

**Regional Case Studies for the Africities
Conference Report**

CAIRO

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List of Acronyms

AfDB – African Development Bank

AUC – American University in Cairo

CAPMAS – Central Agency for Public Mobilization and Statistics

CBO – Community-based Organization

CO² – Carbon dioxide

EGP – Egyptian Pound

GCR – Greater Cairo Region

GDP – Gross Domestic Product

GIS – Geographic Information Systems

GNP – Gross National Product

GOPP – General Organization for Physical Planning

HDI – Human Development Index

IAURIF – l'Institut d'aménagement et d'urbanisme de la région d'Île-de-France

ISDF – Informal Settlements Development Facility

JICA – Japan International Cooperation Agency

M/SMEs – Micro, Small, and Medium Enterprises

MENA – Middle East and North Africa

MODMP – Ministry of Defense and Military Production

MoHUD – Ministry of Housing, Utilities & Urban Development

MURIS – Ministry of Urban Regeneration and Informal Settlements

NGO – Non-governmental Organization

NUCA – New Urban Communities Authority

UNDP – United Nations Development Program

UNESCO – United Nations Educational, Scientific, and Cultural Organization

UN-Habitat – United Nations Human Settlements Programme

USAID – United States Agency for International Development

USD – U.S. Dollar

UTM – Universal Transverse Mercator

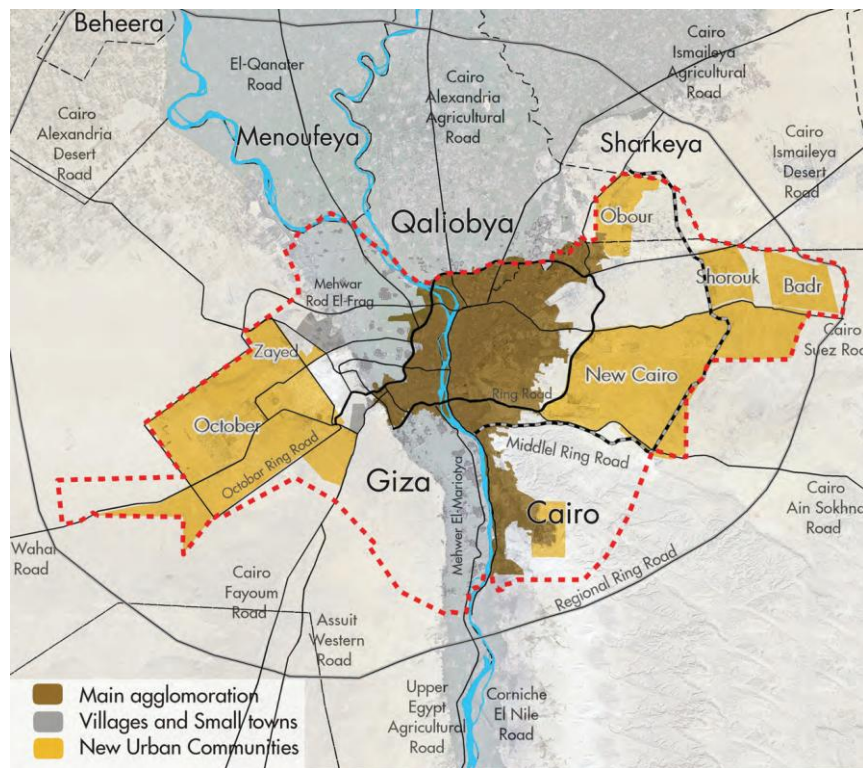
VAT – Value-added tax

1 OVERVIEW

The Cairo metropolitan area, known as the Greater Cairo Region (GCR), with a population of almost 20 million, is the largest extended metropolitan region in the Arab world. Cairo proper, with an estimated 2015 population of 11.6 million is one of two “megacities” in Africa and one of the continent’s few “global cities”.¹ Its population is expected to reach 26.8 million by 2027.²

The GCR covers an area of 3,133 square kilometers; it consists of the Cairo Governorate (48% of GCR’s total area), parts of the Giza Governorate (47%), and the southern part of the Qalyubeya Governorate (5%). It includes the New Towns surrounding the contiguous urban area of the main agglomeration and vast undeveloped desert areas. The region is defined in Figure 1 by the red dashed line.

Figure 1: Greater Cairo Region



Source: Database of the Greater Cairo Region GIS (GOPP 2012)

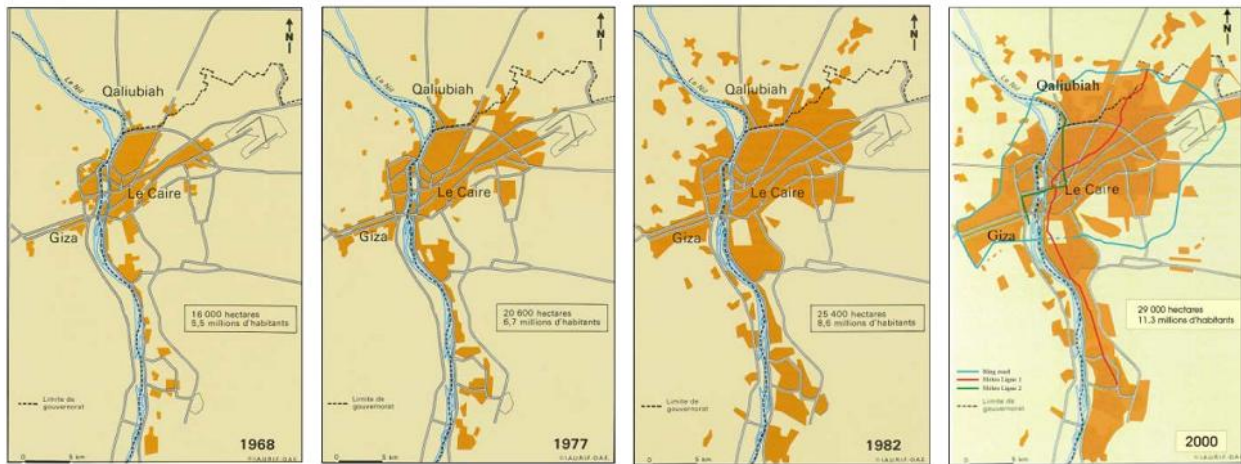
Cairo’s primacy in the Egyptian economy has increased steadily since the 1950s despite efforts by the central government to redirect urban growth to secondary cities in other

¹ UN-Habitat, *State of the Arab Cities*, 2012, p. 15. A megacity is defined as having an urban population of 10 million or more.

² GOPP, *Greater Cairo Urban Development Strategy*, 2012

regions, including satellite towns, tourism destination cities, and New Towns in other Governorates. Its primacy is evidenced by the fact that it houses 25% of the Egypt's total population, 51% of its urban population and accounts for 31% of Egypt's GNP. Twenty-three percent of its labor force of 5 million is employed in manufacturing, 16% in trade, 8% in construction, 8% in government, and the balance in service-based sectors.³

Figure 2: Evolution of the Greater Cairo Region



Source: GOPP, 2015

Starting in the 1960s, the GCR's built-up area started to expand rapidly. Driven mostly by the remittances of expatriate workers to the Gulf countries, the urbanized area nearly doubled in size from the 1980s to the 2010s. In the absence of an integrated urban development strategy, an estimated 11,000 feddans of agricultural land has been lost annually between 1984 and 2007 to the dense informal housing built on the urban periphery. The broad strategies of developing satellite towns in the desert embodied in the 1966 and 1982 master plans were unable to prevent the continued growth of informal settlements as the annual flow of remittances continued to grow, reaching USD \$2.5 million in 2000 and an estimated USD \$20 billion in 2014.⁴ It is currently estimated that 60% of the urbanized area consists of dense informal settlements on agricultural or desert land with inadequate services; another 5% of urbanized area is developed on unstable soils, mostly on the foothills of the desert plateau and the Mokattam.⁵

The GCR's governance implicates a hierarchy of bureaucracies, from line ministries to governorate, municipal, and village local units and district citizen committees. Despite the passage of 36 years since the enactment of the Local Administration Law in 1979, decentralization in Egypt has been limited and central government ministries exercise direct and indirect control over units of local government while, within the governorates, power is centralized in the office of the Governor and his local elected council.

³ GOPP, *Greater Cairo Urban Development Strategy*, 2012.

⁴ Egypt is the 6th largest remittance recipient in the world. (World Bank, 2015).

⁵ Source: Informal Settlements Development Fund.

Responsibility for physical planning has been vested in the General Organization for Physical Planning (GOPP) in the Ministry of Housing, Utilities & Urban Development (MoHUD). Sectoral line ministries prepare urban and regional development studies and plans with a degree of coordination with GOPP, including the preparation of regional economic development plans by the Ministry of Economic Development (formerly the Ministry of Planning). Major plans and projects, whether at the national, regional, or local level, must be approved by the Ministry of Defense and Military Production (MODMP) and presented to the Higher Council for Planning and Urban Development for review and approval.

At the local level, Governorates have authority over most urban planning, housing, land development and infrastructure. The plans have to be approved by both the local executive and popular (elected) councils and signed by the governor. At the city level, the local executive councils are responsible for planning and management of public services improvement projects within their jurisdiction. The financial resources needed for their implementation are secured primarily from budgeted central transfers, partnerships, and grants from donors.

The 2012 *Greater Cairo Urban Development Strategy* prepared by the GOPP is an integral part of the *National Strategic Plan for Urban Development in Egypt to the Year 2052*. The spatial delineation of the Greater Cairo metropolitan region takes into consideration three interrelated factors: the functional relationships among the districts and areas that form the contiguous urbanized area; a unified labor market; and the similarity in living conditions of the population (GOPP 2012).

The strategy proposes to promote economic competitiveness, social justice, and environmental friendliness by:

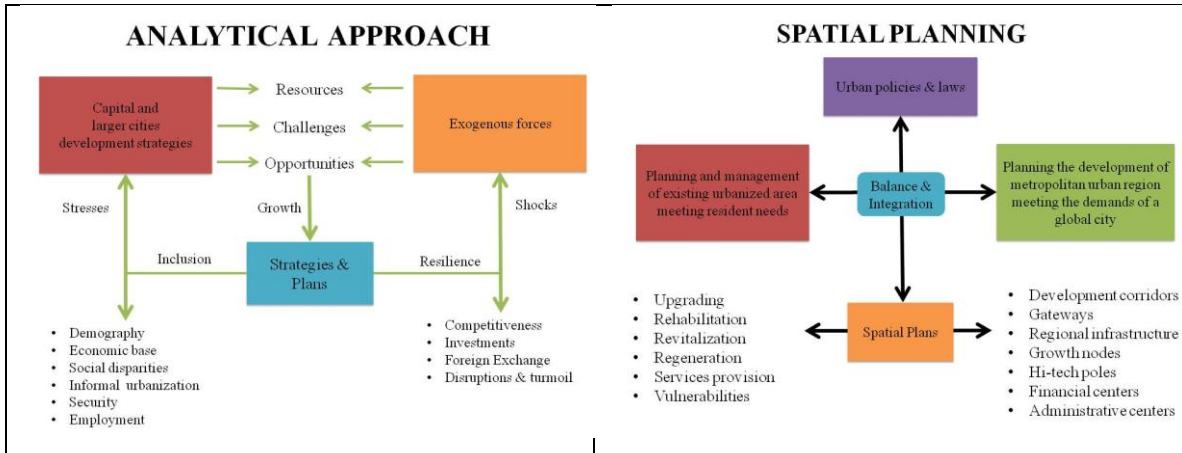
1. Improving the residents' living conditions and quality of life;
2. Providing a competitive environment for a knowledge-based economy;
3. Improving environmental conditions and achieving sustainability;
4. Developing the infrastructure and transportation network;
5. Developing the new urban communities as diverse and attractive centers;
6. Creating an environment suitable for tourism and the preservation of historical and archaeological areas;
7. Revitalizing the Central Area; and
8. Providing an effective governance system.

