



Banha University
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Analyzing the Maps of Economical Activities of Toukh District - Qulyubia Governorate Using Geographical Information Systems

**A Thesis
Submitted in partial fulfillment of
The Ph.D. Degree in Geography
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Summary

The current study is divided into five chapters in addition to the introduction and the conclusion.

The introduction puts forward the study subject and importance. It also introduces each used conception separately (Analyzing-maps-economical activities-geographical information systems). It also defines the study area, topic choice, objectives, literature and methodology. It concludes with the difficulties that faced the study.

As for Toukh district, it has gained a specific position among the other centers of Qulyubia governorate not only because of its geographical proximity to the governorate urbans, but also because of the variation of its special resources and economical activities.

For Qulyubia governorate, Toukh district represents the heart. It lies between the two latitudes ($30^{\circ} 15' 47''$ and $30^{\circ} 24' 57''$ N)and the two longitudes ($31^{\circ} 3' 6''$ and $31^{\circ} 17' 48''$ E) . That is to say that the center stretches between (9' 10'' latitudes) and (14' 42'' longitudes). It shares the borders with Banha district from the north, Shebein Al-Kanater from the east, Qulyub district and El-Kanater El-Khairia from the south and the river Nile Damietta Branch from the west. This location has had effects on the general characteristics and the practice of the economical activities of its population. The south of delta location has had an effect on its soil which a deep sector and coarse granules. There is a tendency among its farmers to cultivate orchard and vegetable products because of its location to be south of Banha and north of Cairo.

The First Chapter: The Natural Factors Affecting the Economical Activities at Toukh district. It deals with the geographical location, the spatial relationships, topography, climate and soil. Its findings are:

- The district area amounts to 221, 65 km² to include (10 local units), (50 villages), (234 hamlets), and the two cities of Toukh and Banha.

- The topographical features of the district vary to include the river Nile and the Turtle backs.
- The yearly, seasonally, monthly temperature average varies at Toukh district in which the North-West and North wind are most frequent there. The rainfall ratio amounts to 40, 5 cm per year.
- Most of the district's soil in the South is formed of coarse granules soil and it is finer than that in the North. The newly formed soil is thick mostly formed of mud with few amounts of the other elements. There are also sandy lands (sandy islands) in the Northeastern area of the center near Meat Kanana.

The Second Chapter: The human factors affecting the economical activities at Toukh district. It deals with the population, water sources, agricultural drainage, road network, railways and markets. Its findings are:

- The population of Toukh amounts to 292469 inhabitants in 2006. The average computed density is 9.3/Feddan. The teenagers (0<15 years old) represent 31.6%. The young (15<60 years old) represents 62.6%. Whereas, the elderly (60 years old and above) represent 5.8%. The district is characterized with the rural feature because the agricultural activity represents 17.2% followed by the service activity which represents 10.9%.
- Toukh District includes a good network of canals whose total length amounts to 239.1 km. The uncovered sewage canals amounts to 107.7 km, whereas the covered ones serve a total area of 28431 Feddan .
- Toukh District contains a good network of roads whose total length amounts to 284.870km. The unpaved roads amount to 2.1% of the total roads of the center in 2008.
- The weekly open markets amounts to 16 ones. The biggest and the most important of them is that which is held on Thursday of weekly.

The Third Chapter: Map Analyses of the Agricultural And Industrial Activities in Toukh District. It deals with analyzing the maps of the agricultural activity that is represented in the whole district and the cultivated area, as well as the areas of crops, the

orchards, and vegetable, in addition to the livestock. The second section of this chapter deals with analyzing the maps of the industrial activity that is represented in the factors of domesticating the industry in Toukh district for the small, medium and large industries. Its findings are:

- The total area of Toukh Distric amounts to 50063 acres. The agriculture area amounts to 47065 Feddans. The area specified for farming amounts to 26271 Feddans. The area of the orchards amounts to 20794 Feddans, whereas the area specified for the vegetables amounts to 13600 Feddans.

