Major Trends of the Gated Communities Development in Egypt
an Approach to Urban Sustainability

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Abstract

The phenomenon of GCs as urban residential developments is spreading all over the world. This old/ new pattern of development was a response to the fear of crime in urban areas in many countries ,but in Egypt the moves to GCs was mainly for enjoying a better quality of life and not for safety concern. GCs in the contemporary form emerged in Egypt since the mid-1990s in the new cities and satellites around the Greater Cairo Region (GCR) .They started to attract the rich and upper classes to live into luxurious lifestyle communities with leisure activities and amenities, and surrounded by gates and high walls.

Egypt recognized social segregation from a long time ago .Private schools, private social and sports clubs were allowed only for selective membership. The first instances of exclusive communities in Egypt appeared in the late 1970s as holiday's villages for elite classes along Mediterranean Coast and the Red Sea Coast. Exclusive malls, another example of fortified structures, have existed for some years in the upper class quarter like Zamalek.

New cities surrounding Cairo emerged as a perfect location for luxury communities, situated at a special and social distance to the city .First luxurious GCs were restricted to villas only providing "new standard of residential living". Later comparatively modest communities offered just greener, healthier and less dense environment.

A study conducted in HBRC documented the real situation of the GCs in new cities focusing on the urban, economic, social and development issues. The objectives of the study are to monitor and evaluate the local and international experience, aiming to identify the growing trends and transformation scenarios of GCs in Egypt. The main goal is to clarify the future vision for decision makers in order to achieve sustainable urban policies and development for GCs. The paper will present some results of the study with special reference to El-Sheikh Zayed new city which was planned to accommodate the low and low-middle class people. Today about 59% of planned housing areas have been transferred to GCs for upper and upper-middle classes, and dramatically affected the urban as well as the socio-economic development.

Key words: Gated communities – New cities- Socio-spatial fragmentation- Urban sustainability.
Introduction

During the late seventies the Egyptian government established new communities around Cairo City, to control the urban sprawl of the capital city and to direct the urban expansion towards the desert land preserving the agricultural land. Developed new cities and settlements became the primary solution to the ongoing and projected population surges (UN Habitat, 2011). Although new cities surrounding GCR were planned to accommodate the middle class and less, gated communities as a new pattern of development observed and spread in many of these cities. New cities emerged as a perfect location for luxury communities, situated at a special and social distance to the city. In the nineties, GCs were being constructed in 6th of October City, El-Sheikh Zayed, New Cairo, El-Obour and El-Shourouk cities, consisting of distinguished large-area villas and mansions, huge green open spaces, and exclusive recreational and social amenities including all types of luxuries. The trend towards GCs is accelerating in Egypt, in response to global change. GCs offer luxury housing, clean environment, and good infrastructure for those eager to escape the polluted, crowded, and noisy of the capital city.

The paper over view the change of GCR's master plan, and the developing of new cities surrounded GCR, in respect of the population and areas. The aim of the study is to identify the growing trends and transformation scenarios of GCs in new cities around GCR. The paper presents some results of the study conducted in the Housing and Building Research Center to document the existing situation of the GCs in new cities with special reference to El-Sheikh Zayed city which was planned to accommodate the low and low-middle class people. The paper clarifies and summarizes the pros and cons of GCs in the Egyptian contexts. It ends with recommendations concerned the Egyptian field.

Evolution of GCR Planning

The Greater Cairo Region (GCR) with a present population approaching 20 million is a vast agglomeration that comprises of the Governorates of Cairo, Giza, Qulubiya, Helwan, and the eight new urban communities that surround. From the seventies master plans were approved to solve urban problems and to preserve the agricultural land. The first master plan that shows the official boundaries of GCR is in 1997, which is the first plan that recognizes the geographic boundaries of the GCR. In 1997, the 1983 master plan has been updated to divert the population growth away from the “green land” towards the desert border, where new towns and settlements were located. The 1997 master plan shows the interferences between GCR boundaries and new cities boundaries. These new cities are 6th October and Zayed cities to the west, & New Cairo, El-Obour and El-Shorouk cities to the east. The master plan is combining several new urban settlements into one or more new city or new urban community. In 2010, the 1997 master plan has been updated during a long-term plan and the area of the territory became about 757 thousand acres, as the master plan shown in figure one (GOPP-2011).
Through the previous plans, we find that urban policy lacks the concept of continuity and just looking for temporary solutions to accommodate the increase in population during a specified period of time. In spite of the huge urban extensions in new cities and urban communities, what has been accomplished did not accommodate 40% of the total target for the year 2000. On the other hand the rapid growth of urbanization had been wasting about 59 thousand acres of the finest land in the GCR. Figure one shows the 1997 and the 2010 GCR's master plans.