The management of the growth of a megacity such as Greater Cairo depends on the ability of the authorities to analyze the challenges and opportunities resulting from its evolving role in its national and international contexts. This analysis will allow them to formulate the strategies, plans and interventions needed to take advantage of changes in its opportunities, increase its resilience in the face of changing macroeconomic trends and, more recently, climate change. In the African context, the process is complicated by the stresses posed by the youthfulness of the population, social disparities, unemployment and underemployment, and informal urbanization.

The preparation of an effective spatial planning strategy depends on the achievement of an integrated balance between the improvement of existing urbanized areas, much of

which has been developed illegally and without adequate infrastructure and services. Planning the growth of the metropolitan region is a key component of the country's economic development. Given the scarcity of resources, there is a permanent competitiveness between the need to invest in the future and the need to remedy the errors of the past.

Figure 3: Conceptual Approach



2 SYSTEMATIC ANALYSIS OF THE CITY UNDER REVIEW

Egypt's high rate of demographic growth, like those of other African countries, has resulted in a very young population, with 52% below age 25 (UN-DESA 2010). The sustained out-migration of young people in search of better economic opportunities has generated a significant amount of remittances that have been primarily invested in real estate in and around urban centers. Concurrently, national policies promoting the concentration of economic activities in urban areas to achieve economies of scale and attract private investment in employment generating activities have further accelerated the rates of urbanization of major cities.

These trends have resulted in rapid urbanization with a proliferation of unplanned peri-urban informal settlements that threaten the cities' ability to equitably and sustainably provide basic services and affordable housing for their populations. Between 1976 and 1994, Egypt lost an average of 8,000 hectares of agricultural land yearly to urbanisation while only being able to reclaim about 4,800 hectares of desert land annually and bring it under cultivation using the available water resources (Serageldin, 2012). In Greater Cairo, 13,000 feddans were lost annually between 1984 and 2007.

Cairo's primacy in the Egyptian economy has increased steadily since the 1950s despite efforts by the central government to redirect urban growth to secondary cities in other regions, including satellite towns, tourism destination cities, and New Towns in other governorates.

2.1 Spatial Development of the Greater Cairo Region

Since the 1950s the unplanned growth of Cairo has taken place mainly on the fertile lands of the Nile Delta. The first Plan for Cairo completed in 1957 tried to address the issue of rural/urban migration, estimated to account for over half of the 5% annual rate of population increase, by capping the growth of the capital city at about 4.5 million. By the time the Plan was completed the city's population exceeded 5 million. To divert the flow of migrants from Cairo, the plan proposed the creation of industrial zones in the rural areas beyond the urban periphery, where the jobs created would attract potential migrants. Six zones were built – three in Giza, two in Qalyubeya, and one in Cairo, the latter being a heavy industry zone in Helwan about 25 km to the south. The plan also proposed two planned, urban extensions of which the largest was Madinat Nasr developed in the 1960s by a public development company specially created for this purpose. Expanding on desert land, Madinat Nasr accommodates government buildings and massive housing projects for salaried employees, mostly civil servants. Paradoxically, the six industrial zones in the midst of agricultural land generated unplanned, mixed-use urbanization around them and spurs of informal housing as fields were subdivided into building plots. In 1965, a government decree created a single planning entity for the urbanized areas of Cairo and Giza governorates and the industrialized southern segment of Qalyubeya Governorate. The Greater Cairo Planning Commission was established in 1966.

The Greater Cairo Plan, completed in 1970 and adopted in 1973, with a time horizon to 1990, was strongly influenced by Abercrombie's Greater London Plan and proposed to

channel population growth to four new towns in the desert: three in the East and one to the West. The plan's implementation was delayed by the 1967 Arab-Israeli war and the budgetary constraints of its aftermath. However, the effort led to the establishment of a new planning agency in the Ministry of Housing Utilities and Urban Development that became the influential General Organization for Physical Planning (GOPP). The concept of developing new urban centers on desert land became a strategic objective of Egypt's national urban policy. By the time construction started in 1976 on the first new town, the 10th of Ramadan Industrial City, greater Cairo's population exceeded 12 million.

A 1977 Presidential decree (475/1977) designated the Greater Cairo Region as an "economic region". To create an economic base for the new towns, a ten-year tax exemption and subsidized serviced land was offered to investors in industrial projects. The incentives did not counterbalance the advantages of proximity to markets and government agencies and industries did not start locating in the new cities until the issuance of new licenses in the city of Cairo was prohibited in 1983. The lack of coordination in the development of the residential and commercial components of the new towns led to substantial commuting of workers while a significant proportion of the building plots and residential units were purchased by land speculators and expatriate workers and remained vacant for extended periods of time. The lack of a sufficient quantum of resident population to support public services and private commercial enterprises (shops and offices) impeded the growth of new towns, a situation that led to reassessment of the policy.

Figure 4: 1970 & 1982 Plans for the Development of the Cairo Metropolitan Region



Source: Greater Planning Commission (left); GOPP/IAURIF (right).

In 1982, a new plan to structure the Cairo Region's development to 2000 was developed by GOPP with technical support from the Paris Region planning agency (IAURIF). The plan created an urban boundary for the Cairo region with a ring road, connected Cairo to other Egyptian cities through five development corridors with strong anchors at both ends, developed satellite cities anchored by Cairo, and created new settlements around

the satellites. Starting in 1987, the New Town Organization (NTO)⁶, under the Ministry of Housing, Utilities and Urban Development, was given responsibility for implementing the plan. The ring road was completed in 1991 and, in 1997, the plan was updated to a 2017 horizon.

Major infrastructure investments to implement the 1982 Plan included the construction of the ring road and a series of elevated highways along major radial axes; retrofitting of the primary infrastructure, including new sewer collectors and a treatment plant and two new water filtration plants; and the first subway line servicing the city center and connecting the main railroad station to existing suburban lines to Heliopolis and Helwan.

This series of plans for the Greater Cairo Region illustrated a progressive shift from the direct intervention of governments in the implementation of ambitious and complex projects – the new towns and social housing, in particular – to a strategy that encouraged private investment in development by focusing government investment in large scale infrastructure projects, including providing access and basic infrastructure to peripheral desert land to be sold to private developers. In the 6th of October new town, for example, the government provided the land and access to offsite infrastructure at a subsidized cost on the condition that the housing developers build a specified number of affordable housing for lower-income families.

New Towns

Development in the new towns has been accelerating; from 2001 to 2008 they averaged 27.9% growth, but planned targets take a long time to be reached. It is now recognized that a satellite city can only reach a threshold after which it grows on its own momentum based on the size of its resident population, the economies of agglomeration it offers, and its comparative advantages within the GCR after about 20 years. Over 50% of the development currently taking place in the GCR new towns is in New Cairo to the east and 6th of October/Sheikh Zayed twin cities to the west, underscoring the growing importance of this east-west axis. These satellite cities benefit from good connections to Cairo and Giza, contiguity or easy accessibility to the international airport, and the strategic junction with the Cairo/Alexandria desert highway corridor. They encompass the expanding tourism zone around the pyramids; the high technology zone (the Smart Village) and the media center; and public and private universities, including Cairo University in Giza and the new campus of the American University in Cairo (AUC) in New Cairo. They also offer a broad range of housing for middle and upper income groups, many in gated communities, an advantage sought by families concerned over security during the turmoil.

Open Space and Cemeteries

Green open space is in short supply in the urbanized area of the GCR. The current rate of 1 – 5 m²/person is among the lowest in the world. The World Health Organization, for

⁶ Later renamed the New Urban Communities Authority.

instance, has recommended that cities have a minimum standard of 9m²/person. There is therefore an acute need to introduce open spaces in the very dense fabric, particularly in the overcrowded informal settlements and it has been included as part of the policy for improving the living environment. The ministries, the governorates, and most civil society organizations agree on the need for open space. Interestingly at the district level, local councils most often prioritize housing over all other uses. In Giza Governorate, the existence of parks and land holdings still under the Ministry of Agriculture open up opportunities for the creation of public gardens.

Another issue of concern is the illegal occupation of cemeteries that were once in the desert on the outskirts of the urbanized area and are now embedded within it and surrounded on all sides by mixed uses, including illegal settlements. Proposals for the relocation of cemeteries and reuse of the area they cover (over 500 hectares) have met with legal hurdles and political and popular opposition in a culture that has always given great importance to its burial places.

City Center

As in other megacities, economic activity centers in the GCR have polynucleated. As the city expanded, this type of spatial evolution was the only efficient way to provide accessible services to the inhabitants. The newer centers encompassed mixed commercial, financial, office, and residential uses that drew business away from the older central business district in Khedival Cairo, where the resident population had declined sharply in the 1950s and 1960s due to the departures of foreigners and Levantines, most of whom either returned to their home countries or went elsewhere in Europe, North America, or South America. Today, there are major, ongoing public and private efforts to rehabilitate and conserve this valuable historic fabric and revitalize its economy, which formerly drew on tourism, food, entertainment, professional services, and specialty shops. All of these economic activities were adversely affected by the 2011 turmoil in adjacent Tahrir Square and the collapse of tourism, which has yet to fully recover in the GCR.

Older administrative buildings, scattered throughout the urbanized area are viewed as a potential source of land to alleviate the deficiencies in open space and public services, as well as to regenerate strategically located sites. Their current location is no longer appropriate given the congestion in the central districts and recent growth patterns.

Development scenarios since 1990 have opted for their relocation to a new administrative center along the ring road, well connected to all sectors within the GCR by multimodal transport systems, where functions would be housed in buildings adapted to the new technologies. These scenarios have generated controversy over the need for a new center, the implication of future removal of activities from the existing centers, the proposed location and cost of the new center, and funding sources. The most recent scenario presented to investors at the Sharm El-Sheikh conference in March 2015 calls for a new town with the administrative center at its core, surrounded by a financial center, a diplomatic area, hotels, commercial uses, and residential areas.

2.2 Characteristics of the Greater Cairo Region

The GCR's total population was estimated at 16.2 million in 2012, 8.9 million of whom (55%) are in Cairo Governorate, 5.4 million (33%) in Giza Governorate, and 1.9 million (12%) in Qalyubeya Governorate (GOPP 2012).

Greater Cairo has one of the highest densities of any urban agglomeration in Africa. The built up portions of the GRC have an average density of 20,000 persons/km².⁷ Informal and unplanned areas in Greater Cairo have the highest densities, reaching an estimated 800 persons/feddan or nearly 2,000/ha in some areas.⁸ Greater Cairo Region's extremely high density has also resulted in very limited green space, as discussed earlier.

Table 1: Population Density of Greater Cairo

Governorate	Population (in millions)	Area (in km ²)	Density (pop/km ²)
Cairo Governorate	8.9	1,514	5,878
Giza Governorate	5.4	1,471	3,671
Qalyubeya	1.9	148	12,838

Slightly over one-fifth of the Egyptian population and 51% of its urban population live in the Greater Cairo Region (World Bank 2014). Within its boundaries are:

- 52% of Egypt's university students;
- 40% of industrial establishments;
- 43% of national investments in industrial enterprises;
- 38% of employment in manufacturing enterprises; and
- 25% of the employed labor force.

Despite its primacy, Cairo has developed without zoning or land use regulations other than the height, bulk, and setback rules contained in the building code. While this mix has given the city a vitality and vibrancy that is widely recognized, it has also generated urban management issues, including traffic congestion, incompatibilities among adjacent uses, and settlement in areas inappropriate for residential use.

