

# DRIVING FACTORS OF URBAN EXPANSION IN THE PERI-URBAN AREAS

A CASE STUDY OF THE GREATER CAIRO METROPOLITAN REGION

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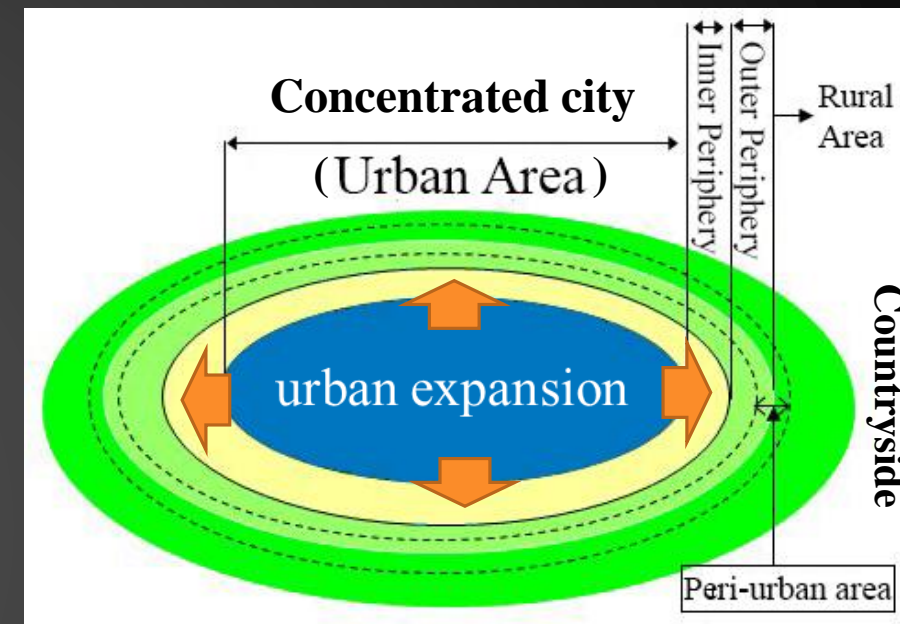
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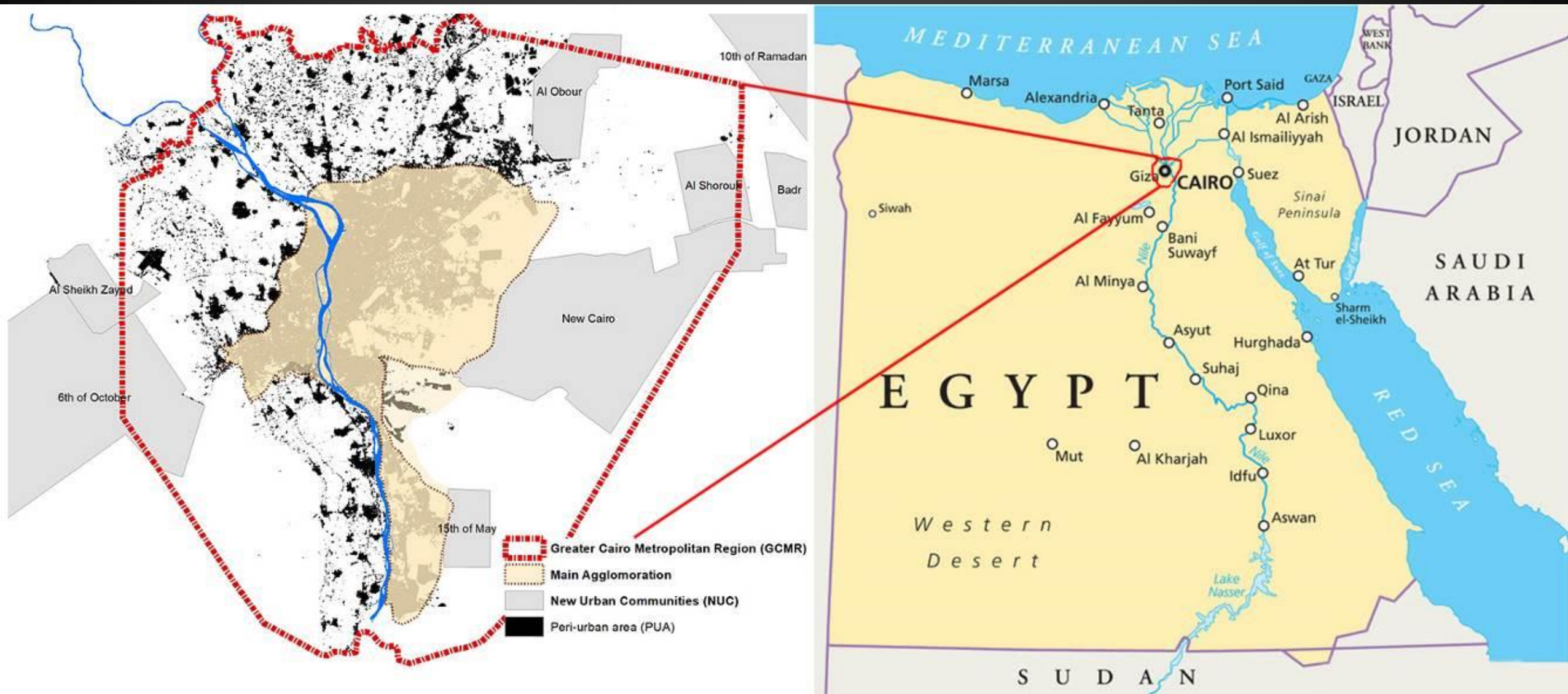


