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Natural Potentials and Their Role in the Urban Development of the Cities of Alexandria and Sedat Al-Hindiya

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Research Summary

The natural potentials, including the elements they possess, have a major role in establishing cities. It is clear that the study area, which is represented by the cities of Saddah Al-Hindiya and Alexandria, enjoys a good location in terms of transportation and trade exchange routes, as well as their connection with other cities and their location on the most important water resource, which is represented by the Euphrates River and its branches, which contributed to the irrigation of agricultural lands And the orchards enjoyed by the regions of the two cities and their rural hinterland, as well as their auxiliary role for industrial projects, the most important of which is the establishment of sources of energy and electricity production on its banks, and the possibility of benefiting from these water resources to establish recreational places such as corniches and casinos and related entertainment and racing boats and floating yachts, in addition to the nature and structure of the flat land Geological sites that contributed to the establishment of urban projects, buildings, industrial facilities, etc., and the establishment of housing and what the population needs in terms of service and commercial facilities and transportation methods. All these factors help to establish a modern urban city.

Abstract

The natural potentials, including the elements they possess, have a major role in establishing cities. It is clear that the study area, which is represented by the

cities of Sadat Al- Hendiya and Alexandria, enjoys a good location in terms of transportation and trade exchange routes, as well as their connection with other cities and their location on the most important water resource, which is represented by the Euphrates River and its branches, which contributed to the irrigation of agricultural lands and the orchards enjoyed by the regions of the two cities and their rural hinterland, as well as their auxiliary role for industrial projects, the most Important of which is the establishment of sources of energy production, electricity on its banks, and the possibility of benefiting from these water resources to establish recreational places such as corniches, casinos and related recreational and racing boats and floating yachts, in addition to the nature of the flat land and its geological structure, which contributed to the establishment of urban projects, buildings, industrial facilities, etc., and the establishment of housing and what the population needs From service and commercial facilities and transportation methods, all these factors help to establish a modern urban city .

Introduction

The earth is the field and the place from which it proceeds A researcher, especially a geographer, who studies spatial development studies, considering that The works of Urban Development , which deal first with the natural characteristics that prepare the basis for any project that seeks to address the problems that society suffers from, whether in the increase of population or the lack of services provided to them or the lack of housing that shelters them. Natural factors are considered among the most important factors that Affects the test of the placement of urban cities, foremost of which is the location and area of the city.

A- The research problem

1 - What are the natural capabilities that characterize the cities of Seddah Al Hindiya and Alexandria to be a catalyst for the establishment of urban development?

Second - the research hypothesis

1- The cities of Seddah Al-Hindiya and Alexandria enjoyed many potentials, such as the location, the nature of the flatness of the land, the nature of its soil, rocks, and water resources.

Third - the aim of the research

Knowledge of natural potentials and the extent of their ability to absorb urban expansion and how to exploit what is available from them, taking into account not to harm and deplete these potentials and available natural resources.

Fourth - the limits of research

The spatial borders, which were represented by the cities of Sedat al-Hindiya and Alexandria, which belong to the Musayyib district within the Babylon governorate, and are astronomically located between the two latitudes 32.47°-32.46° north, and longitudinal 44,170°- 44,160° east , as shown in map 1.