Table 2: Land Uses in Greater Cairo (2007)

Land use category	Hectares
Built-up area / Mixed use	52,100
Industrial zones	11,800
Vacant land	4,100
Airport land	5,900
Cemeteries	1,000
Agricultural area	80,500
Desert area	272,600
Water bodies	3,400
Open spaces	5,100
Total	436,500

Data from GOPP, 2012

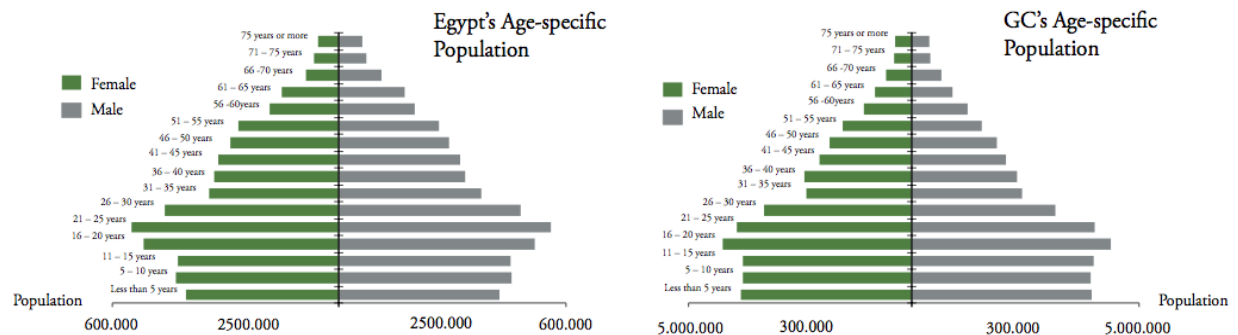
⁷ Lagos, for instance, has an average density of 16,905 persons/km² (GOPP, 2012).

⁸ A *feddan* is an area unit used in Egypt equivalent to 0.42 hectares or approximately one acre.

2.2.1 Human characteristics

The Middle East, including Egypt, has the largest youth cohort in the world: 52% of the Egyptian population is below age 25. This youth bulge has broad implications for current and future demand for services, jobs, and housing. The educational and job opportunities in the Greater Cairo Region have attracted this age group.

Figure 5: Population Pyramid - 2006



Source: GOPP, 2012; CAPMAS, Population Census of 2006

Egypt’s rapid population growth of 2.6% annually is fueled by a high birth rate and low mortality rate, positioning the country in the middle of its “demographic transition” (Youssef 2014)⁹. The mortality rate has declined significantly faster than the fertility rate, sustaining population growth. In fact, the national total fertility rate actually increased between 2008 and 2014 from 3.0 births to 3.5 births. Urban governorates, however, have the lowest fertility rate at an average of 2.5 births per woman (Ministry of Health and Population et.al. 2014). The crude death rate in Egypt was recorded at 6 deaths per 1,000 persons in 2013 (World Bank 2014). Infant mortality is lowest in the urban governorates (17/1,000 live births).

Labor Force

Of the 5 million workers in the GCR, 24% are employed in manufacturing, 11% in trade, 8% in construction, and the balance in government, transport and different service sectors.¹⁰ The labor force participation rate is 45.9% of the population 15-years and older broken down into 69.7% for males and 21.4% for females with the highest rates recorded

⁹ The “demographic transition” can be described as the changes in demographic trends that often accompany development and result in lower death and fertility rates. Egypt has yet to reach replacement-level fertility (2 births per women), leading to sustained rapid population growth over the last several decades (Youssef et. al. 2014).

¹⁰ GOPP, *Greater Cairo Urban Development Strategy*, 2012.

among the 25-49 age group (60%) and university graduates (78.2). Among the employed, 64.4% are salaried, 11.4% are business owners, 12.7% are self-employed without any employees, and 11.6% are unpaid family workers. Unemployment rates are higher in urban areas, reaching 14.9%. Urban unemployment rates disproportionately affect youths (38.2%) and females (24.1% vs. 9.3% for males); all skill levels are affected.

Table 3: Number of Non-manufacturing Workers (in 1,000s)

Governorate	Agriculture	Mining	Construction	Wholesale & Retail Trade	Hotels & Restaurants	Transport & Warehousing	Education	Health and Social Services	Services (1)	Services (2)	Total
Cairo	82	4,997	2,296	3,781	674	2,234	1,874	769	2,091	3,931	21,729
Giza	1,753	3,115	1,689	2,305	463	1,286	1,163	465	1,386	1,708	15,333
Qalyubeya	1,601	2,408	1,342	1,452	268	1,045	1,044	336	1,017	625	11,239
Egypt	63,707	26,845	18,229	21,718	4,114	13,573	19,699	5,455	9,846	21,254	204,438

Source: CAPMAS,

The 2011 political turmoil sent the economy into a recession and unemployment, which was already high, rose sharply, particularly among the youth. There has been a recent partial recovery and 352,000 new jobs were created since in the second quarter of 2014, an increase of 1.5% of which the bulk is held by males.

As of the second quarter of 2015, the Egyptian labor force stood at 27.8 million, an increase of 212,000 persons over 2014, while total unemployment recorded a decline of 141,000 standing at 12.7%. As Egypt struggles to recover from this downturn and restore its foreign exchange economy to its former level, it is also deeply aware of the need for urgent employment generation across all skill levels. The most recent figures point to the improvement achieved through the measures implemented to date, as well as the challenges still to be faced.

Health

Health and education form the basis of the human development index, an important indicator for the global competitiveness of cities. A healthy and skilled or well-educated workforce is critical to sustaining and strengthening economic development.

Although Egypt's HDI ranking declined slightly between 2008 and 2013 (dropping four places in rank to 110th out of 187 countries), the GCR offers the highest level of services in the country, more than twice that of other regions.¹¹ While service indicators are lower than those in the West, the health sector is competitive on a regional level, even when compared to the oil producing countries. The sector gains its strength from: university facilities and teaching hospitals; the large pool of specialists; the high level of professional skills among doctors; sustained improvements in nursing care; expansion of

¹¹ Egypt's 2013 score of 0.682 categorized the country as having "Medium human development" (UNDP 2014)

research and training activities; and a solid pharmaceutical industry, which has expanded into the growing market for medicinal herbs, dietary supplements, and homeopathic medicines.

Adverse effects on the health of residents in Greater Cairo are caused by air pollution, solid waste accumulation, and water pollution in peri-urban areas. Efforts are underway to foster the growth of medical tourism and develop manufacturing of medical equipment. A large medical complex has emerged in the 6th of October and is expanding through public and private investments in modern hospitals and associated medical facilities and infrastructure. The extension of the subway to the 6th of October and the improvement of the road network and bus service to this rapidly growing satellite town will make this complex more accessible to limited income households.

Projected population growth will require a renewed effort to expand primary care, and mother and child care facilities in informal settlements, where these services lag. Securing land to build clinics within the dense fabric of the settlements is a challenge that the governorates are tackling with assistance from the central government, donors, and NGOs.

Education

The population of the GCR has an illiteracy rate of 15.9%, 10% lower than the national average; 20.5% of females are illiterate, which is substantially lower than at the national level (65.4% as estimated for 2015) (CIA World Factbook 2015). It is the traditional center of education and culture in Egypt. When the colonial administration curtailed education by closing the public secondary school in Alexandria, the one in Cairo became the lone operating secondary school in the country. Private donations of land and funds allowed the establishment of an Egyptian University, which became Cairo University, Egypt's largest and highest ranked university, located in Giza. Other public and private universities, including foreign universities, were established at later dates, of which the largest is the American University in Cairo (AUC).

The weakness of the education system lies primarily in the obsolescence of the public school system. Yet, compulsory, combined primary and intermediate level schooling has led to 100% attendance. Recent improvements to this basic level have included the introduction and rapid expansion of language schools. Foreign schools are available but too expensive for limited income households and secondary school enrollment lags at 64%. Commercial and vocational schools attract part of the target age groups, while the poorer segments enter the labor force.

Weaknesses encumber the education system and cause dissatisfaction among parents. Classes are overcrowded and ill-equipped, secondary education does not lead to living wage jobs, and higher education does not provide the skills required by today's labor market and the expansion of technology in all professional fields. Low salaries and lack of funding for research have led to the outmigration of highly qualified academics, mostly to institutions in the West.

Acting on the inequalities in service provision in education is a challenge. Lack of land in the informal areas impedes the building of badly needed new schools, which add to social

disparities. The high illiteracy rate among rural migrants in general and women in particular affects the capacity of the home to foster a learning environment and increases reliance on private tutoring by families eager to improve their children's opportunities.

Modernizing and enhancing the education system is a national priority. The expansion of the Smart Village and the creation of a new science and technology center in the 6th of October, as well as a branch of the Alexandria Library, will enable partnerships with the national and international industry and business sectors. Such partnerships tend to promote higher rates of enrollment in the universities with the twin hope of access to better-remunerated jobs or work abroad.

2.2.2 Economy

The Greater Cairo Region's unique position in Africa is the result of its strategic geographic location, its accumulation of economic, political, cultural, and administrative strengths, which gives it a special position in the Arab World, connectedness with key cities across Africa, and a nodal position in the network of global cities.

The region is the largest industrial concentration in the country, providing jobs for 25% of its active labor force and 38% of the workers employed in licensed industrial establishments. The increasing economic importance of the new towns is reinforced by the movement to the new towns of establishments with large footprints, those seeking proximity to gateways (airports and highway corridors), as well as enterprises desirous to escape the congestion of Cairo and Giza cities.

The economic downturn that started in 2008 was aggravated by the 2011 turmoil and its aftermath in 2012 and 2013. The regional economic position of Cairo was affected as multinational and other corporations moved, permanently or temporarily, primarily to Dubai. Cairo's ranking as a globally competitive city declined sharply but such rankings looked at Cairo governorate rather than the GCR and therefore also reflected the intra-GCR movement of economic activities, the spread of informal and chaotic urbanization, the traffic congestion that affected the overall quality of the urban environment, and heightened economic disparities and inequities. The Economist Research Unit Global City Competitiveness Index ranked Cairo 113 out of 120 global cities in 2012. Cairo ranked fourth out of the seven African global cities, after Johannesburg, Cape Town, and Durban. A projection of 2025 Competitiveness by the same group projected that Cairo would jump to 106 out of 120, significantly improving its score from 2012.

Manufacturing

The GCR concentrates 40% of Egypt's manufacturing enterprises, of which 23% are in Cairo Governorate. According to the most recent available surveys, the total number of registered industrial establishments stood at 13,482 of which only 3% were in large factories employing upward of 500 workers. Fifty-six percent of the 76,297 hectares of industrial use are in Giza Governorate and 25% in Cairo Governorate. According to the New Urban Communities Authority's website, nearly 9,000 factories operate in the satellite cities – 15th of May, Badr, New-Cairo, 6th of October, Al-Shorouk, Sheikh

Zayed, and El Obour – providing jobs for over 750,000 workers (NUCA 2015). In addition, there is a free trade zone in Nasr City in Cairo, in proximity to the international airport. The General Organization for Investment and Free Zones and the Industrial Development Agency plan to attract an additional 1,300 new factories, providing 56,000 jobs in the new towns.

Leading manufacturing subsectors are coal and petroleum (18.7%); chemicals and pharmaceutical (17.2%); metal products (11.4%); and automotive and tools (10.5%). Leading subsectors in terms of employment are those consisting of small establishments, namely food and beverage products (12.3%); non-metal products (10.8%); rubber products, including shoes (6.8%); and apparel and tanning (5.6%).

The attractiveness of Cairo to private investors stems from its central location as the anchor of the national transport network and the size of its domestic market. Manufacturing assets in the GCR accounted for 52.6% of the national total (with the public sector contributing 72.9% and the private sector 44.3%). They generate 93.7% of the value added by the manufacturing sector, of which 87.6% is produced in Cairo Governorate.

While the listed establishments produce 83.8% of the locally generated GDP, these establishments cover 57.4% of the employment reflecting the large number of informal, small and microenterprises, and workshops dispersed throughout the urban agglomeration.

Table 4: Structure of the Manufacturing Sector

	Production			Employed/Salaried					
	Public	Private	Total	Public Sector		Private Sector		Total	
	Sector	Sector		Employed	Salaried	Employed	Salaried	Employed	Salaried
Cairo Governorate	50.5%	41.4%	48.4%	36.8%	65.2%	59.6%	44.9%	46.8%	53.3%
Giza Governorate	34.4%	19.1%	30.7%	35.2%	17.0%	20.5%	34.3%	28.7%	27.2%
Qalyubeya Governorate	15.1%	39.5%	20.9%	28.0%	17.7%	19.9%	20.8%	24.5%	19.5%
TOTAL GCR	100%	100%	100%	100%	100%	100%	100%	100%	100%
GCR as % of national	27.1%	33.7%	28.4%	45.8%	43.7%	39.2%	50.3%	55.8%	47.4%

(Data from GOPP, 2012)

Half of the GCR factories are located in the new towns. The two preferred locations are 10th of Ramadan, located just outside of Greater Cairo, and 6th of October, west of Cairo on the main transportation axis to Alexandria. In total, the GCR new towns account for approximately 35% of the existing factory establishments in Egypt's New Towns (NUCA 2015).