# INTRODUCTION

- During the last decades, The urban expansion in developing countries has generally been more rapid and chaotic and the most of this expansion was directed to the peri-urban areas (PUAs). These PUAs have been commonly defined as transitional zones located between the city and the countryside which are neither strictly rural nor urban.
- The urban expansion process occurs in the PUAs, where the rural villages are spread. Thereafter, a merging process happens with existing villages, which creates distorted areas in terms of land tenure, land use, access to services...etc.
- Several scholars discussed the driving factors of urban expansion in the PUAs in many metropolitan regions. However, this issue has not been discussed deeply in the Greater Cairo Metropolitan Region (GCMR) in Egypt, till now.
- **Therefore, the goals of this study are:**
  1. Measuring the urban expansion for the PUAs in the GCMR during 2001 – 2017.
  2. Analyzing the driving factors in the PUAs within the boundary of the GCMR.
  3. Present a set of recommendations for planners and decision makers when dealing with these areas.



# STUDY AREA





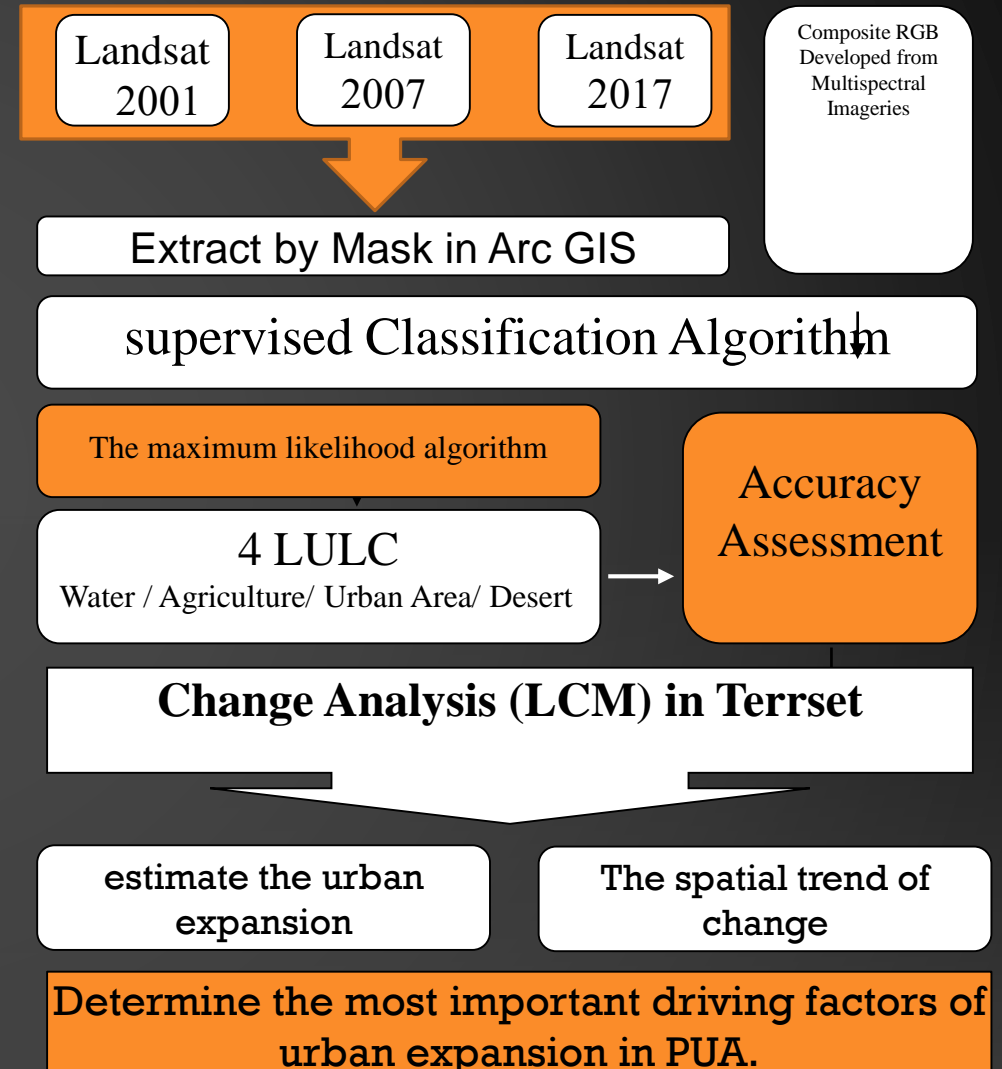
# METHOD

- This study mainly depend on remote sensing and the basic data sources landsat imagery in 2001, 2007 and 2017. In addition to population census during this period.