Figure (1) the 1997 and the 2010 GCR's master plans.

Development of New Cities Population around GCR

Table one presents the existing population of the new cities in the 2006 census, comparing the targeted population in the same period to the targeted one in 2022. It also highlights the percentage of the existing to the targeted population. These percentages are less than 50 per cent in most of the new cities except in Zayed city (61.25 per cent). According to 2006 Census, new cities around Cairo absorbing only 13.8 per cent of the 3 million people added to all Greater Cairo Region over ten years (World Bank, 2008).

Table (1) New towns’ populations

<table>
<thead>
<tr>
<th>City</th>
<th>Population (thousands)</th>
<th>% of existing in 2006 : Target in 2022</th>
<th>% of Existing in 2006 : Target in 2022</th>
</tr>
</thead>
<tbody>
<tr>
<td>Census in 2006</td>
<td>Target in 2006</td>
<td>Target in 2022</td>
<td></td>
</tr>
<tr>
<td>15 May</td>
<td>90.6</td>
<td>180</td>
<td>250</td>
</tr>
<tr>
<td>6 October</td>
<td>154.0</td>
<td>500</td>
<td>2500</td>
</tr>
<tr>
<td>El-Obour</td>
<td>43.6</td>
<td>100</td>
<td>600</td>
</tr>
<tr>
<td>Badr</td>
<td>17.1</td>
<td>60</td>
<td>430</td>
</tr>
<tr>
<td>Shourouk</td>
<td>22.6</td>
<td>62</td>
<td>500</td>
</tr>
<tr>
<td>Zayed</td>
<td>29.4</td>
<td>48</td>
<td>500</td>
</tr>
<tr>
<td>New Cairo</td>
<td>122.3</td>
<td>302</td>
<td>2000</td>
</tr>
<tr>
<td>Total</td>
<td>479.6</td>
<td>1252</td>
<td>6780</td>
</tr>
</tbody>
</table>

Sources: Census 2006, GOPP 2010
International Conference- Privet Urbana Governance and Gated Communities, University of Brighton, UK (26-28 June, 2013).
As the study mentioned, the new cities were established around the GCR from the seventies. The area of each city or settlement has been changed in the updated master plans. Table two shows the approvals date, area of each city and the change of area in the latest master plans (GOPP, 2011). According to the establishment decree, the total urban mass of all new cities were 97,000 acres, in 2010 the total area became about 368,000 acres. Although of the increase in the city's urban mass, the population in 2006 census reached only about 7.1 per cent of the target population in 2022.

Table (2) New towns’ approval dates and areas

<table>
<thead>
<tr>
<th>City</th>
<th>Approval Date</th>
<th>Area in the approved Master Plan</th>
<th>Area per Acres in the 2010 Master Plan</th>
</tr>
</thead>
<tbody>
<tr>
<td>10th of Ramadan</td>
<td>1977</td>
<td>22,000</td>
<td>95,000</td>
</tr>
<tr>
<td>15 May</td>
<td>1978</td>
<td>2,500</td>
<td>12,000</td>
</tr>
<tr>
<td>6 October</td>
<td>1979</td>
<td>16,000</td>
<td>119,200</td>
</tr>
<tr>
<td>El-Obour</td>
<td>1982</td>
<td>5,000</td>
<td>31,500</td>
</tr>
<tr>
<td>Badr</td>
<td>1982</td>
<td>3,500</td>
<td>18,300</td>
</tr>
<tr>
<td>Shourouk</td>
<td>1995</td>
<td>4,000</td>
<td>12,000</td>
</tr>
<tr>
<td>Zayed</td>
<td>1995</td>
<td>9,000</td>
<td>10,300</td>
</tr>
<tr>
<td>New Cairo</td>
<td>2000</td>
<td>24,000</td>
<td>70,000</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>97,000</td>
<td>368,500</td>
</tr>
</tbody>
</table>