Table 5: Industrial Establishments and Jobs in the New Towns

	Establishments	Jobs
Badr	496	11,856
New Cairo	71	N/A
15th of May	119	11,960
El Obour	1,042	59,000
6th of October	1,574	94,427
Al-Shorouk	N/A	N/A
Sheikh Zayed	N/A	N/A

Source: NUCA 2015. (Based on New Towns for which statistics are available).

The older factories, in Central Cairo, Helwan and Qalyubeya, or the newer ones that were developed in informal areas, tend to be polluting and it has proved difficult, costly, or practically impossible to retrofit them with anti-polluting devices. Within Cairo Governorate there are 350 older factories and 130 newer ones in informal areas: 1,570 and 126 in Giza; and 227 and 1,533 in Qalyubeya, respectively. The current policy is to relocate them outside the urbanized areas to new industrial zones to the east and west in the desert.

Trade

The Greater Cairo Region is Egypt's trade hub. In terms of sheer consumption, the GCR is the largest commercial market in the Middle East for wholesale and retail trade. Nationally, it is also the one that concentrates the most affluent consumers and draws customers from other parts of the country for seasonal shopping and life cycle events.

The sector contains over 80,000 smaller retailers and employed 16% of the workforce in the region in 2008, second only to manufacturing (GOPP 2012). However, the retail area per inhabitant in Greater Cairo remains much lower than international standards reflecting the small size of commercial establishments, the bulk of which employs between one and three people, including the owner. Most transactions in Greater Cairo are strictly on a cash basis, even in the increasing number and more controlled environments of supermarkets and malls that increasingly appeal to the upper middle classes.

The recently established Internal Trade Development Authority at the ministerial level, as well as national and governorate Chambers of Commerce have articulated a sectoral strategy that seeks to improve and enforce standards of consumer goods and attract foreign and domestic investment. Proposed measures to strengthen the sector include offering sites to developers of modern trade facilities and malls. All of the proposed sites are located in the new towns. Furthermore, in an effort to provide resources for the improvement of the business environment, the Ministry of Finance has proposed a Value Added Tax (VAT), which may reduce the tax burden on lower income households (Ministry of Finance 2015).

Finance and banking

The domestic financial sector suffered only minor repercussions from the 2008 international financial crisis as its prior restructuring had eliminated weaker banks, limited mortgage activity, and achieved a high liquidity, with deposits exceeding loans by a factor of two. Banks have established branches with ATMs in every district of the GCR. However, less than 15% of the residents have bank accounts. Furthermore, families are reluctant to contract loans either because of the fear of encumbering real estate assets with liens or lack of assets and guarantors. Nevertheless, banking services are expanding and branches of foreign banks and private and joint stock banks have been established (AfDB 2009).

The economic shocks suffered in 2011 and its aftermath has affected the banking sector and diminished foreign exchange earnings. The financial sector is set to revive its growth. The pre-2011 weaknesses have been magnified by the shocks of the turmoil. Investors, who are major clients for the banks, still face cumbersome bureaucratic procedures to obtain investment licenses, acquire land, register property transactions, and have building permits issued, among other hurdles. These impediments result in increasing the cost of doing business and breeding corruption, which undermines Egypt's competitiveness and adversely affects the economic ranking of the GCR.

The weakness of the financial sector is reflected in the small size of the stock market and the limited volume of transactions. These shocks and stresses caused by the turmoil caused periodic closures from 2011 – 2013 of the exchange and wide fluctuations. The lagging development of the financial sector points to the potential opportunities for the expansion of services and specialized institutions in the GCR, some of which would be attractive to multinational companies.

For individual and household banking, the potential of mobile transfers has yet to be explored, though they could create an important economic stimulant, particularly given significant remittances Egypt receives. Remittances of Egyptians working abroad, including contributions to the Egypt Fund, have partially made up for the shortfall in tourism revenues caused by the post 2011 instability.

Medium, Small and Micro Enterprise and the Informal Economy

It is estimated that approximately 85% of micro, small, and medium enterprises (M/SMEs) operating in Egypt are informal (El-Rifae, 2014). In the Egyptian context, "informal" refers to the status of the business as unregistered, resulting in the government's inability to collect taxes on the economic activity generated. According to the 2006 Egyptian Labor Market Panel Survey, 15% of all non-agricultural wage-earning informal laborers are in Greater Cairo, the largest share of any urban region in Egypt (Wahba, 2009). Greater Cairo's proportion has likely increased over the past decade due to the economic turmoil caused by the political instability of the 2011-2013 period.

The informal economy of Greater Cairo is estimated to absorb over half of the labor force of the city, whose income, educational level, job stability, and regularity of salary varies widely. It manifests itself in a multitude of ways, from street vendors selling fruits and

vegetables, to rural crafts or contraband, to semi-formal businesses and workshops, often operating on the first floor of residential buildings. While 85% of the sector consists of men, there are many women laborers who also participate in the informal economy. The sector is said to be booming since the January 2011 Revolution due to the relaxed supervision and enforcement of informal.

Trade and services in Greater Cairo are dominated by micro and small enterprises, a large majority of which would classify as informal. The Central Agency for Public Mobilization and Statistics (CAPMAS) defines micro and small enterprises based on their sector and size, or number of workers employed. Micro enterprises are those that employ 1-4 workers (many of whom are members of the owner's extended family) and are the most prevalent type of enterprises across sectors. Small enterprises in trade and services are defined as that employing between 5-9 workers, while, in manufacturing and construction, a small enterprise is considered an establishment employing between 5-49 workers. It is estimated that 80% of Egypt's micro and small enterprises are informal.

The January 2011 turmoil has underscored the importance of informal sector activities. Protestors' demands for the opportunities to earn a living wage have been met with the establishment of new ministerial departments, such as the Economic Justice Unit in the Ministry of Finance that works on policies and programs to formalize and upgrade smaller enterprises. The government is committed to developing a comprehensive plan to encourage more M/SMEs to operate formally through technical assistance, the creation of an enabling environment, and by alleviating the bureaucratic and administrative complexities for both business owners and local authorities to apply for and issue permits and licenses (Ministry of Finance 2013). To register a business, entrepreneurs and business owners must currently register with the Tax Authority, Chamber of Commerce, and Commercial Registry due to the lack of a unified registry (El Hitta, 2013).

It should be noted that the economic mobility of informal sector workers and their ability to formalize has varied significantly by level of education and gender, with educated men transitioning from informal to formal labor with much greater frequency (Wahba 2009). Future policies linked to economic justice, therefore, need to take into consideration the gendered nature of the informal economy and the opportunities (or lack thereof) that it currently provides.

Tourism

Tourism has historically been a major contributor to the economy of Cairo. In 2010, the number of tourists in Greater Cairo had reached an all time high of 3.8 million, the result of a 15% annual increase since 2000. Tourism in the Greater Cairo Region centers around antiquities and ancient monuments, such as the Pyramids of Giza and the historic centre of Cairo, two of Egypt's seven registered UNESCO World Heritage Sites. Its share of international tourists prior to 2011 accounted for slightly more than 25% of Egypt's total visitors (GOPP 2012; CAPMAS 2015).

By 2032, Greater Cairo aims to host 8.85 million tourists annually. This tourism potential is estimated to require 100,000 hotel rooms, compared to the 61,400 rooms in the GCR as of 2012 (GOPP 2012). These estimates, however, were based on projections made before

the events of January 2011 and subsequent turmoil. Nationally, the Antiquities Ministry's revenue in 2014, largely dependent on monuments and archaeological sites, represented only 4% of 2010 levels (a reported EGP 125 million compared to EGP 3 billion) (Kingsley 2014). The instability and deteriorated security situation deterred visitors from Europe, the country's largest visitor group. The number of tourists to Egypt from all regions of the world dropped by 35% in 2013, compared to 2010 levels (CAPMAS 2015).

To recover from this severe downturn, the Greater Cairo Region will need to leverage its strengths, such as its concentration of elements of historic and civilization heritage and its local and international transportation connections, which is additionally attractive for conference tourism (GOPP 2012). In this sense, restoration and revitalization of historic heritage sites will be a critical priority. Opportunities also exist to diversify Greater Cairo's tourism offers in terms of the types of tourism and tourists the region can attract. Opportunities exist and are being explored to diversify the hotel room supply and expand different sectors of tourism such as environmental tourism.

2.3 Governance and administrative structure

As is the case in most other developing countries, ministries and central authorities are deeply involved in the management of capital cities. Three different national ministries are involved in the formulation of urban policies in the GCR:

- The General Organization for Physical Planning (GOPP) in the Ministry of Housing, Utilities and Urban Development is the entity responsible for the development of national urban spatial policies. Since it was first established as the Greater Cairo Planning Commission in 1966, the GOPP has grown in importance and its responsibilities have steadily expanded. It has given priority to the preparation of plans and large projects to shape the development of the Greater Cairo Region and the regeneration of strategically located sites.
- The Ministry of Housing, Utilities and Urban Development is also responsible for government housing programs.
- The Ministry of Agriculture and Land Reclamation issues laws and decrees relating to agricultural land, including regulations governing its conversion to other uses. Because agricultural land is predominately in private ownership, the Ministry has given special attention to the reclamation of desert land.

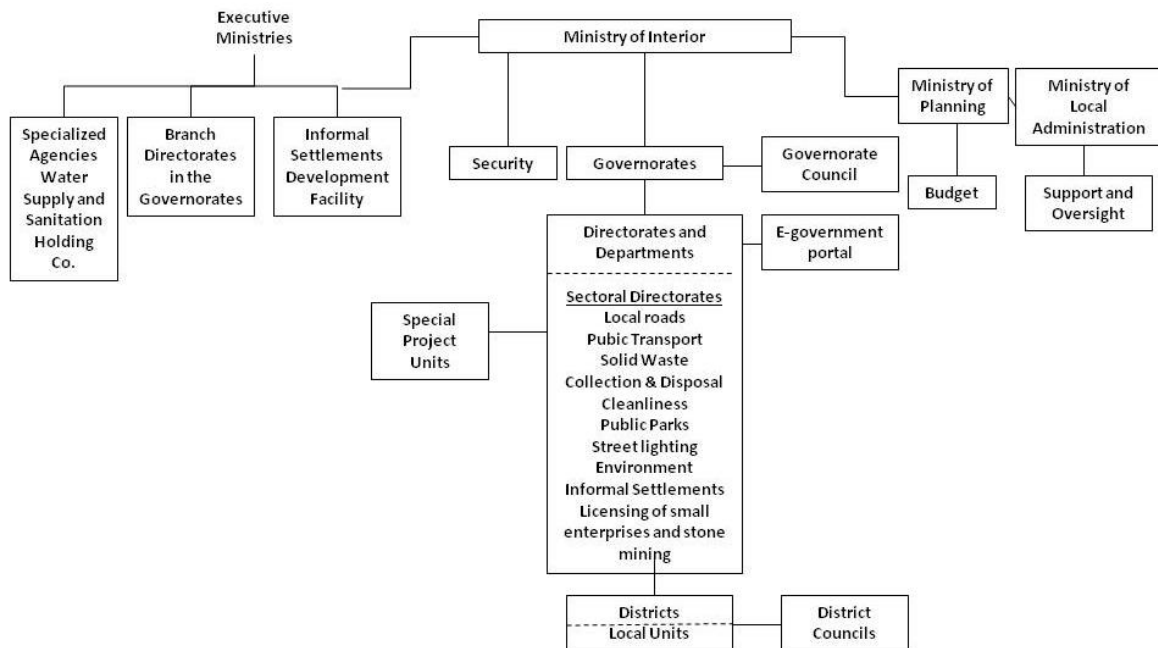
The management of existing urban centers is the responsibility of local authorities, namely the governorates and municipal administrations. They control urbanization within their legal boundaries and can, in the absence of zoning regulations, move industries to new, better serviced, and more appropriately located zones. Part of their responsibility is to deal with informal settlements within their respective jurisdictions, slum upgrading, and the regeneration of dilapidated areas.