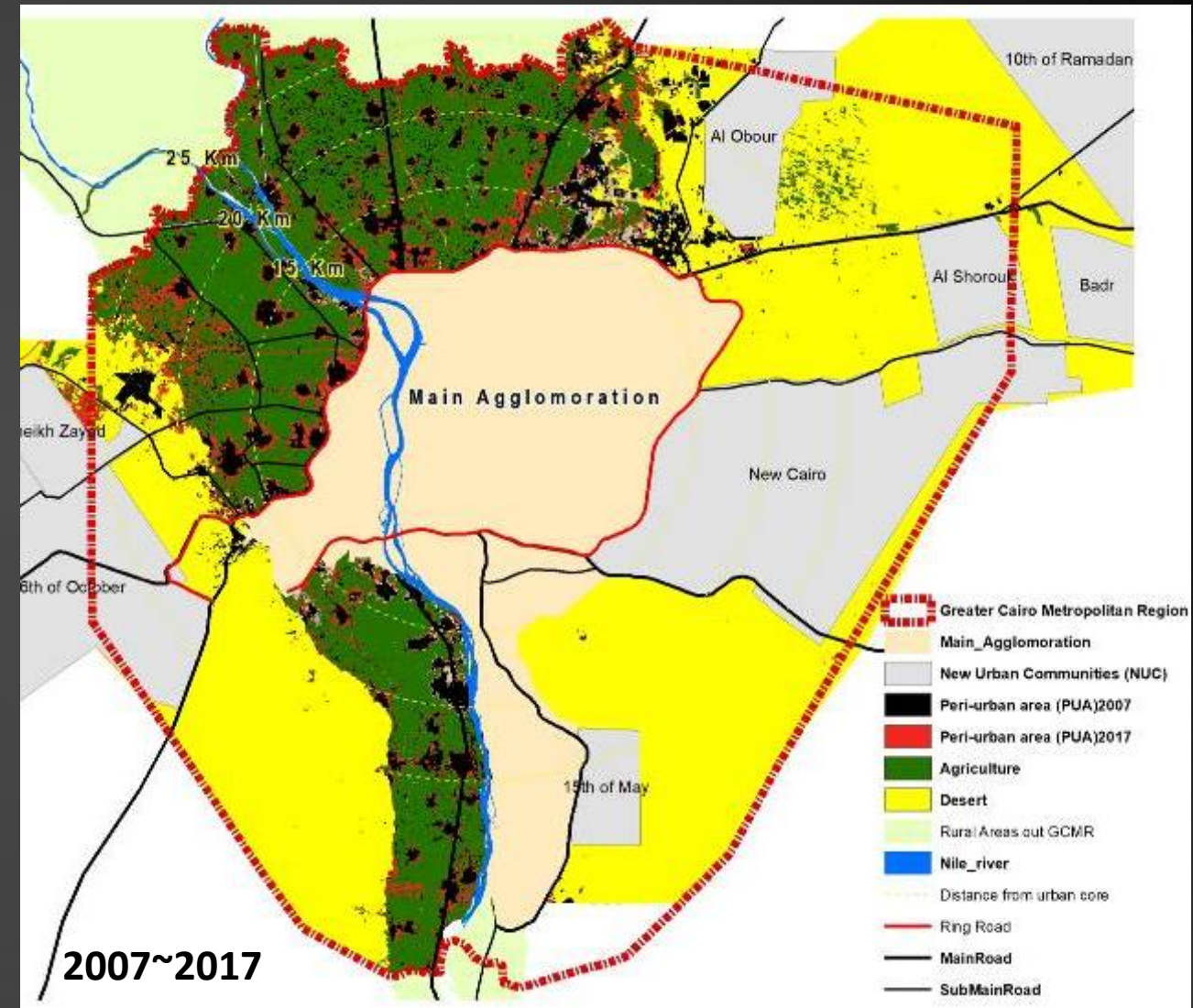
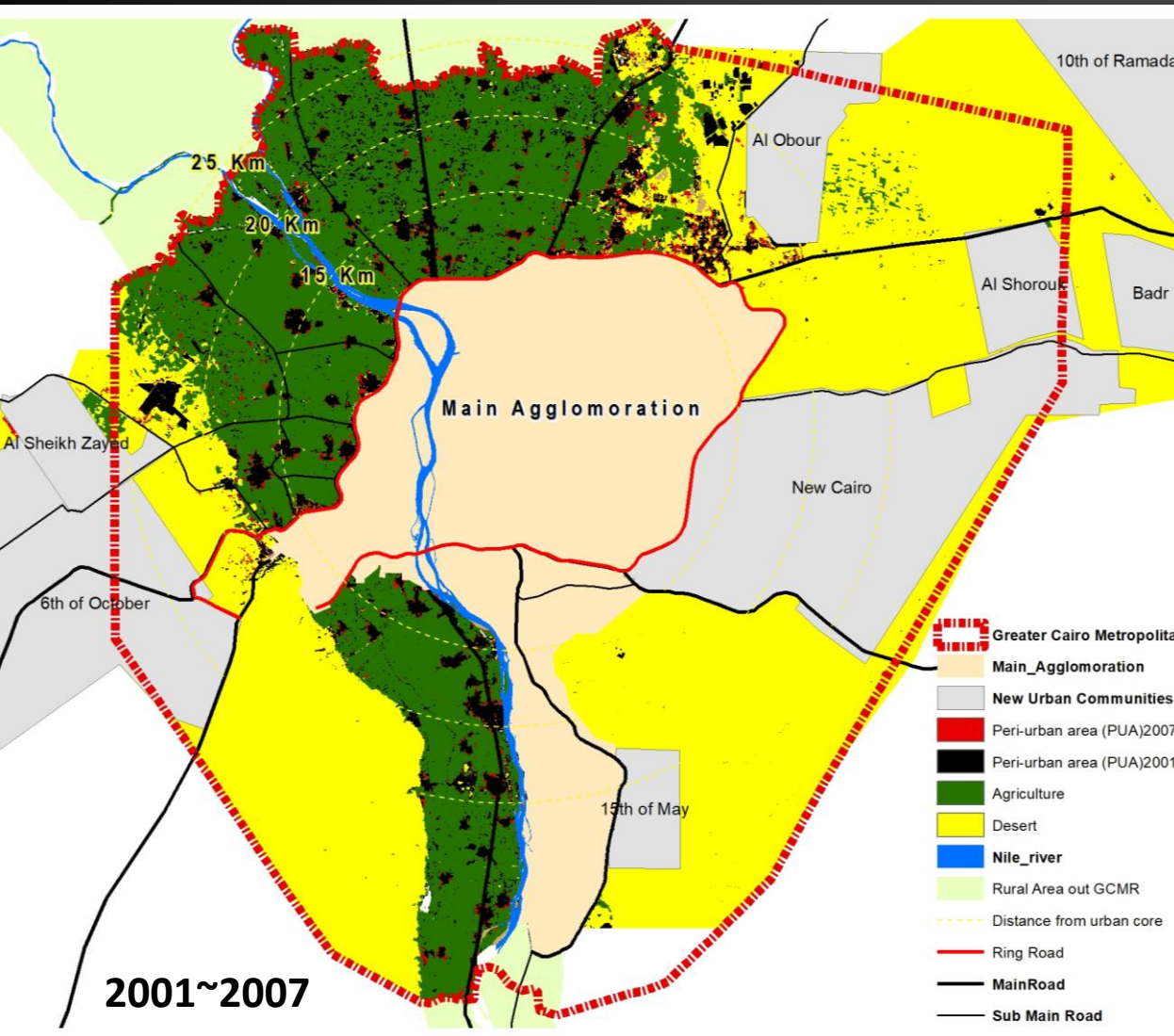
## URBAN EXPANSION VS. POPULATION GROWTH

