

Effect on accessibility and transport infrastructure

This takes the largest percentage of urban morphological changes in Cairo as the city faced a whole new road map network project. In this point, **the case study of Heliopolis district Eastern Cairo is explained** as one of the brutalist changes in a unique and distinctive district to highlight and distinguish the situation before and after the transformation of mobility network and how it affected the shape of the zone as well as the pedestrian life (shown in a held questionnaire) in addition to negative environmental impacts of removing the green areas.

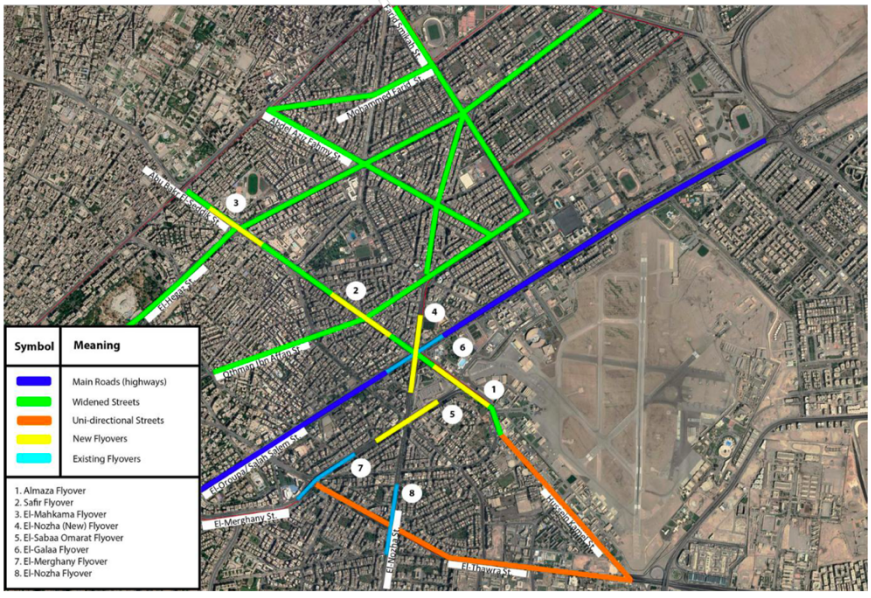

Figure 11 Changes in Heliopolis district

Source: [32]

