

Spatial Analysis of the Map of the City of Baldrooz using Geographic Information Systems

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1. Introduction

The study deals with the study of the city of Baldrooz through the analysis of the stages of its inception and development, and through the checking the area occupied by the periods and stages passed by. The size of the city, the town of Baldrooz (739.66 ha) is located between two latitudes ($33^{\circ} 33' - 33^{\circ} 42'$) north and longitude ($44^{\circ} 44' - 44^{\circ} 59'$). As the map shown in figure (1).

It consists of (16) residential neighborhoods, including (3) uninhabited neighborhoods. Its land is characterized by its flat, flat, low-lying position. It stretches on both sides of the old rosette table which was in the middle of the old city and passes from north to south, because It is the lifeblood of the city, so the city grew to a population of about (58147) persons in 2013.

The study area has undergone four developmental stages, the first of which has been from 1970 to 1971, the second from 1971-1990, the third from 1991-2003, the fourth from 2004-

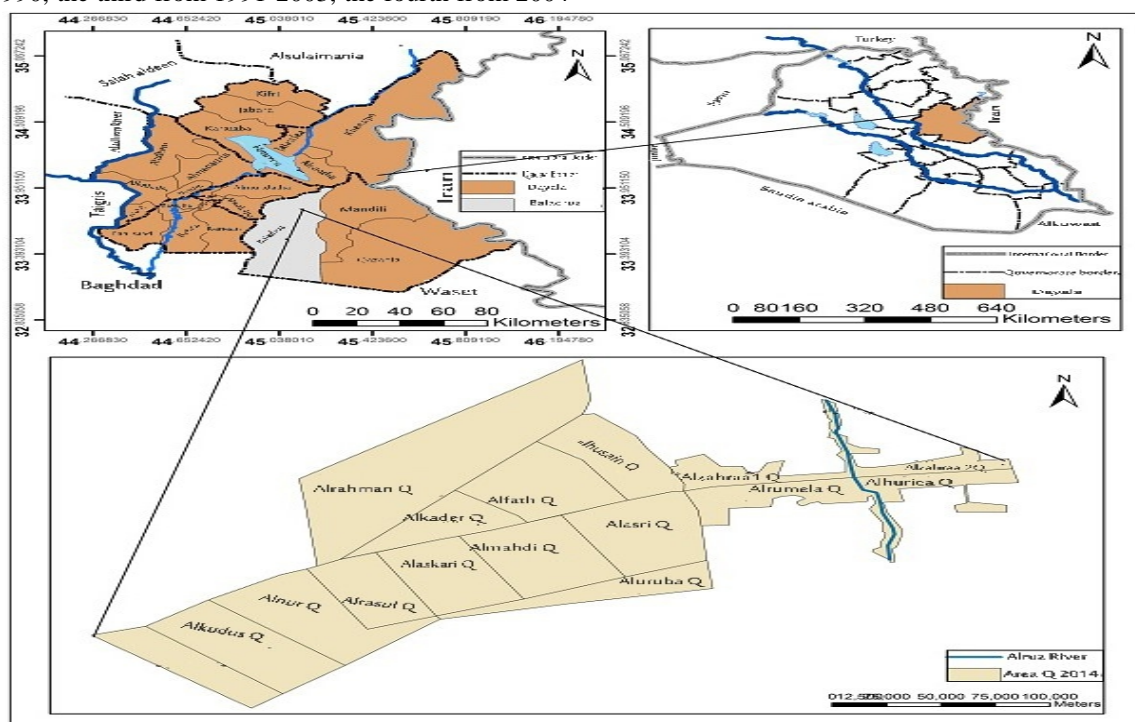
2013., Each stage of these developmental stages of the city had its own direction of expansion and urban extension, and can be seen through the maps that were drawn for the study area in various stages of evolution.

2. The problem of research

Iraq has been through its history in many political and economic crises through its different years. Is it possible for these conflicts and crises to have an impact on the city, its expansion and the direction of that expansion?

3. Research Hypothesis

Various international policies as well as political and economic crises affect the formation, growth and expansion of the city and contribute to the shape and expansion of cities.



Map 1: Location of the city of Baladrouz of Iraq and Diyala province

The researcher adopted his analysis of the map of the city of Baldrooz on the satellite space type IKONOS, 2012 (look at

the picture (1)) as well as the basic design of the city of Baldrooz 1997.