Year	Population of PUA (1000 person)	Urban expansion in PUAs from previous census (ha)	Rate of lose (ha/year)
2001	3412.2	2350	470
2007	3942.3	2300	383
2017*	5231.4	5400	540

- The primary driving force for urban expansion in the PUAs is the accelerated population growth
- The urban expansion in PUA outpaced population

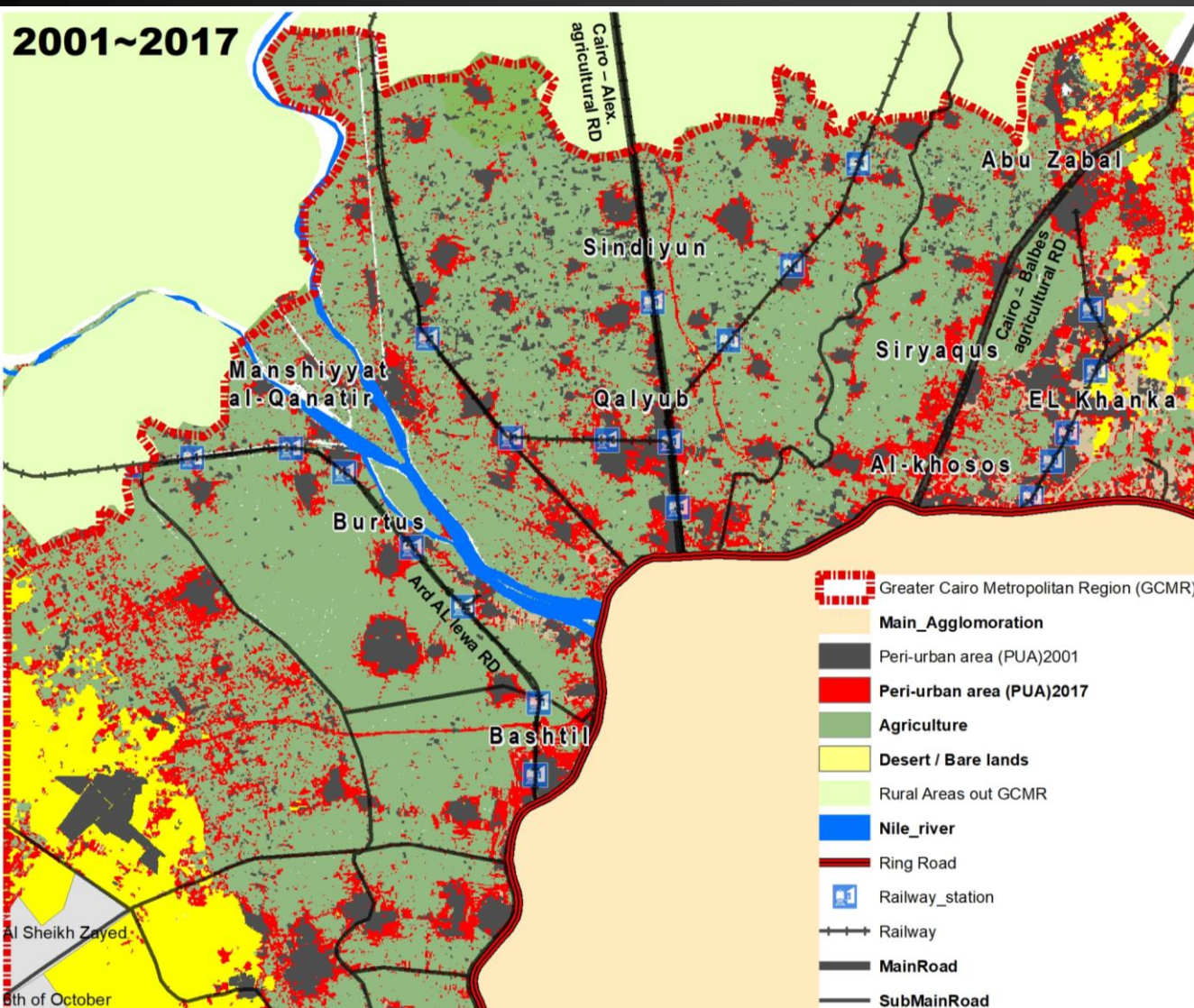


# URBAN EXPANSION IN PUA OF GCMR





# ACCESSIBILITY



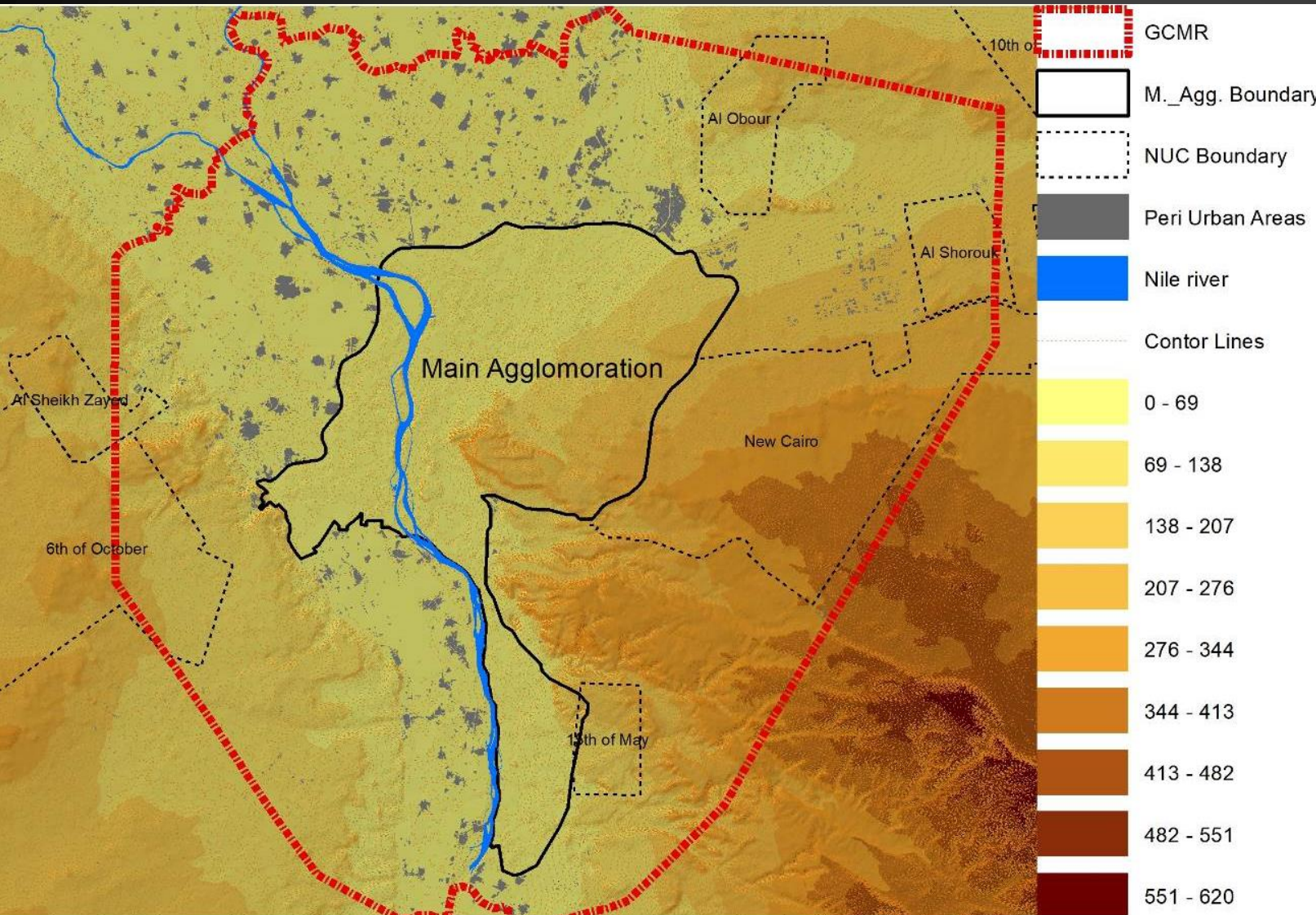
The greatest urban expansions of settlements were happened, particularly in the following axes;

- First, the northeast axis (Cairo - Balbes agricultural road), where Al-khosos – Siryaqus - Abu Zabal
- Second, the north axis (Cairo - Alexandria agricultural road), where Qalyub and Sindiyun
- Third, the northwest axis (Ard AL lewa road), where Bashtil- Burtus - Manshiyyat al-Qanatir