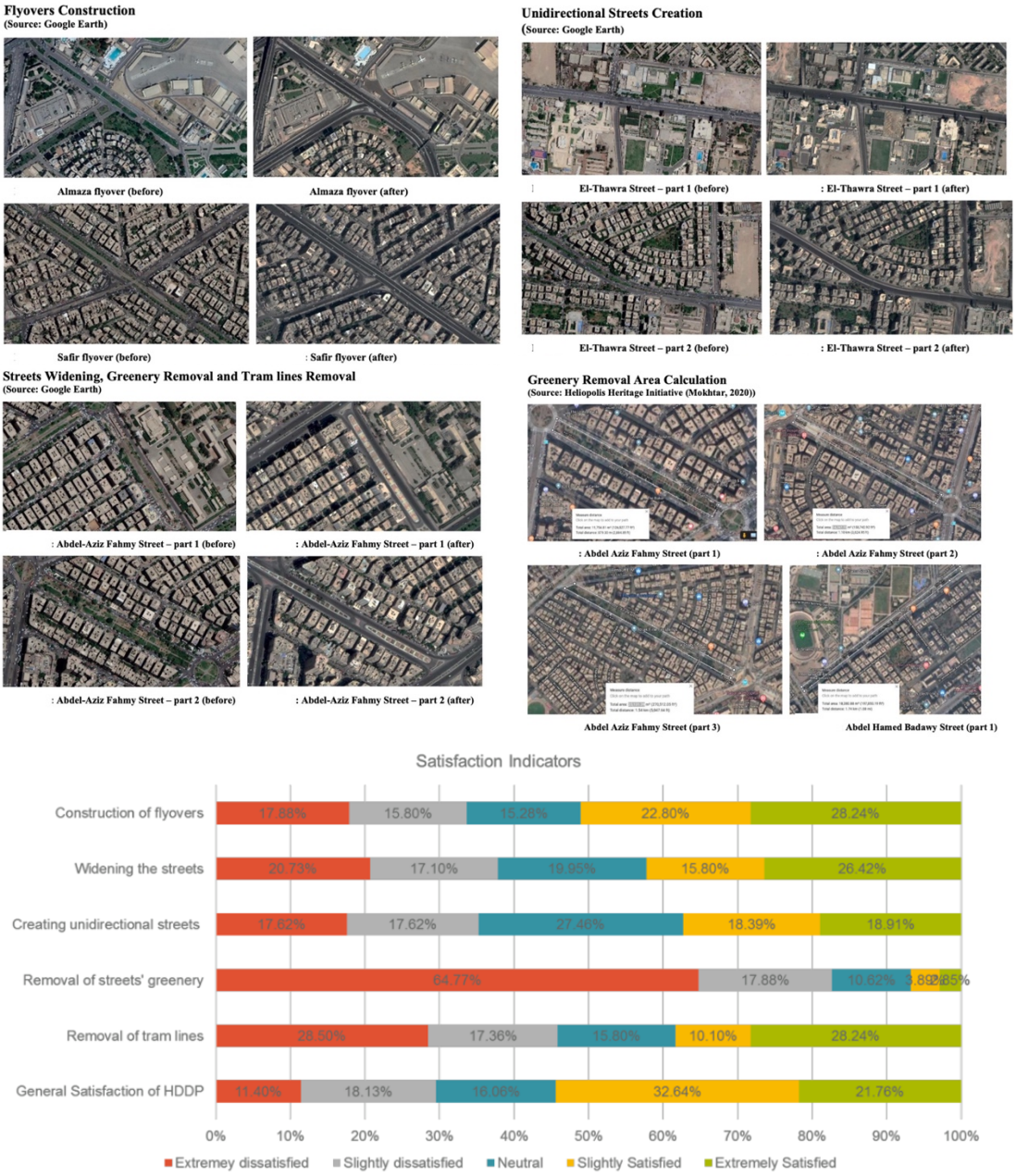

Figure 12 Samples of transformations of physical changes in Heliopolis district, Cairo and response of users to them

Source: [32]

Effect on urban layout

The urban layout of Cairo changed in both macro and micro scales due to the previously mentioned effects as the set of blocks, streets, buildings, and spaces which form the image and identity of the place for its users with high effect on environment and pedestrian movements in the streets and safety cautions (due to high speed of new roads for example). The next photos (before and after) show the change and transformation of some Cairo zones urban layout showing the history and development of Downtown, Heliopolis, and Nasr city as three main districts of Cairo urban fabric.