Source: GOPP 2011

**Development of Gated Communities in New Cities**

The massive growth of GCs development has been one of the major urban changes in new cities since the nineties. GCs spread fast in New Cairo & Shourouk in the east of GCR and in Zayed and 6th October in the west. The HBRC study documented the total GCs in new cities; the paper highlights the urban development in El Sheikh Zayed City since GCs occupy 43 per cent of urban mass of the city as table three presents.

**Development of Zayed City's Master plan:**

The city was comprised of two development areas with about 2800 acres which was planned to provide low income housing and industrial areas. In 1998, the two settlements combined together to be El-Sheikh Zayed city. The urban mass of the city became 9524 acres with about 72 per cent of its total area for residential use. In 2003, a tract of land was added to the city's border from the west side to provide gated communities as an exclusive residential area. The city extended to a total area of about 10.3 thousand acres, with 7500 acres of residential use. The master plan has been changed since the government sold large portions of public land to private sector real estate developers (M. Metwally, S. Abdalla. 2011).

Figure three shows the formation of the city during the two phases. We can observe the distribution of commercial centers of the districts in the city plan, which has been
changed later and transformed to gated communities and private services. The city was planned to accommodate the low and low-middle class people. Today about 59 per cent of planned housing areas have been transferred to GCs for upper and upper-middle classes, and dramatically affected the urban as well as the socio-economic development. We can recognize the difference between the master plan of El-Sheikh Zayed city which was issued in 2003 and the current situation in 2013. GCs projects concentrated in the city center as alternative to the middle class housing and social housing. Plots of land added to the border of the city as a big gated community project, also districts commercial centers have been transformed to GCs. The study presents some of the results belong to Zayed city through a comprehensive survey and analytical approach.

Figure (3) the formation & development of El Sheikh Zayed City

Figure (4) Master plan & the development of Zayed City

Zayed Master Plan in 2003

Zayed 2013

Sources: GOPP 2003, HBRC, 2013

International Conference- Privet Urbana Governance and Gated Communities, University of Brighton, UK (26-28 June. 2013).
Gated Communities within Zayed City:

In the early 2000s, many GCs have been constructed and were spreading very fast all over the city as a result of selling large plots of state-owned land to the private sector and investors. The study monitored 50 gated communities which were established within the city with different masses, styles and areas (HBRC survey, 2013). The large projects of GCs are ranging from 300 to 1500 acres, middle projects average from less than 100 acres to more than 10 acres, in addition to mini GCs ranging from 1.5 to 9 acres. The total housing area represents 7510 acres, the GCs represents 59 per cent of residential areas in the city and 43 per cent of the urban mass of the city.

Table (3) No. of GCs & its areas in Zayed City

<table>
<thead>
<tr>
<th>New Cities</th>
<th>City's total area by 1000 Acres</th>
<th>No. of GCs.</th>
<th>GCs Area by Acres</th>
<th>% of GCs from Total Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zayed</td>
<td>10.3</td>
<td>50</td>
<td>4434.5</td>
<td>43%</td>
</tr>
</tbody>
</table>

Source: (field survey in 2013 & Zayed City council)

Methodology of case study

A comprehensive physical survey with in-depth interviews and questionnaires are applied to Zayed city documented the real situation of the GCs in the City. The study based on analytical approach in addition to the using of GIS program for documenting and analysing information in the form of city maps. The objectives of the case study are to monitor and evaluate the local experience, aiming to identify the growing trends and transformation scenarios of GCs in the city.

General Characteristics of GCs in Zayed City

Investors started establishing private residential communities in Zayed City since 1994 until present. The field survey in 2013 monitored 50 GCs within the city and classified them according to their areas, densities, types of buildings and occupation rates. From the survey, the study documented numbers of buildings, housing patterns, street networks, gates, fences, urban spaces and services in each compound. From the field survey, the study declares the urban and architecture features of each compound, the general construction requirements, user's preferences and the management and maintenance budget.