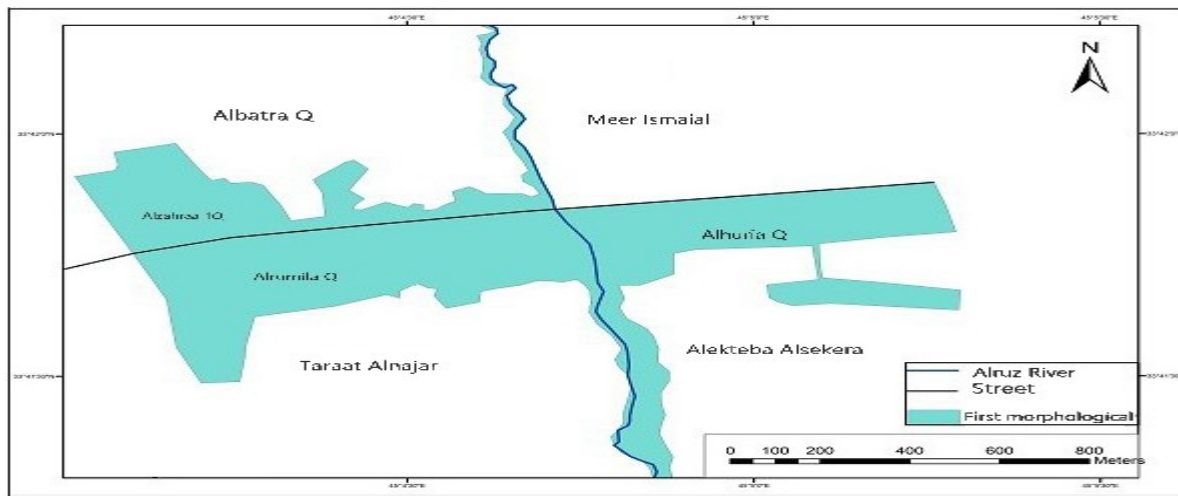


Photo 1: Satellite view of the city of Baldrooz 2013

1. The first morphological stage since its inception - 1970 was characterized by a long period of time, but the changes were limited and slow, and what distinguishes this stage (or its architectural heritage) is a number of houses and public buildings such as mosques, shops and others.

surrounded by orchards of the city continued to grow and expand and with the beginning of the English occupation Baldrooz was a small town consisting of two areas are the chest at the northern end (hawash al kalaah) In the southern part of the city, these old shops formed the nucleus of the current city of Baldrooz. Looking at the map (2)

At the beginning of the 20th century, the city was a small village that was established next to the River Rose



Map 2: The first morphological phase of the city of Baldrooz (origin - 1970)

The spatial map of the design of the city of Baldrooz 1997. Despite the slow and gradual growth of the city, but expanded despite the slow at this stage has developed the provinces of Rumaila and the market between the two districts of Sadrania and bazania on the western side of the rose table look at map (2).

city of Baldrooz was (780) km, the area was measured using the gis program.

(Baldruz was founded in 1920, and in 1923 the municipality of Baladrouz was established. The city witnessed the emergence of service institutions after the establishment of the Iraqi government in 1921, due to the urgent need due to the continuous population growth which reached a population of 3117 thousand persons in 1957 It was (4850) people in (1965). From the map we find that the area of the

2. The Second Morphological Phase (1971-1990)

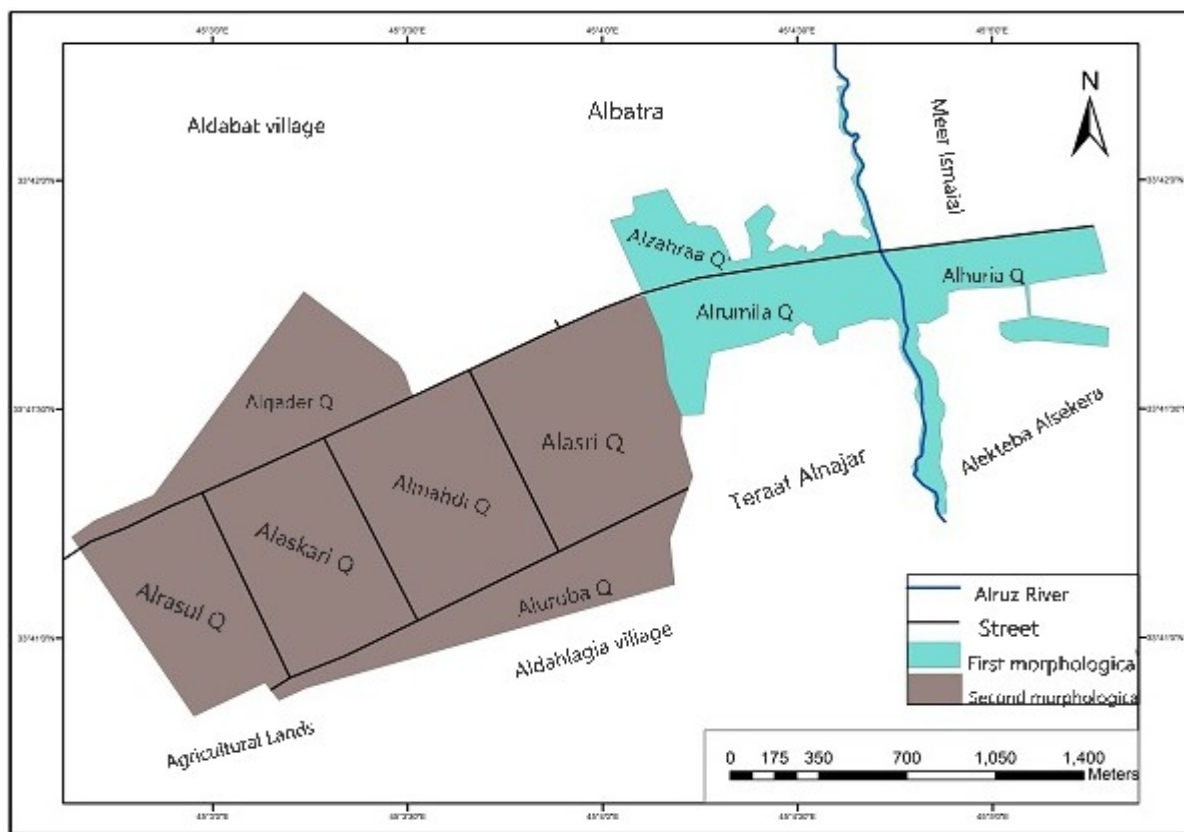
This stage represented a period of time that is important in the city's architectural and demographic history and the rest of the morphological stages. This is the completion of what has been accomplished at this stage. This phase witnessed the emergence of economic functions and events, New jobs were created as a result of the increase of the population of the city, which reached 6,330 in 1977 as a result of the economic recovery experienced by the city at this stage and included Iraq in general after the nationalization of oil