The connectivity to roads in the northern part in the PUA of the GCMR



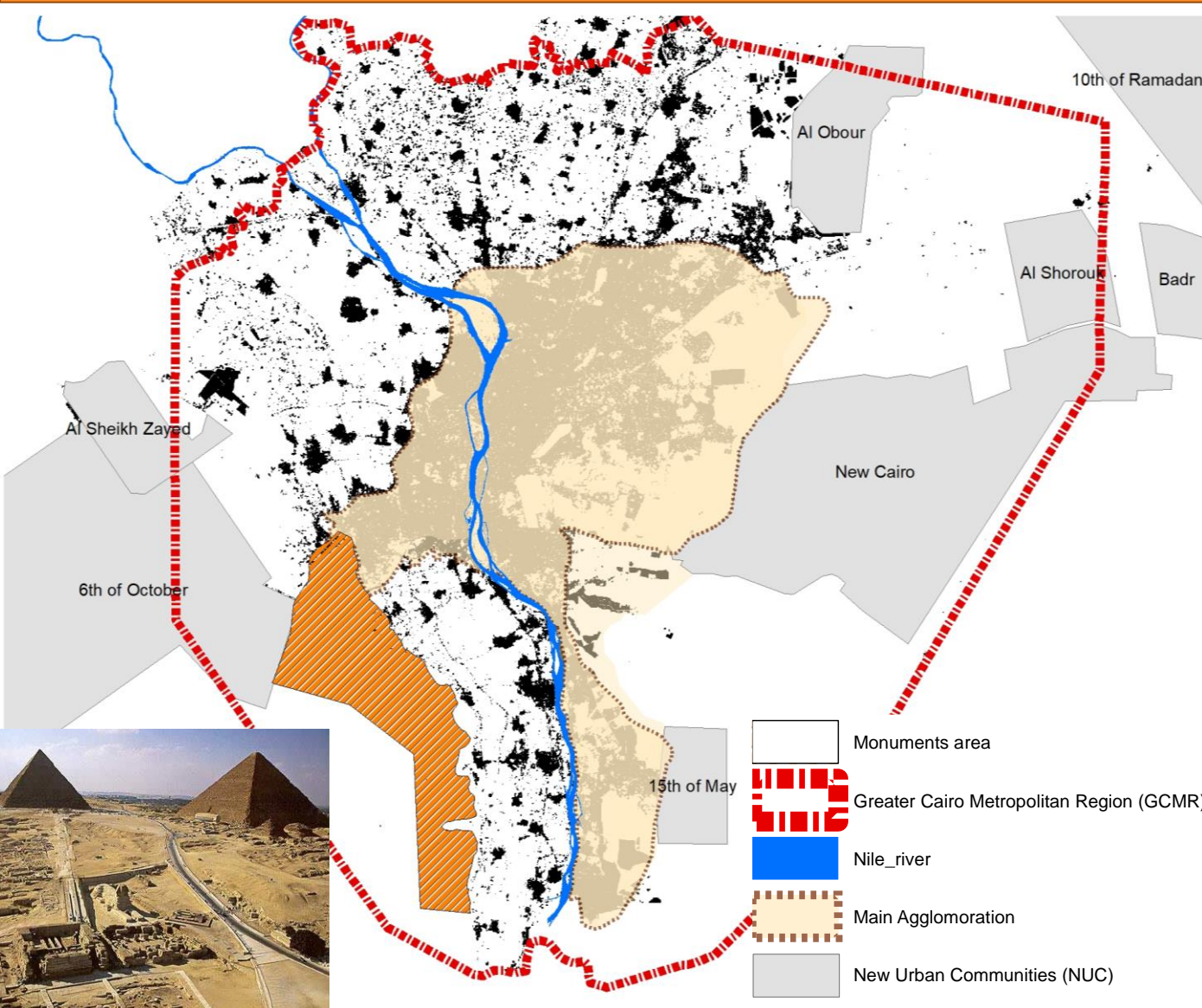
# TOPOGRAPHY



- The regional topography was an influencing factor which drove the urban expansion toward agricultural lands, particularly in the northern frontiers.
- Most of the built-up area of the GCMR exist on a semi-flat area. Unlike the north and the south, the topography of the eastern and western parts have rugged terrain represents a constraint for urban expansion in both directions.
- That's why the most of urban expansion during all expansion stages was directed mainly to the PUAs in the north and western north of the GCMR.



# ECONOMIC AND LEGAL FACTORS



There are many economic factors which push the urban expansion in PUAs, the most important are:

- A wide area in the west is a buffer zone by law for monuments discoveries purposes. This issue push the urban expansion towards north and south.
- **the affordable lands in PUAs**, unlike the land values in the new urban communities (NUC) and the main agglomeration.
- **the High benefits of land transformations** (price of the converted lands from agriculture to buildings exceed between 8 to 12 times the price of the same agricultural land)
- **Ownership** (almost all agricultural land in PUAs are privately held, so agricultural lands are easily bought and sold and subdivided into residential lands)
- On the other hand, Since urban expansion on agricultural land is officially prohibited, so the government cannot force planning procedures to manage the urban expansion in PUAs.



# RECOMMENDATIONS



The current driving factors of urban expansion can be used to direct the future development in the GCMR and enforce planning policies.

The decision makers must recognize and track the rapid population growth and the increasing concentration of urban expansion in these areas. The government should utilize restricted policies to adjust urban expansion in the agriculture lands, which consider very important resource for all Egyptians.



The research suggests more future research on the mechanisms of land management in PUAs, especially for the lands which situated along major roads, which the most of expansion occurred in it



# Thank you

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