GCs.' Area:

The total area of GCs in the city is about 4434 acres; the urban masses of GCs are presented on the map by using the GIS program as shown in figure five. The study classified the GCs in four groups according to their areas which range between 1.5
acres "mini-compounds" to 588 acres "Compounds with golf course facilities". Table four shows the classifications of the urban mass of GCs; according to the numbers, areas of each group and their percentages to the total. The survey results showed that the eight larger compounds occupy about 70 per cent of the total GCs' area in the city and the 15 mini-compounds lies on less than 1 per cent of the total GCs' areas as shown in table four.

Table (4) Classification of GCs by areas in Zayed City

<table>
<thead>
<tr>
<th>Group</th>
<th>Group 1</th>
<th>Group 2</th>
<th>Group 3</th>
<th>Group 4</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of GCs</td>
<td>8</td>
<td>20</td>
<td>7</td>
<td>15</td>
<td>50</td>
</tr>
<tr>
<td>Category of Area /acre</td>
<td>More than 100</td>
<td>30 : 100</td>
<td>10 :30</td>
<td>Less than 10</td>
<td>1.5 : 588 acres</td>
</tr>
<tr>
<td>Total area/acre</td>
<td>3075</td>
<td>1197</td>
<td>122</td>
<td>42</td>
<td>4434</td>
</tr>
<tr>
<td>% of total area</td>
<td>69%</td>
<td>27%</td>
<td>2.8%</td>
<td>0.93%</td>
<td>100%</td>
</tr>
</tbody>
</table>

Figure (5) Distribution of GCs by its areas in Zayed city

Sources: HBRC, 2013

Building Types

The first, second and third groups of GCs include villas, town, twin houses and apartments building with different areas and ratios. The fourth group have different urban pattern since all the building are apartments building with four or five stories. As a result, we conclude that 24 compounds with area of 2820 acres have only villas which occupy 64 per cent of the total GCs' urban masses. On the other hand 14 compounds includes only apartments building, built on 310 acres and only occupy International Conference- Privet Urbana Governance and Gated Communities, University of Brighton, UK (26-28 June, 2013).
seven per cent of the total area of GCs in the city. Table five presents the ratio of the different building types in GCs. Figure six shows the distribution of building types on each compound on a map of Zayed city, and the pie chart shows the percentage of building types by its number and areas.

Table (5) Building types

<table>
<thead>
<tr>
<th>Building Types</th>
<th>No. of GCs</th>
<th>% of No.</th>
<th>Area/acre</th>
<th>% of Areas</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apartment Buildings</td>
<td>14</td>
<td>28%</td>
<td>310</td>
<td>7%</td>
</tr>
<tr>
<td>Apartments &amp; Villas</td>
<td>12</td>
<td>24%</td>
<td>1298</td>
<td>29%</td>
</tr>
<tr>
<td>Villas</td>
<td>24</td>
<td>48%</td>
<td>2820</td>
<td>64%</td>
</tr>
<tr>
<td>Total</td>
<td>50</td>
<td>100%</td>
<td>4428</td>
<td>100%</td>
</tr>
</tbody>
</table>

Source: HBRC 2013

Figure (6) Classification of GCs according to building types

International Conference- Privet Urbana Governance and Gated Communities, University of Brighton, UK (26-28 June, 2013).
Building Densities

The building densities are ranging from 3.5 units per acre to 60 units per acre in the four groups of GCs. These densities are reflecting the building types within the compounds, since compounds containing villas have the lowest density. The oldest GCs in the city include only villas, while the newer contain villas and residential buildings. Table six presents the building densities, ratio of villas to apartment building, the housing types and the maximum and minimum areas per acre in the four groups of GCs.