(1972) and the accompanying political, economic and social developments.

In this phase, several economic and service projects were implemented which led to the growth and expansion of the city, including the implementation and paving of Baladrouz-Mandali Street, and in turn contributed to the expansion of the city. In addition, the government agencies distributed land plots to state employees at suitable prices.

And the establishment of residential complexes as a ready-made role carried out by foreign companies in the western side of the city to concentrate administrative, health and educational services, as well as the existence of large areas

for expansion (1).look at map 3. It is evident from the map (3) that the city of Baladrouz expanded its area from the first morphological phase with an area of (2355) km², becoming the entire city area for the first and second phases (3135) Km², ie the area of the city increased by (3)Fold the area in the first stage. As can be seen from the map, the direction of the expansion of the city was in the western direction of the study area, ie towards the center of the province (the city of Baquba)In order to provide all services in the center of the province as well as the result of the Iran-Iraq war in this period, which led to the trend to expand westward towards the inside of Iraq.



Map 3: The second morphological phase of the city of Baladrouz (1971-1990)

In the early 1980s, despite the difficult economic conditions experienced by most of Iraq's cities as a result of the war, the process of expansion, construction and urban development continued through the distribution of residential land to the military and the families of martyrs and state employees, The implementation of a number of housing projects has also contributed to the growth and expansion of the city and to an end to its random growth, Which occurred in its earlier stages (3)So, the city had to expand rapidly in leaps and bounds, exhausted all the lands prepared for expansion before the expiry of the planned period for the entry into force of the basic design scheme. It was updated in 1987 to accommodate whatbeing from urban expansions.

3. The Third Morphological Phase (1991_2003)

At this stage, the city did not witness major expansions, as was the case in the previous stage, despite the introduction of the basic design plan for the city in 1997. (4) At the beginning of this period, the political circumstances in Iraq

changed with the Gulf War, And then the economic embargo on Iraq and its serious repercussions, Which has greatly affected the future of urban planning throughout Iraq and the study area in particular. The region witnessed the migration of large numbers of the population, especially the rural population and the neighboring villages due to the lack of water resources in the Rose Table in 1997, Which led the population to leave their lands and migrate to settle in the city, thus increasing the population of the city to 35594 people from (28918) persons in 1987.

The map shows that the area of the city was not much larger than it was in the previous period, but only a small percentage, compared with the number of residents who migrated from nearby villages. The area increased by (939) km², to 4074 km² for the three stages, At this stage, we notice that the city expanded toward the north and west, that is to say, it expanded on both sides.

through the previous maps all that the city took the expansion of two specific directions are the west, ie towards Baquba and another towards the north, ie towards the district of Muqdadiya. It is noted that the old part of the city remains unchanged without any expansion in its area, only a very small number (112 km) only, and this is due to the political periods of crisis between Iraq and Iran, which led the Iraqi government to go to the inside of Iraq and the distribution of land. As well as the implementation of housing projects in the parts near the center of the province without heading east towards Iran. The increase in the area towards the inside of Iraq by (6648) km, that is, the increase in this direction was more than (59) double the breadth to the east (the old city) or towards Iran.

4. Conclusions

- 1) The city of Baladrouz has undergone four morphological stages throughout its history.
- 2) Each of these phases has an impact on the shape of the city and the changes that have taken place.
- 3) One of the most extensive stages in which the area of the city has widened is the fourth morphological stage. The city expanded with an area of 3467 km. It was the highest increase in the city during its four stages. The second morphological phase followed. The city expanded by an area of 2355 km followed by the rest of the morphological stages.
- 4) The political and economic conditions experienced by Iraq have influenced the planning of a particular city pattern, making it a certain trend in its expansion without expanding to another direction.
- 5) The absence of future planning for cities, and the absence of any future in seeing the future of the Iraqi city and taking into consideration the developments in cities and population.

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