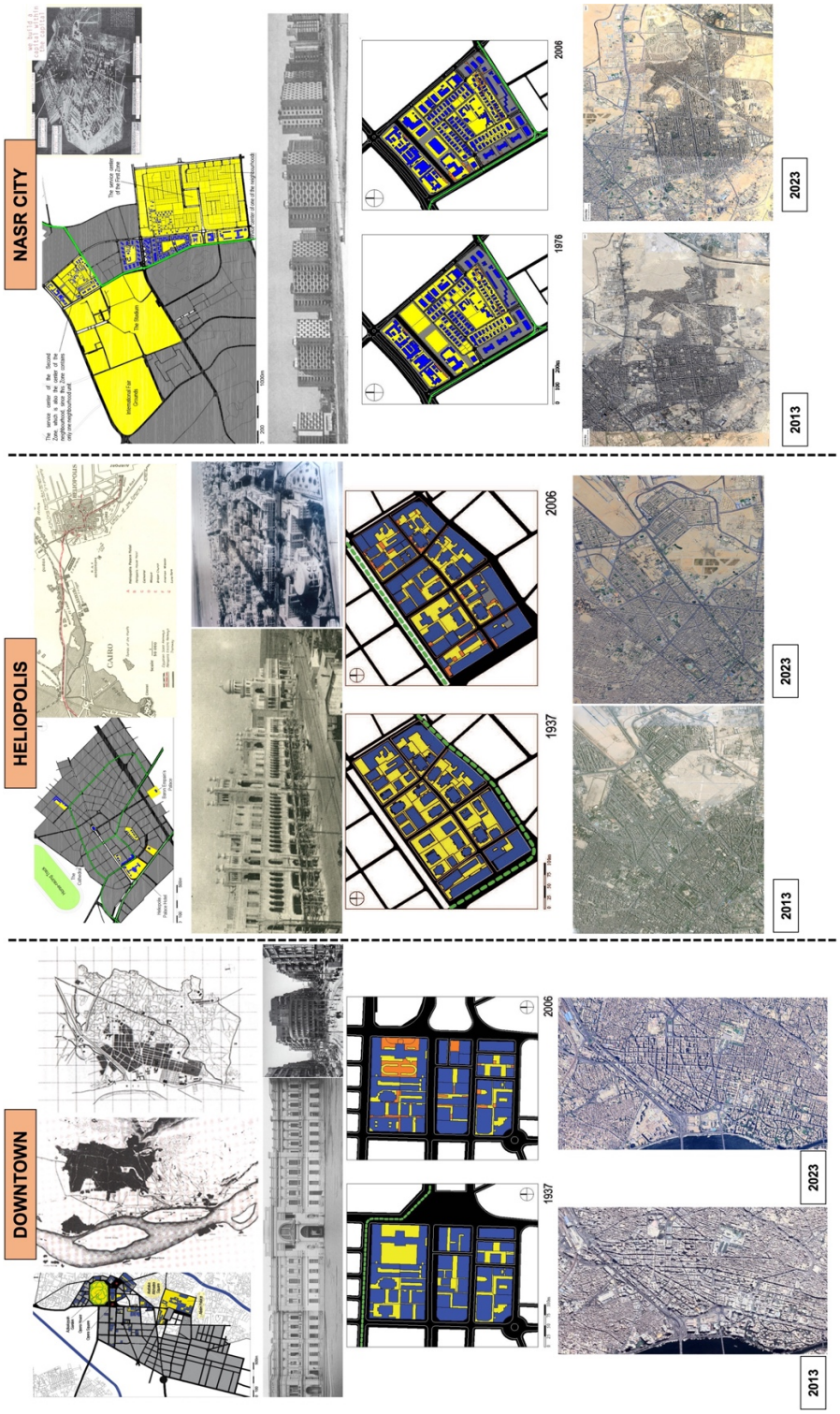

Figure 13 The history of establishment of Down Town Cairo, Heliopolis, and Nasr city and the change of their urban form till 2023

Source: Okoplan, 2020, Google Earth Pro, 2023 with author's edit

Effect on housing and building characteristics

The dominant residential model of New Cairo is the gated communities which provide luxury, enclosure, silence, safety for users and in opposite cause segregation between different community layers. However, this model is successful in New Cairo in terms of level of tenure, spreading, investments, total income, and other aspects.

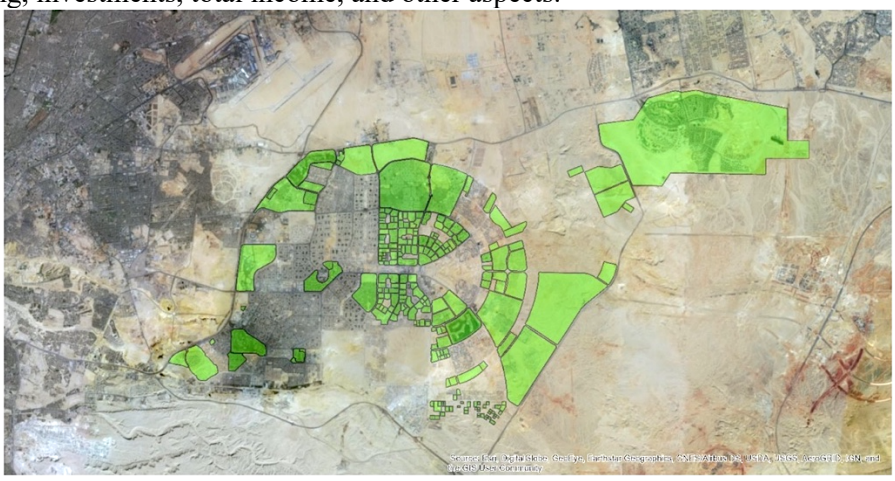

Figure 14 Gated communities in New Cairo

Source: [30]