<table>
<thead>
<tr>
<th>GCs in Zayed City</th>
<th>Group 1</th>
<th>Group 2</th>
<th>Group 3</th>
<th>Group 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Building Densities (units/acre)</td>
<td>3.5</td>
<td>16</td>
<td>7</td>
<td>60</td>
</tr>
<tr>
<td>Ratio of villas: Apartment Buildings</td>
<td>3:1</td>
<td>1:1.2</td>
<td>2:1</td>
<td>_</td>
</tr>
<tr>
<td>Housing Types</td>
<td>Villas, Town, Twine Houses, Apartment Building</td>
<td>Apartment Building</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maximum &amp; Minimum areas/acre</td>
<td>168: 588</td>
<td>30: less than 100</td>
<td>10: less than 30</td>
<td>Less than 10</td>
</tr>
</tbody>
</table>

Source: HBRC 2013

Occupation Rate:

About 36 per cent from the GCs in the city are still under construction, 26 per cent from GCs are almost totally occupied. Table six shows the occupation rates of GCs in Zayed City and their percentage from the total. The low rate of occupation reflects Egyptian phenomena related to invest in real estate rather than banks, and also book housing units for sons to avoid housing crises or high housing prices. There is a big demand for purchasing and owning real estate within the compounds, since the selling prices of units inside compounds are higher than others outside. By using the Hedonic Pricing Model a study confirmed that building units inside compounds in Zayed city is higher than the other units the compounds (Shalaby, A. & Al-Aryan S., 2013). Figure seven presents the distribution of occupation rates of the GCs in the city. The map in figure seven shows the distribution of GCs in Zayed city by occupation rates.

Table (6) Occupation Rate of GCs within the city

<table>
<thead>
<tr>
<th>Total GCs</th>
<th>From80: 100%</th>
<th>From 50: 75%</th>
<th>Less than 50%</th>
<th>Under construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>50</td>
<td>13</td>
<td>13</td>
<td>6</td>
<td>18</td>
</tr>
<tr>
<td>100%</td>
<td>26%</td>
<td>26%</td>
<td>12%</td>
<td>36%</td>
</tr>
</tbody>
</table>

Source: HBRC 2013
Figure (7) Distribution of GCs in the city by occupation rates

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Color</th>
</tr>
</thead>
<tbody>
<tr>
<td>80%</td>
<td>#000000</td>
</tr>
<tr>
<td>50:75%</td>
<td>#808080</td>
</tr>
<tr>
<td>less than 50%</td>
<td>#F0E68C</td>
</tr>
<tr>
<td>under construction</td>
<td>#D3D3D3</td>
</tr>
</tbody>
</table>

Sources: HBRC, 2013

Examples of GCs in Zayed City

Three different examples are selected from the 50 surveyed GCs in Zayed city to identify the different characteristics of each and the residents' preferences.

First Example: The larger project in the city lies on about 15% of its urban mass.

SODIC West
Owner Company: SODIC
Location: North West Zayed City
Total Area: 1500 acres, included:
Beverly Hills" First implemented project"
Allegria offers signature Golf Course, villas and town houses,
West town offers city villas, twin & town houses, apartment buildings,
CASA featuring apartments, duplexes and penthouses.
The Polygon, The Strip and Designopolis offer management companies, shopping malls, hotels, office buildings and restaurants.
Each project has its own character
Facilities: clubhouses, swimming pools, tennis courts, international schools gardens, and shopping malls.
Target population: 60,000

First established project: Beverly Hills
Area: 417 acre Allotment Date: 1996 Delivered: 2001
Currently hosts over 2,000 families and offers a diverse range of residential and commercial spaces to suit every need.

Planning & Urban Design:

Planning Pattern
Different pattern depends on residential areas
- Organic planning in the residential building
- Graded consistence planning
- Ring road, Cul de sac & Loop streets

-Urban Tissues: Pointed
-Building Types: Villas (separated & attached) and Residential Buildings
-Road Network: Hierarchal graded network, differ in each zone depends on the design concept.
-Urban Spaces:
-Private, semi-private & public spaces
-Services:
-Commercial, Educational - Religion - Administrative - Entertaining
-Fences & Gates:
Compound Fence: trees & barbed wire. Villas Fences: low-rise concrete and brick facades, Five gates secured by guards & cameras

Architecture Design:
The company provided different models for villas, twin & town houses, duplexes and apartments. Total residential units : 2934 units

Separate villas:
Unit Area 200: 280 m².
Land area: 500: 900 m²
Building Ratio: 30%

Townhouses:
Unit Area: 323 m²
Area of land: 300: 340 m²

Residential buildings:
Unit Area: Miscellaneous (ranging from 50 m²: 300 m²)
Building Ratio: 30%

Social Dimensions:
- Residents have higher qualifications.
- Most families have moved to stay in the compound since 2002 or later.
- Good social relations special among women who do not work.
- Distance between compound and work ranging from 15:60 km.
- Family income ranging between 10: 20 thousand pounds per month.