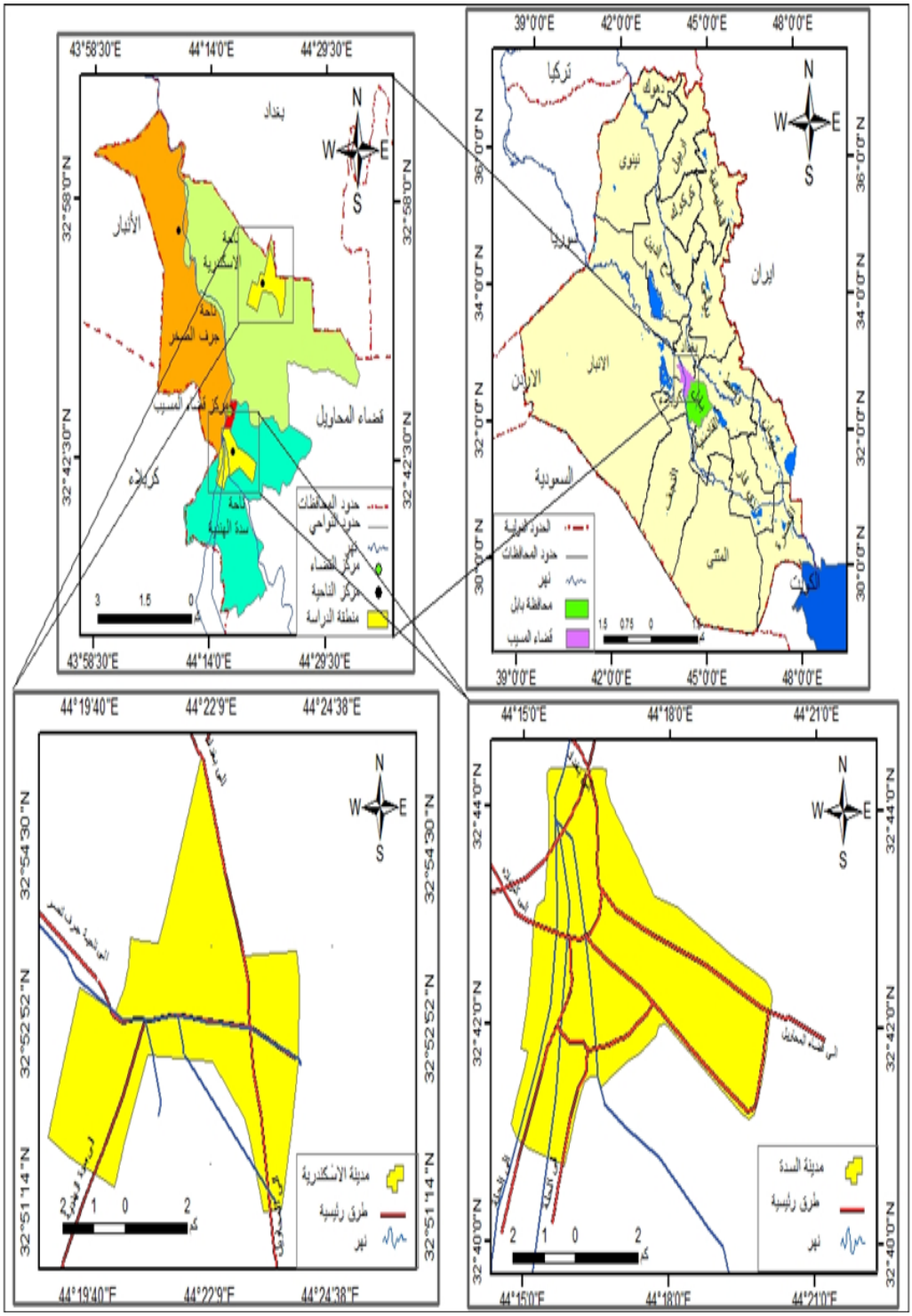
1- Location and area

The site is considered one of the most important natural factors that have a major role and a basis for any area subject to study , as all the physical features come together in it . of the studied area with human characteristics in order to provide a deserved preference for the place and make it a living element a movement that directs the city and makes it an area of attraction and polarization for all human and economic activities , and thus the location becomes the controlling factor in the existence, establishment, size and functions of settlements hement , and it is necessary to distinguish between two concepts whose meanings have been mixed up by many location and position as well as the two concepts Astronomical location and geographical location, the concept of astronomical location means the location in relation to longitudes and latitudes, and this meaning is of great importance , through which it is possible to know the type of prevailing climate, the type of plant life and its distribution, as well as its importance in the distribution of the population, and the crafts, occupations and others that are practiced.

As for the concept of geographical location, it means the spatial location and the surrounding regions of the site, and this concept is of no less importance than its counterpart, the previous concept.

The district of Al- Musayyib , which included the study area, is located in the province of Babylon in central Iraq, which is considered one of the governorates of the Middle Euphrates . It is thus located in the northwestern part of Babil Governorate, and the area of the district is 928 km 2 , in which the district is divided into four administrative units, where the center of the district occupied an area estimated at 113 km 2 , and the area of Saddat al-Hindiya is 257 km 2 . , and the district of Alexandria 170 km 2 , and the district of Jurf al-Nasr 388 km 2 , and all of them constitute an estimated percentage of 18.1 % of the total area of the province of Babylon, which is 5119 km 2 , Map 1 . Table 1 .