The continued proliferation of informal settlements and a lack of technical and financial resources at the local level led to the creation of the Informal Settlement Development Facility (ISDF) in 2009 and, in June 2014, of a new Ministry of Urban Regeneration and Informal Settlements (MURIS) that incorporated ISDF. The new Ministry worked closely with the Ministry of Local Development, the Governorates and the municipalities to address key urban issues facing localities and formulate new approaches to the management of the informal urbanization that accounts for the bulk of housing starts before being absorbed into the Ministry of Housing, Utilities & Urban Development in September 2015.

Several other Ministries are directly or indirectly involved in implementing national urban policies. The Ministry of Social Solidarity, established in 2005, absorbed the functions of the former Ministry of Social Affairs. It manages social assistance programs for vulnerable populations. It also registers non-governmental organizations, charitable organizations, and civil society associations. Listing with the Ministry is a precondition for NGOs to operate legally and participate in the review and implementation of urban plans and projects.

The Ministry of the Environment, established in 1997, focuses on the conservation of natural resources and the development of renewable energy. It undertakes studies to assess the anticipated impacts of climate change. However the responsibility for the management of Egypt’s scarce water resources rests with the Ministry of Water Resources and Irrigation.

Figure 6: Institutional Framework for Urban Management in the Greater Cairo Region and its Three Constituent Governorates



The Ministry of Industry, Trade and Small Industries has focused on the diversification of manufacturing activities and the promotion of industrial zones and free trade zones to attract foreign investment and foster exports. The Ministry of Planning, Follow Up and

Administration prepares Egypt's five-year development plans and the annual budget allocations. It has the difficult task of negotiating with the different ministries the funding requests that can be included in the budget given available resources and national priorities. The priority placed on employment generation and foreign exchange earnings has led to prioritizing large-scale public projects, manufacturing, tourism, and high technology.

Many executive ministries control large landholdings in the governorates and are therefore important actors and stakeholders in the GCR.

While the local administration law gives the governor authority over the carrying out of all public functions in the urbanized area of the governorate, many ministries and central agencies are involved in local planning and management in the large urban areas spanning administrative boundaries. In the GCR governorates, for example, traffic management involves the security directorates under the Ministry of Interior in the Cairo and Giza Governorates, the General Organization of Roads and Bridges under the Ministry of Transport, and the Organization for Public Transport under the Cairo Governorate. In this context, the legal role of local councils focuses more on monitoring and oversight of those functions that are the responsibility of the local authority than on policy and plan formulation. However, they have to approve local "detailed" plans and projects (JICA - GOPP 2008).

Even when they are located within the jurisdictional boundaries of the governorate, the New Towns are managed by the New Urban Communities Authority, as is the case for New Cairo and 15th of May.

Budgets for projects are allocated to the responsible ministries rather than the governorates and implemented by the branch directorates of these ministries at the governorate level in cooperation with the governorate departments. Special governorate and district units handle cross-sectoral programs including improvement of the urban environment, and upgrading and development projects in informal settlements. Donors sponsoring projects at the community level usually resort to the creation of implementation units attached to the governorate.

Two non-executive ministries are more involved than others with the governorates and their constituent towns and districts:

- The Ministry of Administrative Development has programs to enhance the effectiveness of governance, improve the performance of government entities providing public service, and promote the use of e-government portals; and
- The Ministry of Local Administration, whose mandate is to support local authorities in discharging the responsibilities devolved to them and advances the implementation of decentralization laws;

This complex governance system requires a capacity for horizontal coordination at all levels of governance, which does not currently exist. This leads to overlapping mandates and cumbersome bureaucratic procedures that increase the cost of business transactions and foster corruption. The internal policies of local councils and the limited avenues for popular participation in the planning and management of their localities add to a lack of

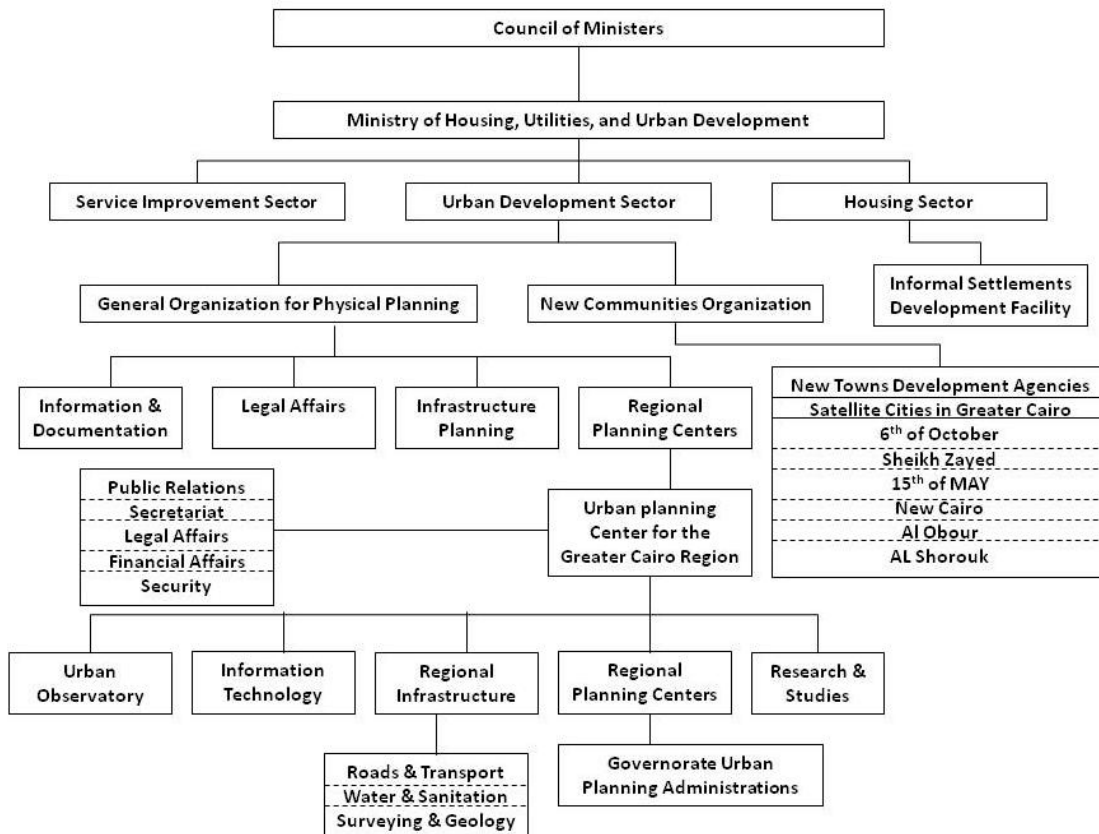
transparency in local decision making and the feeling of increasing inequities. The multiplicity of commissions and committees bringing together representatives from different public authorities and experts to propose actions on specific issues are useful, but these efforts are ad hoc and cannot solve the systemic coordination issue.

2.3.1 Planning and Management

In 2008, national planning and development regulation laws were amended and incorporated in a single law – Law 119/2008 and its executive regulations. This law expands the role of local authorities in the planning and management of their territory and mandates the active involvement of the elected governorate and city councils, as well as the consultation of stakeholders.

The General Organization for Physical Planning (GOPP) remains the entity responsible for national and regional planning. The regions are defined for economic development purposes and their multi-sectoral potentialities. They are not administrative jurisdictions and do not have a governance structure. However, the plans developed for the regions provide the framework for the master plans and the detailed plans that are developed by the governorates and the larger cities. GOPP may prepare plans on the behalf of governorates or provide them with the technical support needed to prepare them. Consultants are usually engaged for these purposes.

Figure 7: Institutional Framework for Planning in the Greater Cairo Region and its Three Constituent Governorates



Regional development scenarios and structure plans are particularly important in the case of metropolitan urban regions since they determine the alignment of development corridors anchored by the metropolis, transportation networks (highways and subways), water supply and sewerage systems, and energy grids, as well as the siting of regional facilities including ports and airports. The Regional Planning Directorate under GOPP coordinates with the urban planning departments of the governorates of each region: Cairo, Giza, and Qalyubeya in the case of Greater Cairo.

Plans for Priority Regional Projects have been prepared by GOPP for key sites in all three governorates. Similarly, there is an action plan to deal with settlements in hazardous sites, starting with those in the highest level risk areas according to degree of risk and severity of social problems (drugs, gangs, and other illicit activities) as determined by ISDF's survey of 2009. Urban extensions build upon the planned development of the major east-west corridors from Cairo to the Suez Canal cities in the east, including the proposed new administrative, financial, and diplomatic center.

In Giza, this development scenario entails the extension of the 6th of October Corridor in a southwest direction to Fayoum. Two major projects are planned – the first in Monib, where the middle ring road crosses the Nile; and the second in the tourism zone near the pyramids plateau. Dealing with the encroachments on this World Heritage Site is a national priority, as well as a priority for the Giza Governorate and the Ministry of Antiquities. The new museum of Egyptian Civilization under construction below the plateau near the Cairo/Alexandria desert highway will further enhance the already high value of land in this prime tourism location.

The emphasis placed on employment generation and the development of the urban economy, and on attracting foreign and domestic investment in productive activities is reflected in the planned development of diverse economic projects along the development corridors, mostly light industry, including pharmaceuticals and high technology.

2.3.2 Local Finance

Within the centralized Egyptian administrative structure, local revenue consists primarily of transfers from the Ministry of Finance, including the redistribution of locally collected fees and fines. Approximately 15% of the national budget is allocated to the governorates that, in turn, reallocate part of their distribution to lower units of government.

Local finances were adversely affected by the civil unrest and turmoil. Between fiscal year 2006/07 and fiscal year 2013/14, expenditures increased by close to 300% while local revenues grew by only 50%. Concurrently, the share of local expenditures covered by local revenue declined from 14% to 7.4% as local authorities were unable to collect local fees, fines and licenses, and the reliance of local authorities on central transfers to cover their expenditures rose from 86% in 2006/07 to 92.8% in 2014, severely constraining their ability to manage urban development. The local share of national public expenditures remained around 15% (Ministry of Finance 2007, Ministry of Finance 2014).

2.4 Challenges facing the Greater Cairo Region

In spite of considerable progress in recent year, the GCR remains the magnet for rural-urban migrants who can only find affordable housing in older districts or in the informal settlements, once located on the periphery but by now an integrated part of the urban fabric. To draw urbanization onto the desert through development corridors, growth nodes, satellite cities, and associated new settlements requires massive capital investments in the regional infrastructure.

The future of Cairo is a key element of the *Strategic Vision for Egypt's Development 2050* formulated in 2009 by GOPP with UNDP technical assistance. It proposes to:

1. Regenerate underutilized strategically located sites including deteriorated neighborhoods and dilapidated older areas through large scale urban projects that enable land value capture for the Governorate.
2. Address the problems of servicing informal areas most of which, particularly in Giza, have densified with buildings over 12 stories in height and quasi-total land coverage.
3. Decongest Cairo by moving the Ministries and central agencies to a new administrative district between the two ring roads in the desert to the South East of New Cairo.

Its implementation was delayed by the 2011 turmoil that sent the economy on a recession path, aggravated by mismanagement of the effects of the economic crisis as they reverberated from one sector to another in 2012. Unemployment, which was already high, rose sharply particularly among the youth. As Egypt struggles to recover from this downturn and restore its foreign exchange earnings to its former level, it is also deeply aware of the need for urgent employment generation across all skill levels.

2.4.1 Employment generation

The most recent figures point to the improvement achieved through the measures implemented to date, as well as the challenges still to be faced. As of the second quarter of 2015, the Egyptian labor force stood at 27.8 million, an increase of 212,000 persons over 2014 – a year over year rate of 0.8%.