Residents Preferences
Reasons and motivation for living in GC:
- Security, homogeneous community, availability of parking, quality of life, green areas, services, away from the pollution and congestion, lifestyle, social relations.

Second Example: Gated Community and Affordable housing project: Continental Gardens

Area: 82.5 acre Allotment Date: 2006 Delivered : 2012
New Urban Communities Authority (NUCA) sold large portions of public lands at low prices to real estate developers in condition to build the half plots for luxury housing" and the other half for affordable housing supported by public bankers. The allotment decree was for national housing project with 38 residential building and a gated community on 42 acre, plus 7.6 acre of services on the area between the two projects.

Planning & Urban Design:
Planning Pattern: Radial graded planning pattern with loop street
Urban Tissues: Pointed, semi-pointed
Building Types: Twine Houses & Residential Buildings in the national project.
Road Network: Hierarchal graded loop streets.
Urban Spaces: Private, semi–private & public spaces
Services: Recreational (within the compound) commercial, Educational (out of the compound).
Gates & Fences: Gate secured by guards. Concrete and brick fence, Villas Fences: low-rise concrete and brick facades.

Architecture Design:

The company provided two models of twin & town houses, three models of the apartment buildings “national project”.

Town & Twine house: 400 units
   Unit Area: 320 m²
   Plot of land: 500 m²
   Building Ratio: 22%

Apartment buildings: 38 Building,
   1512 Unites (apartments)
   Unit Area: 63 m²
   Building Ratio: 18%

Social Dimensions:

- Residents are well educated.
- Most families have moved to stay in the compound since 2012-2013.
- Social relations are only between family members.
- Distance between compound and work ranging from 10 to 60 km.
- Residents in the national project complain because of no gate or fence to secure and protect their houses, but they do have good social relation with each other.

Residents Preferences
Reasons and motivation of living in GC:
- Security, away from pollution and congestion, availability of parking, green areas, quality of life, prestige
Third Example: Mini Compound

Project: Green Valley

**Owner Company:** El-yosr for Real Estate

**Total Area:** 2.38 acres

**Delivered:** 2012

**Planning & Urban Design:**

**Planning Pattern:** Semi-radial graded planning.

**Urban Tissues:** semi-liner

**Building Types:** Residential Buildings.

**Road Network:** There is no street network within the mini-compound

**Planning Pattern:** Semi-radial graded planning.

**Urban Tissues:** semi-liner

**Building Types:** Residential Buildings.

**Road Network:** There is no street network within the mini-compound and no parking areas

**Urban Spaces:** very limited strip of semi-private open spaces

**Services:** Recreational (small swimming pool & green areas).

**Gates & Fences:** Gates with entrance for each building open directly to the public street, & secured by guards. Residential buildings are planned around the project area forming the main fences.

**Architecture Design:**

The company provided five models of apartments.

**Residential buildings:**

- 16 Building, 136 Units (apartments)
- Unit Area: 140 : 359 m2
- Building Density: 57 unite/ acres.
Social Dimensions:

- Residents are well educated.
- Most families have moved to stay in the mini-compound since 2012-2013.
- Almost no social relations between residents.
- Distance between compound and work ranging from 15 to 60 km.

User Preferences

Reasons and motivation of living in GCs:
- Security, away from the pollution and congestion, suitable apartment areas, quality of life.
- Residents complain about the lack of parking facilities.

Advantages and disadvantages of GCs

GCs provide numerous advantages and disadvantages. About 500 GCs are spreading all over GCR creating many pressures on Cairo and Giza cities affecting negatively their future urban development. While providing many advantages to their residents, GCs have many disadvantages for adjacent neighborhoods and for the sustainability of surrounding communities.