Map 1. Administrative units of the study area for the year 2021.



Source: Ministry of Water Resources, General Authority for Survey, administrative map of Babylon Governorate, scale 1: 1,000,000 in 2021.

As for the geographical boundaries of the district, it is represented by the following: from the north and northeast it is bounded by the Baghdad governorate, from the east and southeast by the Mahaweel district , from the south by the Hilla district, the center of the governorate, from the southwest side it is bordered by the Holy Karbala governorate, and from the west and northwest it is bordered in Anbar Province .

schedule 1. Administrative units of Musayyib district

T	City	The area is km2	Area / hectare	The percentage of the division's area of the district's area
1	hindi dam	257	25,700	%27,69
2	Alexandria	388	38800	%41.81
3	Victory cliff	283	23800	%30,49
	the total	928	88300	%100

Source: Republic of Iraq, Ministry of Central Planning for Statistics , Technology and Information, Statistical Series 3 for the year 2020 , Baghdad, p. 5 .

The city of Siddat Al- Hindiya is among the most important cities of Al-Musayyib district, and it has acquired this great importance from a historical point of view and tourism, due to its proximity to the archaeological site in Babylon, which is of great importance all over the world and which includes the landmark Archaeological and monumental buildings such as Tel Al-Ahimer . and Borsippa and the shrine of the Prophet of God Ibrahim Al-Khalil, peace be upon him, and also what distinguishes this city is its location on the road linking the holy city of Hilla and Karbala, its location also on the road linking the capital Baghdad and Musayyib – Karbala, as well as the road linking the central and southern governorates, and it is far from the city of Hilla And the center of the governorate 30 km, and about the center of Musayyib district 12 km,

As for the city of Alexandria, it is also distinguished by an important location, as it is located in the middle of Iraq and has a direct connection with several governorates, especially with the governorates of Baghdad, Anbar and Wasit, as it is bordered on the north by the capital Baghdad, and on the south by the province of Babil, to which it belongs administratively through the district of Musayyib, and from the south To the west, Anbar Governorate, which is separated by the Euphrates River.

As for the east, it is bordered by the Wasit governorate through large and dense agricultural lands , and the city of Alexandria is the central gate of Iraq towards the southern governorates, as it is located at a crossroads , linking the capital Baghdad governorate with several governorates, including Babylon and Karbala. Therefore, it is considered the link and also the main station for the passage of transportation. And commercial goods, as it is located on the axis linking Baghdad-Musayyib-Karbala, which extends south to connect the central governorates Hillah-Karbala-Najaf . By the usual international roads, where the secondary roads linking it to industrial and commercial projects, and various economic activities branch out, as the city of Alexandria is 48 km away from the city of Hilla , the governorate center , and 52 km from the center of Karbala governorate , and its connection is clear with the district of Musayyib. And it is the strongest axes as a result of its administrative and economic subordination to it, as shown in Table 2 , which shows the distances between the city and the centers of neighboring governorates.

Schedule 2. The distance between the study area and the centers of the neighboring governorates

_ Governorate centers	distance km
Babylon Governorate Center Hilla	48
Baghdad Governorate Center	45
Karbala Governorate Center	52
Najaf Governorate Center	117

Source: Republic of Iraq, Ministry of Central Planning for Statistics, Technology and Information, Statistical Group 3 for the year 2020 , Baghdad, p. 5 . As for the road network, Alexandria is connected to a road network with the district center with good specifications, as well as its connection with the rest of the district centers and the surrounding districts

As for the site, it is considered one of the most important complementary concepts to the site. The site works to help the city grow and develop, and the first to differentiate between the concepts of site and site in the study of cities is Rat Zl .