Labor force participation reached 45.9% of the population 15 years and older, 69.7% for males and 21.4% for females with the highest rates recorded among the 25-49 age group (60%) and university graduates (78.2). Jobs for 352,000 persons were created since the second quarter of 2014, an increase of 1.5% of which the bulk is held by males. Among the employed, 64.4% are salaried, 11.4% business owners, 12.7% self-employed without any employees, and 11.6% unpaid family workers. Over the same period, total unemployment recorded a decline of 141,000 standing at 12.7%. Unemployment rates are higher in urban areas reaching 14.9%. Urban unemployment rates disproportionately

affect youths (38.2%) and females (24.1% vs. 9.3% for males); and all skill levels are affected.

Table 6: Youth Unemployment in Egypt

Age Bracket	% of Age Group Unemployed
15-29	23.6%
20-24	35.6%
25-29	18.5%

Source: CAPMAS, 2015

2.4.2 Land and housing

Land, housing and employment issues dominate planning concerns in the MENA region and are particularly acute in the GCR. Decades of inadequate management and recent economic and political trends have contributed to a high level of segmentation in both formal and informal housing and land markets.

Experts have pointed out the increasing economic disparities in the country. The erosion of housing affordability has been aggravated by the high cost of food and energy and the skyrocketing value of urban land. However, no accurate measure of disparities has been computed, though a study by UN-Habitat in 2009 reported an increase based on a sample survey of families. The Family Budget Surveys, undertaken by CAPMAS used to be done every ten years until 2004 and now will be conducted at five year intervals. They were designed to document household expenditures on food and the consumption for a broad range of staples. This information is important to the Ministry of Supply and Internal Trade, which has to ensure availability and affordability of foodstuffs, particularly the subsidized basic items.

The surveys look at both urban and rural households and their different consumption patterns. Because of its concern with affordability, the lower income bracket is very detailed, while the brackets above the average are broadly aggregated. This distortion reduces the data's usefulness as an indicator of income disparity. While the survey includes expenditures on housing, the statistic is underestimated due to the cumulative impacts of rent control in the older housing stock and the reluctance of families living in informal areas to disclose information out of concern over building violations, illegal connections to utilities, meter tampering, non-payments of user fees, and other infractions.

The combination of the rising price of housing and the lax enforcement of development regulations has created the vast peri-urban informally developed housing and associated economic activities that provided an alternative to the pent up demand for housing prior to 2010 and after the political turmoil in 2011-2012. As a result, local authorities today are confronted with the challenge of having to re-establish some order in a situation that has been allowed to get out of hand in the politically sensitive context of the post 2011 period. Given that this unplanned urbanization accounts for 60% of the housing stock, the magnitude of the challenge far exceeds the resources and capacities of local authorities.

Is it indicative of the situation that the sources of statistical data on land and housing listed in the reference section of the Strategic Vision and Plan date from 2005 to 2008 and are based on IKONOS satellite data (UTM projection) as well as remote sensing images. Identified land uses were classified into eight categories, for which areas were computed and heights of buildings estimated. During this period, urbanization spread over 12,600 hectares with a loss of 2,100 hectares of agricultural land, while 13,100 hectares of desert land were used for corridor development and designated new towns sites.

In all of Egypt's larger cities, and in Cairo in particular, people complain of the shortage of housing and its high cost relative to household incomes. Yet, according to the several surveys that have been undertaken, the number of housing units slightly exceeds the number of households. Furthermore, in the decade of 1986/1996 when the urbanized area of the GCR almost doubled, the average annual rate of increase of housing units in the Cairo and Giza Governorate segments of the GCR exceeded the rate of growth of the population. In the Qalyubeya segment it was the reverse, reflecting the overcrowding prevailing among lower income households.

USAID had sponsored a survey of housing demand in Greater Cairo conducted between December 2006 and January 2007, which reported that 36.8% of the dwelling units were owner-occupied and 50.4% were rented (USAID 2008). 71.1% of the privately owned units were registered of which 72.2% were bought through payments in installments. The rented units fell into two categories: the housing stock under rent control and tenant protection laws enacted in the 1952/1962 decade, which accounted for 82.3% of the rented units; and the new rental units built post the enactment of a new rent law in 1996, which removed controls from newly constructed units. However, the formal rental units that have built since 1996 account for only 8.7% of the rental stock because of widespread concern among investors over the possibility of reinstatement of the controls. In the formal market these are furnished flats rented to transient visitors. In the informal housing market, rentals are common in self-developed housing and renters usually share a social bond with the owners, such as kin in extended families or common village of origin. Regulations are ignored and rents for a two room dwelling is much higher than the rents paid for five or more room apartments in the older luxury buildings, which have been occupied for decades by higher income households benefitting from tenant protection laws.

The New Urban Communities Authority (NUCA) reported that through March 2007, 614,360 units had been built in the New Towns within the GCR, of which 243,804 were developed by real estate development companies, 98,915 by individuals who purchased completed units mostly through housing cooperatives or with financing from the Real Estate Bank and the Urban Development Bank, and 172,726 by NUCA itself.

GOPP studies estimate that close to 3.7 million new units would need to be developed by 2032 to meet demand, based on population projections and an average household size of four persons. This demand estimate is based on the continuation of current demographic trends. The urban scenario assumes that 50% of the additional units will be constructed in the urban metropolitan agglomeration, 30% in the new satellite cities and their extensions, and the remaining 20% in the smaller towns and urbanizing villages within the GCR, which is a reasonable assumption. The Ministry of Planning has proposed that

70% of the production should be directed at limited income families, 25% at middle-income families, and 5% at higher income families. The two scenarios entail that about 60% of the production will be in the informal areas and unplanned new settlements.

The scenarios have been determined by an analysis of what is feasible and what will be needed to realistically meet demand. Implementation is contingent upon a stable security situation that allows for economic recovery. The feasibility for affordable housing production to absorb some of the lower income demand requires an investment environment that enables and incentivizes the private sector to play a major role in affordable housing provision.

There has been a lot of discussion regarding the high rate of vacant units in the GCR, which hovers around 30%. The GOPP has developed projections showing the impacted of reducing this rate to 20% and 10%, though the statistical projections do not address the legal reforms needed in rent controls and tenant protection laws to enable the desired change in household investment strategies to occur.

High Land Values

Sustained high land values over the past four decades is primarily due to a combination of seven factors:

1. The lack of public investment in infrastructure between the late 1950s and the early 1980s while the population tripled and the urban area doubled in size;
2. The reliance in the past three decades on specialized executive agencies to drive the development of key sectors, including housing, tourism, manufacturing, new urban communities, agriculture and irrigation. Vast tracts of publically owned land outside the jurisdictional boundaries of cities, towns, and villages were allocated to these agencies, of which over 2 million hectares have not yet been developed. A drawback of the system is the adverse impact on the supply of land. The scarcity of developable land has contributed to the unplanned conversion of private agricultural holdings to informal settlements in peri-urban areas, most notably in the northern and western sectors of the GCR;
3. Obsolete subdivision regulations dating back to the 1940s mandated sewerage of all subdivisions by the developer and low land coverage ratios by house builders. With lagging sewerage systems and high land values, these conditions could not be economically met;
4. The growth of remittance-driven investment in real estate, the primary source of ensuring the appreciation of invested savings. Informal subdivisions without a planned layout for the provision of transport and services and the rapid densification of informal settlements lacking adequate infrastructure makes it difficult to provide the services needed to support these densities without some displacement, due to the absence of any open spaces;
5. The emergence of groupings of contractors, brokers, and corrupt district permitting and inspectional officials have contributed notably to the spread of unplanned urbanization, but also to the illegal occupancy of public land on the

desert edge of the region, where sites along the eastern plateau are undevelopable with many in geologically hazardous locations. Land in the latter locations are sold or rented to poorer populations and local authorities have to face this de facto situation;

6. The impact of the 2011-2013 turmoil, which led to the collapse of all forms of regulatory controls by local authorities allowed the accelerated expansion of unplanned urbanization and the multiplication of violations, as well as a noticeable increase in random urban violence. Restoring and maintaining security and order has become an overriding concern given the ongoing conflicts in the MENA region. Stability is viewed as the foundation of economic development since investors demand predictability even in the short-term perspective of most local and MENA investors; and
7. Incomplete property tax reform highlighted in the recent the real estate tax law whose application ultimately failed due to cumbersome assessment procedures and its ambiguous objectives.

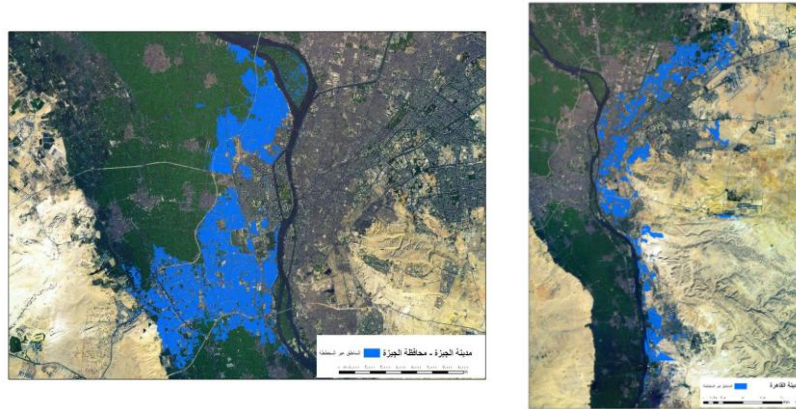
2.4.3 Unplanned urban settlements

It is estimated that unplanned areas account for 40% of the area of the Greater Cairo Region (GOPP 2012). Unplanned informal settlements threaten the GRC's ability to equitably and sustainably provide basic services and affordable housing for their populations.

The two categories of informal urbanization differ substantially in their legal status and morphology and in the challenges they present to local authorities. In the informal settlements on agricultural land to the north and west, land tenure is legal, with owners having bought a share of a field equivalent to their parcel. Although the title is rarely registered beyond a primary level that is considered as a first step towards full registration, it can be transferred and inherited. The property is, however, encumbered by three code violations:

1. The illegal conversion of arable land to urban use without a permit from the Ministry of Agriculture;
2. The parceling of land holdings in violation of subdivision regulations stipulated in the legal framework (currently Law 119 of 2008);
3. Construction without a building permit issued by the local authority.

Figure 8: Unplanned Settlements in Giza (left) and Cairo (right)



Source: GOPP and Ministry of Housing

Informal settlements in hazardous sites and unplanned areas were surveyed by the Informal Settlements Development Facility (ISDF) in 2009. There are 120 settlements in hazardous locations in the GCR encompassing 63,349 housing units covering an area of close to 500 hectares. Not surprisingly, higher densities are recorded in these settlements on agricultural land. ISDF also classified the sites according to degree of risk. Accordingly, there are 16 settlements in the highest risk category in the GCR, almost all of which stretch along the eastern desert edge of Cairo Governorate. The inhabitants are mostly rural migrants. However, the sites have geological faults, which put settlers at risk of landslides, as has occurred in 2009.

**Figure 9: Location of Level One Unsafe Areas in Cairo Governorate (Left);
Landslide in the Mokattam Hills (Right)**



Source: GOPP & ISDF 2010

There are 83 sites in the second level of risk, due to structural unsoundness of buildings from deterioration and illegal heightening, which renders them at risk of partial or total

collapse. Over 39,671 inhabitants live in these buildings. The 35 settlements in Cairo Governorate are much larger than the 25 in Giza Governorate.

Sites classified in the third rank among areas at risk are located in unsuitable locations under the high-tension power grid or in close proximity to polluting heavy industries like cement and metal works and lime and pottery kilns. The 11 settlements in Cairo and one in Qalyubeya contained 15,167 dwellings. Settlements classified in the fourth rank are areas where squatters have settled on government owned land. National policies encourage regularization of such settlements if the buildings are sound.

2.4.4 Environmental challenges

Except for solid waste collection and street sweeping, the legal framework for the management of urban environmental issues dates back to the creation of the Ministry of the Environment (Law 4/1994). Responsibility for environmental management is divided among several central and local authorities: the regulation of automotive emissions was included in the Transportation Law 121/2008, administered by the Ministry of Interior; the Ministry of Local Development oversees the implementation of the cleanliness law; the Ministry of Housing, Utilities, and Urban Development is directly involved in environmental management through the GOPP and the national organization for potable water and sanitation. In many ways, the multi-sectoral character of urban environmental management entails that no less than 14 ministries are involved with environmental issues, in addition to local authorities and six national level unions of NGOs.