However, gated communities started to appear in Cairo city which is considered a phenomenon in Cairo urban morphology and fabric and is considered **one of the most obvious effects of New Cairo housing and investment model on Cairo to have residential compounds and gated communities with fences within the open housing fabric of Cairo.**

Mukattam hills, 2000

Uptown Cairo, 2023

Vacant land in Nasr City, 2018

Green Highland compound, 2023

5. The effect on social dimension of users of the two cities

To highlight the social effect of the adjacency of Cairo and New Cairo, an online questionnaire was held to a random sample of 250 residents of Cairo and New Cairo to collect data and to identify the satisfaction rates regarding the physical changes that took place in the two cities. The results are shown in the upcoming figures and charts as follows:

- **Age group majority from 20 : 40 years old.**
- **Work field majority is private sector.**
- **The majority are residents of Cairo with both work and resident inside it.**
- **0 : 4 times is the round trips AVG number between Cairo and New Cairo.**
- **Private car is the dominant mean of transportation.**
- **The number of users immigrated to New Cairo is more than to Cairo generally searching for better quality of life parameters, less noise, less pollution…etc**

Those were the general information gathered from the users responses. Accordingly, satisfaction rates were collected regarding the main physical changes of the urban fabrics of both adjacent cities of Cairo and New Cairo which are: **1) new roads and flyovers, 2) new public transportation projects, 3) streets widening and directions change, 4) projects that led to removal of green spaces, 5) new model of commercial and mixed used projects in Cairo, and 6) the appearance of gated communities as residential compounds in Cairo**. The responses and its analyses are as follows:

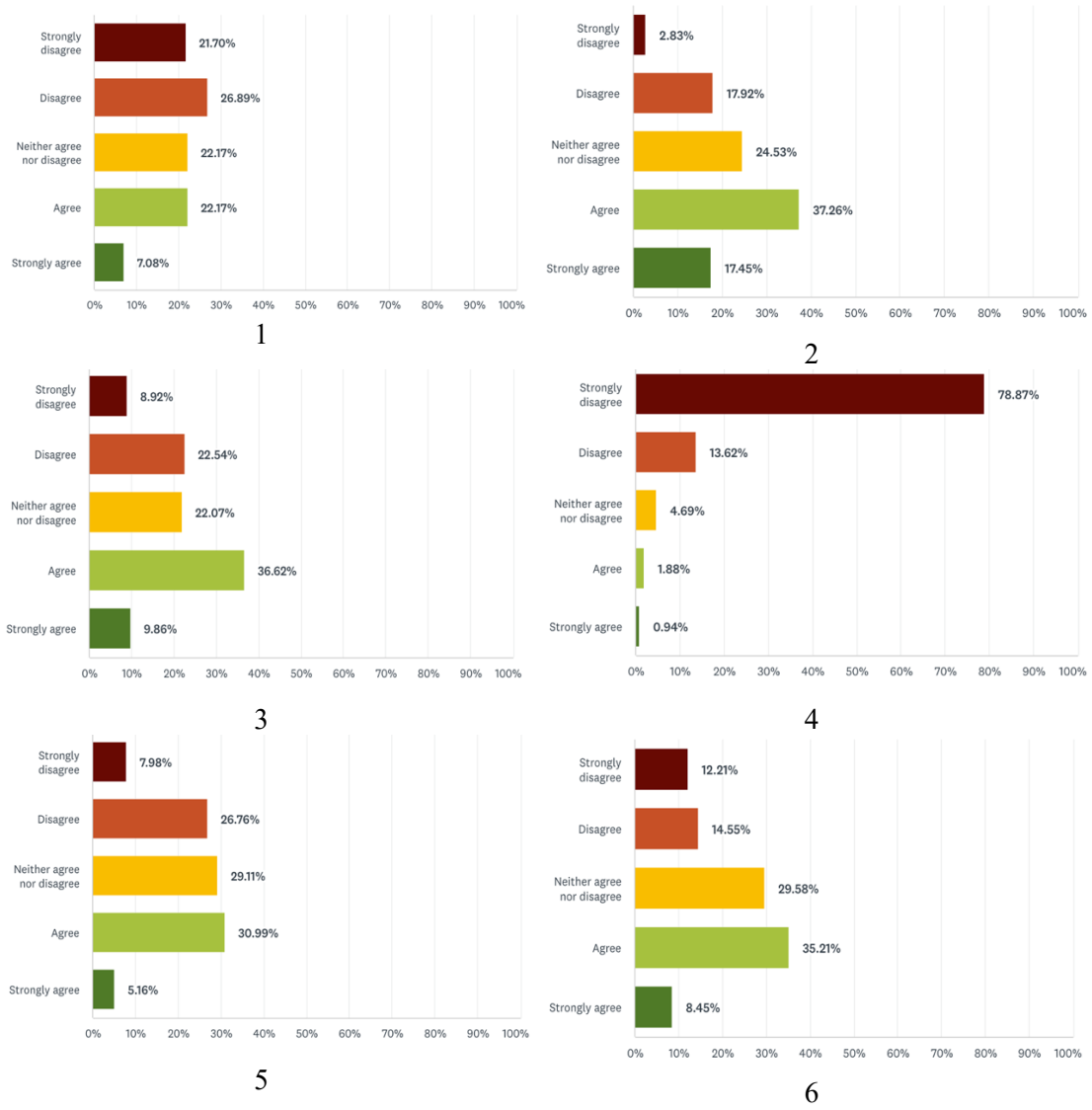

Figure 15 questionnaire charts:

1: New roads and flyovers construction in both cities

2: New transportation projects in both cities

3: Widening and redirecting streets in Cairo

4: Removal of green spaces in both cities

5: New commercial and missed used models in Cairo

6: Appearance of gated communities in Cairo

Source: The Author, 2023

6. Conclusion

Formation and transformation of urban morphology impacts in physical footprint on city fabric and built environment mechanism and systems but at the same time of change, it has an enormous effect on social footprint. It has a significant footprint on users and people who function this fabric in their daily lives as mirrors of its efficiency. Urban morphology definitions and applications should include a social gene in its DNA whether in definition itself or applications on cities formation and transformation. As it affects more the social dimension rather than the physical changes, urban morphology mutual effects among adjacent cities shows the essentiality of having social database consideration from the beginning of the analysis process in addition to the physical aspects.

The research indicates that the more rapid (physical oriented) development takes place, the more dissatisfied and conflict-based users feedback becomes. this appeared in the issue of green removal VS less congestion projects. Additionally, the mutual effects of urban morphology among adjacent cities are affecting in social dimensions of communities, the thing that leads to re-transformation of urban morphology.

Full connected masterplans cities strategy is more preferable for users rather than full separated masterplans strategy (2000s VS 1960s : 1990 s thought in Cairo and New Cairo case). Moreover, there is high value of green areas and vacant lands in cities, well developed strategies for these areas can add more values for communities. On broader scale, in the global south and developing countries, tackling the case of Cairo and New Cairo, the rapid and comprehensive urban planning strategies face the challenge of urban sprawls, informal settlements, and sudden land use change, however, considering the social dimension and community engagement in the master planning process can assist in reaching lower risks and higher efficiency in urban morphology expansion and performance. Consequently, Improving the process of monitoring the social dimension affected parameters through development process can assist in achieving more effective further developments and to reach more good urban governance. Nevertheless, Integrating the essential urban morphology - sociability related legislations and polices in the Egyptian laws is supposed to enhance the development process and outcomes.

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