- The livestock varied in Toukh Distric since the district is ranked as the first among the districts of the governorate in the numbers of (sheep, goats, horses, turkeys, ducks and geese), whereas the district is ranked as the second in the numbers of (donkeys and poultry).

- The number of factories in Toukh is 78 which represent 4.6% of the total number of factories in Kaliobia governorate. The number of workers is 1879 which represent 1.4% of the total number of the factory workers in Qulyubia governorate in 2008. The number of the craft workshops is 2638. Toukh district is ranked as the first in the total number of craft workshops representing 20.3% of the total number, while Ikad Degwa is ranked as the last in the total number of craft workshops representing 3.4% of the total number in 2008.

The Fourth Chapter: Analyzing the Maps of Services of Toukh District. It deals with the infrastructure and health services, educational services, youth and sport services, social services, and religious services. Its findings are:

- There are 25 water purification plants which produced about 19582210 m³ in 2008. The district has three villages which enjoy sanitation drainage service, whereas 36 others are deprived of this service. Currently, 11 villages are being studied to include this service. The number of the participants of the electricity supply is 153538.

- There are 18 rural health units, 5 health complexes and two rural hospitals in the District that serve the countryside of the District. There are two hospitals that serve the urban part of the

District, in addition to one specialized hospital (Toukh Fever Hospital).

- Investigating the pre-higher education, the study finds that the district includes 70 kindergartens, 129 primary schools, 90 preparatory schools and 51 high-schools (general-technical), whereas the higher education is represented in the two faculties for agriculture and veterinary in Moshtohor which are attended by 2073 students in 2008.

- Toukh District includes 49 units for youth activities (46 youth centers and 3 sport clubs), one social unit, 364 mosques, 134 praying corners, 86 domestic mosques and 50 Qur'an schools for memorizing the Holy Qur'an.

- The last fifth chapter:"The applied study of geographical information systems on the village of Tant Al- gazirah - Case study – It deals with basic requirement of geographical information systems, applied steps for building up geographical information, the applied study of geographical information systems, on the village of Tant Al- gazirah - Case study – It findings are :

- There are many basic requirements that should be found in the Establishments which use the geographical information systems. These requirements are different and variety. Many researchers had discussed them .

- The applied steps for building up geographical information systems can be involved in five basic stages :(Concept – System design – Development – Operation – Audit).

- The geographical information systems, has been applied on the village of Tant Al- gazirah for many reasons : (Far location – It is wide area - It is weekley open market effect- The effect of educational services) .

- Tant Al- gazirah is located in the farthest western area of Toukh District, The Nile river (Damietta branch) from the north , west , and south. The eastern borders are : (Kafr Al- rijalat , Jazirat Al – ahrar ,and Ikyad dijwi) .

- The population of the village is 15647 inhabitants in 2006 , represented 3.2 % from the whole population of Toukh District.

- The economic activities of Tant Al- gazirah has been varied . The Agriculture activity is the first of them . The green land areas are 1802 feddans , the area of the orchards amounts to 1077 feddans represented 59.8 % from the whole amount of agricultural area in the village , The rest area represented 725 feddans specified for farming amounts schedules

- The industrial activities in Tant Al- gazirah is limited . it is an activity rather than industries , The most obvious activity is natural silk textile and it is product in 6 work shops .

- The services in Tant Al- gazirah are varied e.g.:(The infrastructure - except the sanitation drainage – educational services (3 primary schools, 2 preparatory schools and 2 secondary schools) health services, luxeraes services, and social services.

- The most important problems of the economical activities of Tant Al- gazirah are : (The shortage of productive ability, not following the suitable agricultural schedules, shortage of the sanitation drainage services , shortage of drinking water services) This study manages reach some suggestions that must be followed to solve these problems.

The study also contains a conclusion that included the study findings, the important recommendations and the suggestions for further studies.