All governorates have instituted a Higher Committees for the Environment and there are environmental departments at the county (*markaz*), city, and district levels. The sanitation, cleanliness, and beautification organizations also carry environmental mandates. Civil society is very active in the environmental field with over 800 active associations. Private sector companies involved in waste management as outsourced contractors include about eight joint venture companies with European firms in addition to the smaller recycling activities of the traditional garbage collectors (*zabaleen*) operating in specific geographic areas.

Greater Cairo has a specialized agency for environmental management covering the three governorates, with their counties, cities, and districts, as well as the new towns located within the GCR's boundaries. There is also a directorate for the environment and water bodies policing industrial pollution. Given the rate of expansion of the urbanized area, industrial pollution has become a major concern, as polluting uses once located outside the city have now been engulfed by urban growth. Close to 2,000 medium and small activities, including metal-smithing and casting, stone cutting, marble works, coal production, and brick and pottery kilns are scattered along the north-south axis and in the older districts. The metal workshops cluster in Cairo Governorate's historic center and the pottery kilns in southern Helwan district. Brick kilns are found in Giza along the Nile while Qalyubeya contains most of the coal production. National and local authorities agree on the need to relocate these polluting uses outside the urban core as budgets for compensation and new infrastructure become available.

About 55% of the larger industries are located within the industrial zones in the New Towns; of the 45% outside the planned zones, the bulk is in Qalyubeya. The government pollution control programs offer polluting industries an assisted credit loan covering 80% of the cost of pollution reduction measures and a 20% grant.

Solid waste

The GCR generates 1.5 million m²/day of solid waste that is collected and dumped in the desert in seven locations on the edges of the urbanized area. Given the size of the urbanized portions of the GCR, the garbage collected in the vast informally urbanized areas is transported to dumping stations from where it is to be removed by the local district authorities. The District undertakes this operation and the private companies are contracted for this purpose. The *zabaleen*, particularly in Giza, tend to illegally unload garbage in opportunistic locations: vacant parcels, the edges of public squares, and old irrigation ditches in informally urbanized areas. There are close to 100 areas where solid waste has accumulated illegally. This is not surprising given that the collection capacity in Cairo Governorate covers only about 68% of waste generated and 55% in both Giza and Qalyubeya.

Automotive emissions

Automobile emissions are the greatest environmental challenge in Cairo and the major contributor to its air pollution levels. Government has mandated the conversion of buses and taxis to natural gas but there are over 3 million vehicles fueled by gasoline or diesel circulating daily in the city.

A seasonal problem is also caused by the burning of rice stalks in the fall in the agricultural areas of Qalyubeya Governorate and further north in the Delta. The smoke is driven over Cairo by northeastern winds. The stalks and other agricultural waste was used in the production of cattle food by farmers but commercial products have replaced these traditional methods.

Other environmental challenges

Environmental issues are most acute in the informal settlements, particularly those located in the peri-urban areas because of their proximity to sources of pollution, including dump sites. In desert locations, some of the settlers sort the waste on their own to remove recyclable materials. In agricultural locations, the leachate from the piles of waste contaminates canals and irrigation ditches, hence agricultural produce and wells, which settlers in the most outlying areas draw upon for drinking water. The situation is aggravated by illegal sewer pipes and cesspools that contaminate ground waters and give rise to pools of polluted water on the surface soil. Several pilot projects in partnership with donors have been, or are being launched to improve the environment of specific sites.

While the lack of environmental awareness and the existing unsanitary situation impair the health of affected communities, the uncontrolled discharge of noxious industrial

waste is a serious concern. The government has acted to stop untreated discharge directly into the Nile or indirectly through the irrigation canals. In the GCR these regulations have affected 40 industries. Other actions taken to address environmental pollution in the GCR are at different stages of implementation. They include

- The modernization of the pottery workshops in the southern sector of Cairo Governorate.
- Creating a special industrial zone for the coal and coke workshops in Giza and Qalyubeya.
- The modernization of brick making to diminish CO² emissions and the designation of a site for the assembly of stone and marble workshops in the Helwan District and mandating the use of filtering systems to control dust.
- The relocation of tanneries to a site along the Ring road in the desert; the 320 tanneries in Cairo Governorate produce 75% of the leather used in Egypt.
- Enforcement of the stipulations of Law 4/1994 regarding mining industries. Stone mining activities in the desert on the outskirts of Giza and Cairo governorates have been ongoing for millenaries; about 350 mines are still active in the GCR, the largest market for construction materials. Stopping these activities within a 30 km radius of the city center is under consideration.
- Relocation of the lead workshops to the new industrial areas.

A major project has also been initiated to remove the accumulations of waste from the urbanized areas of Cairo and Giza governorates, creating green areas on the sites. Outstanding issues that will have to be addressed are:

- Increasing citizen awareness of environmental issues and increasing their participation in environmental projects.
- Improving the management of natural conservation areas, archaeological sites, parks and green areas, and the banks of the Nile, all of which have suffered from neglect and misuse during the turmoil.
- Strengthening the legal and regulatory frameworks for the regulation and enforcement of pollution measures and the improvement of environmental quality.

Sanitation

Projects to expand and improve the water supply system and expand the sewerage system have been ongoing since the late 1980s with the aim of keeping up with population growth and the spread of the urbanized area, including the New Towns, through 2030.

In a 2008 survey of citizen views regarding water and sewerage services, 56% complained of problems with the water supply: 45% mentioned frequent interruption of services, 43% complained of the low quality of the water, 34% of inadequate pressure and 7% of the high cost while 4% were concerned with leakages from the system. Similarly, of the 35% who complained about the sewerage system, 83% mentioned the

obsolescence and lack maintenance that led to the breakdown of pipes and the flooding of streets and danger to pedestrians posed by missing manhole covers. Only 17% complained about a lack of service to their area.

Issues to be addressed include:

- Delays in the treatment of industrial waste;
- Lagging extensions of sewerage networks in periurban areas;
- Revising the engineering codes and standards for water and sewerage systems;
- High water consumption rates as a result of system losses due to leakages and underpricing of water rates;
- Launching efforts to raise awareness and rationalize water use, given the limits on Egypt's share of the Nile waters due to the effects of the Ethiopian dam and climate change on the headwaters of the river.

3 LOOKING AT THE FUTURE

3.1 Ongoing Urban Programs

Cairo and Giza governorates are involved in programs to improve informal settlements and redevelop strategically located sites. Detailed projects to open up dense neighborhoods rely on creating a transportation axis on which public facilities can be located. This entails relocation of displaced residents and hence depends on the social housing budget and the number of units allocated to the governorate. The relocation of households in the higher risk areas and the regeneration of dilapidated areas are the Cairo governorate's priority programs. During the short time it was operating as an independent Ministry (June 2014 – September 2015) the Ministry of Urban Regeneration and Informal Settlements (MURIS) added to the infrastructure and public services improvement program a socio-economic development program focusing on drug use prevention, literacy, vocational training, health, schooling, savings and loans, the reduction of child hardships, and the issuance of national identity cards (a prerequisite for voting)¹². It also advocated for the involvement of NGOs and CBOs to take an active role in the improvement of the settlements, as well as re-blocking and in situ resettlement, which is not a preferred option of the governorates for well situated sites with commercial potential where the high value of land can provide a source of funds for the local authorities. Land for planned urban expansion is dependent on the regional plans prepared by the GOPP and the provision of off-site infrastructure by the responsible national entities.

The Ministry of Housing, Utilities and Urban Development has established urbanization perimeters around villages and informal settlements in the peri-urban areas. Whether these perimeters will be enforced is in question given the laxity of monitoring and the reluctance to enforce regulations. Sustained demand for land and associated rapid price escalation in the new towns has enabled the government to meet the costs of infrastructure provision to new urban extensions and derive a net profit of EGP 200/m² on the land it sells in those areas and cross-subsidize land allocated for social housing. This housing program was launched by the Ministry to attract private investment in affordable housing through the granting of subsidized land in the New Towns on condition that 50% of the parcel, purchased at 30% of the cost be used for social housing units of a maximum size of 63m² that are affordable to a family earning the average national income. Buyers receive an EGP 10,000 grant towards the down payment and access to a 30-year mortgage at a subsidized interest rate. The developer can use the other half of the parcel for market rate units but this land is purchased at just below market rate (EGP 440 as of 2009).

Most of the requests have been in 6th of October and Sheikh Zayed but many of the developers built units aimed at upper middle classes rather than social housing or the 120 m² maximum units for limited income young families. The necessity of drawing

¹² The Ministry of Urban Renewal and Informal Settlements was established through Decree No. 1252/2014.

urbanization to the desert is so urgent that 50% of the social housing budget is allocated to the New Towns.

Local authorities recognize the dominant role of formal and informal land markets and want to be an active stakeholder in the allocation of government-owned land in Greater Cairo. Current and planned urban expansion is occurring on desert land in the New Towns. Governorates rely on land swaps and urban redevelopment to use land value and its appreciation as financing tools for land assembly, local infrastructure, and attracting and partnering with private investors. In sites slated for demolition, a market in resident records allowing the relocatees access to social housing invariably develops. Furthermore, 50% of the social housing program is allocated to the governorates, together with a grant of EGP 15,000 per unit constructed and the discretion to devise their own allocation rules, but they have to provide the land for the project, despite the scarcity of developable urban land. They also have to abide by the norms defined in the social housing law for the units they offer for sale but can define standards for rental units, units for indigent families, and emergency housing. The very low standards used for the latter two categories resulted in their rapid deterioration into slums. The reorientation of the social housing policy enables governorates and New Towns agencies to define their own modalities of implementation and develop eligibility criteria and subsidization methods adapted to the needs of the target population without affecting their ability to attract private investment and expand the role of civil society. This is a difficult balance to achieve where land availability and cost remain the binding constraint.

3.2 Conclusion

The civil unrest leading to the January 25, 2011 Revolution had ripple effects throughout the Arab World as large youth cohorts demanded reforms for social justice, improved quality of life, and political transparency. It brought to light the unbalanced growing disparities in Egypt that were most evident in the country’s larger cities. People complained of the unaffordable price of food, of low wages, of a lack of employment, and wide gaps in economic opportunity. In addition, craftsmen and retailers were being squeezed out of the commercial real estate market.

Of particular significance is the challenge posed by the inability of young people, particularly educated ones, to find jobs that reflect their educational achievement.

Table 7: Urban Unemployment by Level of Education (2nd Quarter, 2015)

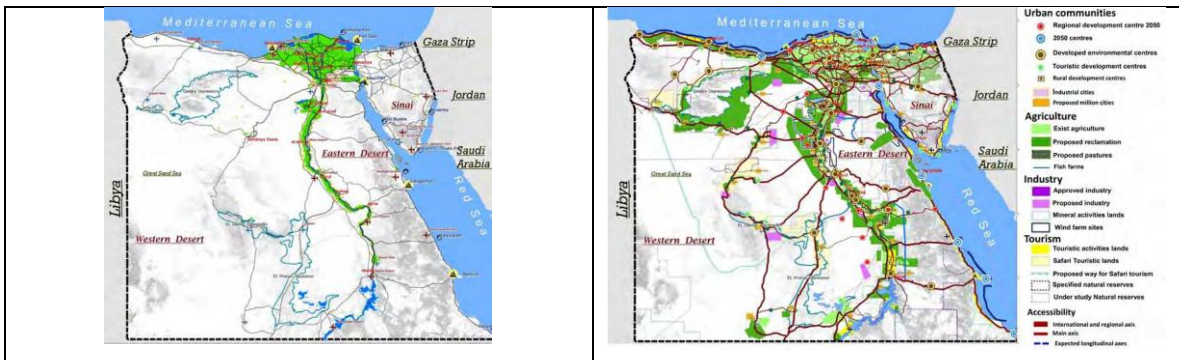
Educational level	Total	Youths (15-29)
Secondary school graduates	52.2%	35.7%
University gradates	31.0%	44.6%

The failure or dysfunction of various urban systems in the three governorates were evident in the protesters demands and has highlighted the inefficiencies of a lack of unified metropolitan governance in Greater Cairo before, during, and after the turmoil. The coordination required among local authorities and between central and local government was reduced to a situation of crisis management, from which Cairo is very slowly emerging.