Advantages of GCs:

- Provision of better environment and quality of life, good infrastructure, luxurious amenities and safer open spaces for children within GCs.
- Low building density and growing of green spaces
- Better maintenance of housing and infrastructure
- Increasing the property value and resisting to the risks of market failure and economic crises more than property outside GCs.
- Provide higher levels of safety and privacy
- The introduction of green architecture standards and the trend towards sustainable communities.

Disadvantages of GCs:

- Management and maintenance problems due to lack of rules and regulations governing the rules and relations between residents homeowners association and local authority.
- Random sprawl of GCs on agricultural land
- Random spreading of GCs within new cities led to the fragmentation of the urban fabric and the distortion of the original plans.
- Inadequate provision of public transportation in new cities led to the excessive use of private cars.
- Expensive home prices and maintenance fees.
- GCs tend to impact the property values of the surrounding areas that increase housing values and restrict the affordability of its adjacent area to higher class residents.
In most GCs in Egypt, developers focus mainly on the facades design and landscaping, regardless of environmental concerns. Consequently, Architects do not take into account the environmental impacts and the passive design principles that lead to the quality of life within housing, rationalize the use of energy and reduce environmental pollution.

**Conclusion towards more sustainable communities.**

GCs dedicate social exclusion and conflict with social sustainability. They are mainly spreading out in GCR. Both informal settlements and GCs dynamically contribute to the fragmentation of socio-spatial structure of Cairo (Youssry, A., 2012).

GCs for holidays use along Mediterranean and Red Sea Coast have a negative impact on the national economy, because Egyptians use them no more than 20% of the year. This phenomenon is against economic sustainability. Authorities and developers must find alternatives to invest these housing units more efficiently throughout the year.

Zayed city is slowly losing its original planning concept becoming an aggregate of GCs. City planning is converting to merely some zones and walls separated by motor paths. This negatively impact on the livability of the city depriving public street from its life. Egyptians often prefer the spread of commercial uses along circulation spines and among residential uses, which was a main characteristic of the original master plan of Zayed city (as shown in figure three- Zayed 1998 master plan).

Study conducted at HBRC showed the satisfaction of residents living in GCs and demand is increasing. After 25 Jan 2011 revolution, the search for safety created additional growing demand for GCs in the real estate market.

GCs constitute a new architectural language that offers to both upper and upper middle classes a sense of privacy, exclusiveness and security of life style, because architects, planners, local & central governance are unable to guarantee quality of life, public safety, social justice and peace for all citizen.

General policies must be adapted to curtail the negative impacts of the socio-spatial fragmentation, to integrate GCs into the city fabric and to slow down their amplification within and around GCR.

Some concluding comments are to be considered with the aim to develop more sustainable communities:

- The need to reduce urban extensions of new cities around the Greater Cairo region, and to limit the development of mega projects within GCR, while directing such projects towards Upper Egypt governorates away from the Delta and agricultural land.
- Reducing pressure on the central government in Greater Cairo, through the implementation of decentralization policies while granting governorates greater powers.

International Conference- Privet Urbana Governance and Gated Communities, University of Brighton, UK (26-28 June, 2013).
- Update new cities strategic planning to reduce the negative impacts of the random spread of GCs.
- Planning and implementation of efficient regional roads networks to fit with the urban expansions of the new cities and GCs on the territory of GCR.
- There is a need to adopt policies towards the development of GCs and integrated business cities in Upper Egypt governorates. Such projects combine business demands with the needs of luxurious lifestyle, provide a better quality of life, training and job opportunities for the surrounding communities, which reduce the negative impacts of social exclusion.
- Developing the open neighborhoods with the same concept of GCs to provide them with quality of life.
- Regeneration and rehabilitation of city centers to transferring them to sustainable economic centers and private residential communities with a better quality of life.

References:

- Metwally, M. (2006). ‘Assessment of the new suburban- experience around the greater Cairo Area’, Academy for Scientific Research and Technology, Cairo, Egypt. (2)
- Yousry, A.M. Mekawy, H. S., (July 2012). ‘Cairo: The Predicament of a Fragmented Metropolis’, Journal of urban research, Volume 9, Faculty of Urban Planning, Cairo University.(13)
- http://www.urban-comm.gov.eg/invest_living.asp (15)