As Egypt starts on the road to economic recovery, it has to address the challenge of restoring to the GCR its regional position and global competitiveness. This should be a key objective underpinning its development strategy. Undoubtedly, driving urbanization along development corridors is a necessity in an overcrowded Nile Valley; however, Cairo proper should not be neglected as the New Towns expand. Improving the quality of the living environment in Cairo and Giza cities should be a priority to restore political stability, social cohesion, and urban resilience. To achieve these twin objectives, an effective framework for the management of the GCR should be put in place. The GCR should become a single governorate to improve its ability to compete as a global city. In this scenario, it will be able to provide nodal business locations, a range of financial facilities and international banks, advanced technology centers with diverse technology services, gateways and connectedness, and quality living environments with green spaces and a broad range of housing options.

Unlike its predecessors, the recently adopted *Greater Cairo Urban Development Strategy* developed by the GOPP is an integral part of Egypt’s National Plan – 2052 that proposes to almost double the country’s developed area to 12 million *feddans* most of which in reclaimed irrigated agricultural land along the Nile valley, in the Sinai and the Western Desert. A key element of the plan is decongesting Cairo and redistributing future growth along new poles distributed along east-west corridors intersecting the north-south axis of the Nile at various latitudes. While the Greater Cairo Region will remain Egypt’s dominant urban center and its population will grow 11.6 to 33.5 million, a system of urbanized areas along the Suez Canal, in the Sinai, and in the Nile valley and Delta will become major urban magnets and the GCR’s share of the total population will fall from 24% to 21%.

Figure 10: Existing Development Patterns and Egypt 2052 Vision



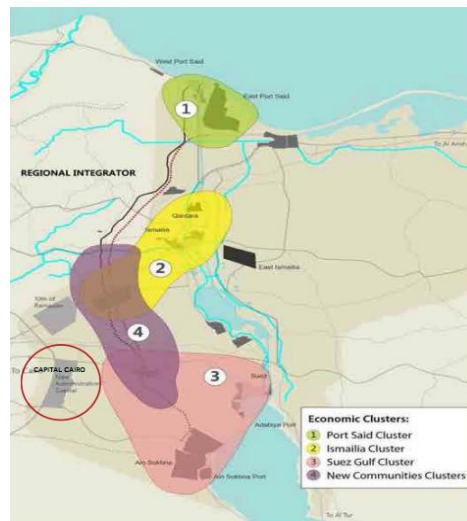
Source: GOPP, 2012

National Urban Policy has looked at a continuation of current trends, which has shown that the Nile valley cannot absorb further demographic pressure without compromising human wellbeing, the economy, ability to govern, and the environment. The higher probability of physical and socio-economic shocks and stresses heightens risks to the political, economic, social, and physical environment. Urban policies have focused on resource constraints and expansion into the desert has thus been considered national policy. Since 1982, drawing development from Cairo into the desert along corridors

linked to the strong anchors of Alexandria and the Suez Canal zone has been the one pursued by Egyptian authorities. This scenario was preferred in terms of economic viability, availability of water (including aquifers and resources for the development of agriculture), and risk reduction over an alternative scenario suggested by Dr. Farouk El-Baz that proposes to expand development westward along the roads to the oases and link the oasis cities along a new north-south axis. This scenario was deemed too onerous and risky at the time. The current plan reflects the benefits of capitalizing on existing and continued investment in the Suez Zone. This dynamic strategy has been improved incrementally and adjusted to accelerate multi-sectoral development.

The Egypt 2052 Vision consolidates the country's seven development regions into four economic clusters as part of an effort to balance development across Egypt and relieve the population and service pressures in Greater Cairo and Alexandria resulting from their economic preponderance. This reconfiguration would consolidate the Greater Cairo Region to boundaries more closely aligned to the built up area and create a similar highly urbanized region around Alexandria. The development of each region would build upon its natural and human resources and its locational advantages: an agro-industrial region in the Delta; agriculture, industry and tourism in Upper Egypt; tourism, industry and agriculture in the Sinai; and international center for logistic services in the Suez Canal; an integrate development region in Matrouh.

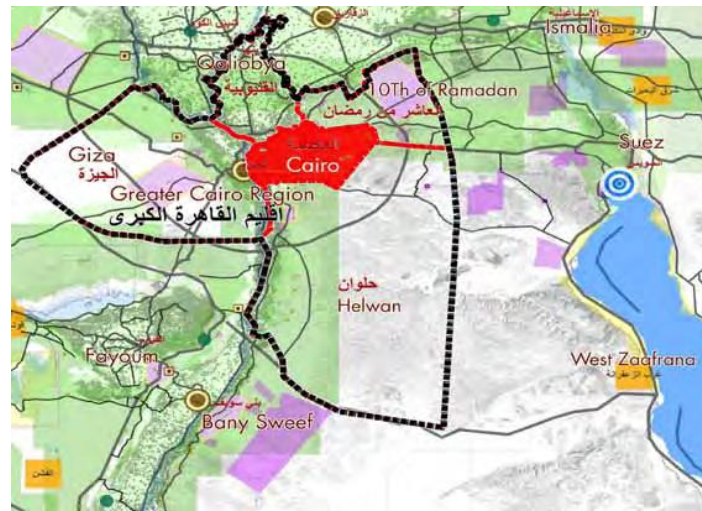
Figure 11: Egypt 2052 Vision – Economic Clusters



Source: GOPP, 2012

The Greater Cairo plan consists of an economic, social and urban development strategy for the region. It sets forth as its goals: *Social Justice*; *Economic Competitiveness* and *Environmental Friendliness* to be achieved through the major strategic interventions noted in the Overview (page 8).

Figure 12: Greater Cairo Plan, 2050

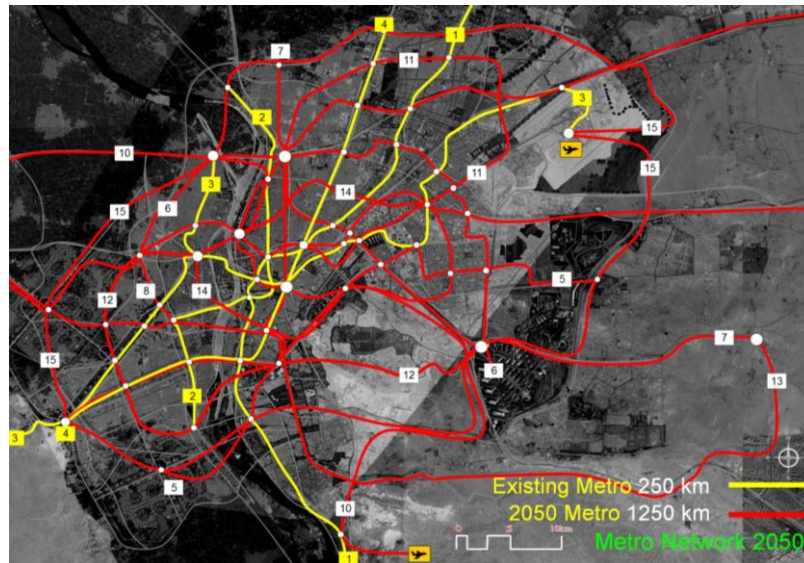


Source: GOPP, 2012

By 2032, the urbanized area is expected to more than double, from 25% to nearly 60% of the Greater Cairo Region. Key components of the strategy are:

1. Increase the population of the new urban communities from 1.2 million in 2012 to at least 8 million people living in in diverse housing typologies, including affordable housing;
2. Construct at least 3.7 million additional residential affordable housing units, including 2.3 million units for the middle-income families and 1.2 million units for the low-income families;
3. Reduce the area developed in un- and under-serviced informal areas from 22,000 feddans to 1,100;
4. Create at least 4 million job opportunities while increasing the share of business services and of the hi-tech and tourism industries;
5. Expand the role of public transportation and lessen commuting times between the new urban communities and the Downtown Area to no more than 45 minutes Figure 12;
6. Reduce greenhouse gas emission by 30% compared to 2012 emissions rates; and
7. Increase of the GC's reliance on renewable energy to 20% of consumption.

Figure 13: Existing and Proposed Metro System



Source: GOPP 2012

In addition to the massive infrastructure investments called for by the plan, it is generally agreed that its successful implementation will require significant revisions to the GCR's current system of management.

Several proposals have been made regarding redistricting by creating a separate governorate covering the Helwan/Tibbin area and splitting Giza into an urban governorate in the north and a rural one to the south. These proposals have been debated for some time and each one has some merit. Irrespective of the action taken, the key issue remains the lack of an executive authority at the GCR level that is able to act cross-sectorially in an integrated manner. The lack of regional level executive agencies is a systemic problem. The involvement of executive ministries and national entities in the planning and management of the GCR to fill this gap increase coordination problems.

Most metropolitan urban regions, from Paris to Istanbul and Sao Paulo, have established a regional executive authority either at a full level of governance or as a regional commission with a broad technical and managerial mandate. Either approach can be effective if the articulation among the three levels of governance is well defined and functions smoothly. Clearly, some issues must be addressed at the higher level where decision making regarding national urban policies and the allocation of resources are made.

Other problems can be resolved by action at the regional and local levels. Deficiencies and inefficiencies arise from imbalances in the decentralization process resulting in the asymmetrical allocation of responsibilities and resources among the different levels of governance.

The constant interaction between the GCR's pivotal role as the anchor of the national spatial strategy and the effects of national urban policies and strategies that are affecting

its fabric and reshaping its growth patterns requires mediation to arrive at a balanced, integrated development.

The mediating role of the Ministry of Local Government functions at the policy level. At the regional level this mediation is missing, yet this is the level where executive and managerial decisions need to be made if national strategic objectives are to be met and plans implemented. In the absence of a metropolitan structure of governance, the GCR's constituent governorates and national agencies involved will continue to pursue uncoordinated action plans that result in inadequate implementation capacity.

In arriving at a vision for the GCR in 2030 stakeholders and residents were consulted in a rather ad hoc manner. In ensuring adequate management and building resilience, citizens have to be fully engaged and made aware of issues, stresses and potential shocks in order to actively participate in the role of an informed citizenship implementing action plans.

The weakness of municipal finances in Egypt and the continued reliance of local authorities on central budget transfers to finance both operational expenses and capital investments deprives them of a critical level of discretion in decision making. The ability to engage governorates, district councils and residents in participatory processes depends on their perceptions of how meaningful their participation will be in terms of affecting their living environment.

In a situation of resource scarcity, there will always be competition for funds. Local authorities lack significant own-source revenue due to the low yield of local taxes, the large informal economy that escapes all forms of taxation, and the difficulties encountered in the collection of taxes and fees since 2011. This forces them to compete for budget allocations with ministries, creating tension between cities focusing on improving the existing urban environment while seeking to ensure the highest use for the land they own; and with national specialized agencies focusing on shaping urban growth and opening up land for new sectoral projects. This tension is most prominently displayed in the key cities, which cumulate demographic, political, and economic primacy, as is the case with Cairo.

For a strategic anchor city, building its resilience is an imperative. It has to withstand shocks and cope with stresses it faces with as small an impact on its functional efficiency as can be achieved. The country cannot afford a breakdown in its functions. The GCR has been tested by the turmoil, which led to encroachments on public lands, public space, chaotic violations of regulations and order and the conflicts in the region that affect its competitiveness, economic performance, investment opportunities, employment generation potential, and migration patterns.

These events have highlighted weaknesses that have to be dealt with. Its primary infrastructure is focused on the development corridors, while its distribution networks suffer from obsolescence, deferred maintenance and lagging extensions to underserved areas. Prompted by the ISDF survey of informal settlements national and local authorities are moving to address issues of environmental hazards and settlers in unsafe locations.

Undoubtedly much more needs to be done to enhance the GCR resilience. It is a task that will involve all levels of governance, as well as civil society, and communities. The

absence of a regional level managerial entity is complicating this task since impacts will occur in the three governorates and responses will involve actions across sectors and district geographic boundaries.

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