Since the site is considered possible to include a large number of places, and the place includes the area on which the city is located; And the study of what includes natural phenomena , geological and topographic composition, as well as weather, climate and water resources on which the city is established, where the location and location interact to provide a spatial and functional interaction whose effects appear in the formation of the city

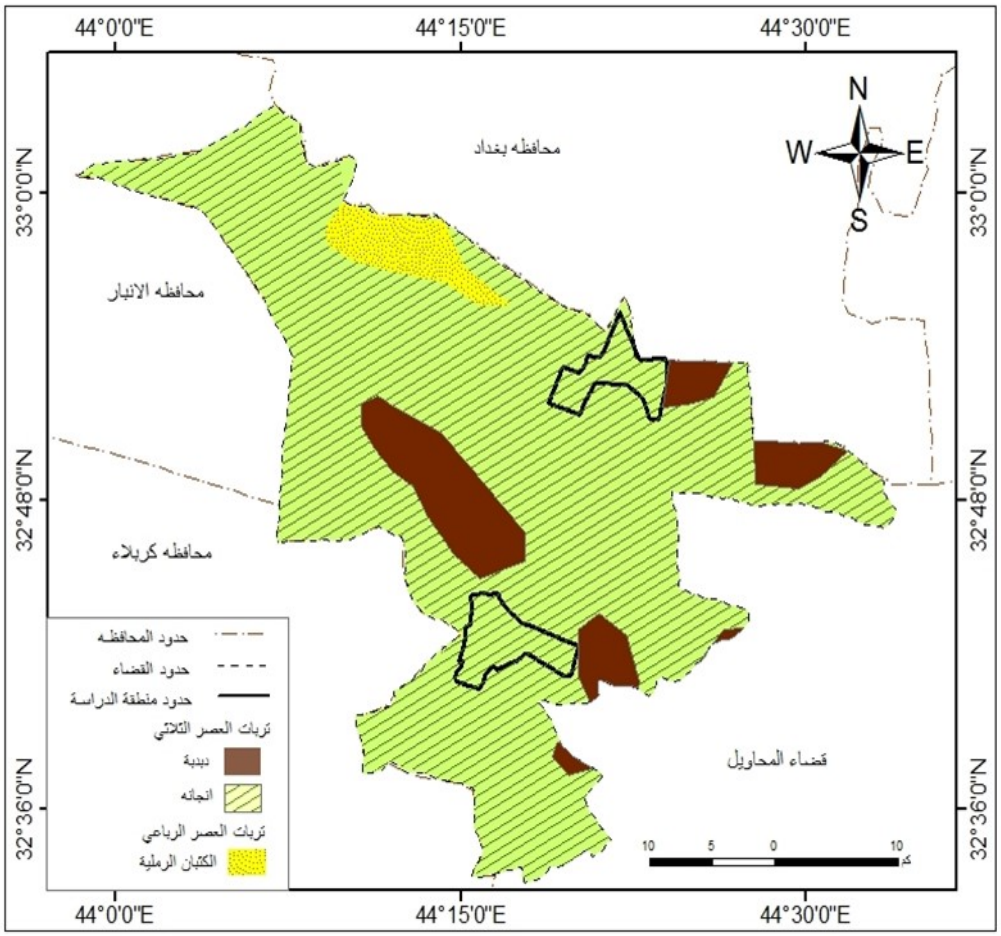
2- Geological Structure

The geological structure is of great importance in the study of the site of the city, especially in geographical studies, because of its relationship to the soil of the site, and the extent of its suitability in building and construction operations . And the importance of studying the geological structure is great and necessary because of the strong correlation between surface characteristics and soil quality and the quality of water resources within the study area, both surface and groundwater , and their impact on the rock and geological composition of the region, which in turn affects the extent of the discrepancy in the nature of the spatial relationship between natural and human phenomena

Likewise, the importance of studying the geological structure is to know the suitability of the soil for construction and the erection of buildings on it and to know the level of the remaining water and the extent of its impact on the multiple uses of the land and its impact on the expansion of the city, and the resources it contains, and in order to be independent of those resources in the future, The geological formation of the study area is due to the recent geological eras in which the current prevailing climatic conditions are characterized , and most of the sediments are The rivers in it are of alluvial resources , and the study area was dominated by modern sediments, which in their geological composition go back to the Hologene era , one of the eras of the fourth time, which was formed thanks to

deposits of materials that were transported by rivers and streams during the flood seasons, as well as the sediments wind , and that the geological structure is one of the most important factors that contributed to the distribution of various services, their efficiency in the study area, and since this area is based on loose land, it needs treatments and retaining walls when establishing urban and service projects , which in turn It leads to an increase in construction costs for building and establishing urban cities . As shown in map 2.

Map 2. Geological structure in the study area



Source: Republic of Iraq, Ministry of Water Resources, General Directorate of Survey, Department of Map Production, Topographic Map of Babylon Governorate, 2014.

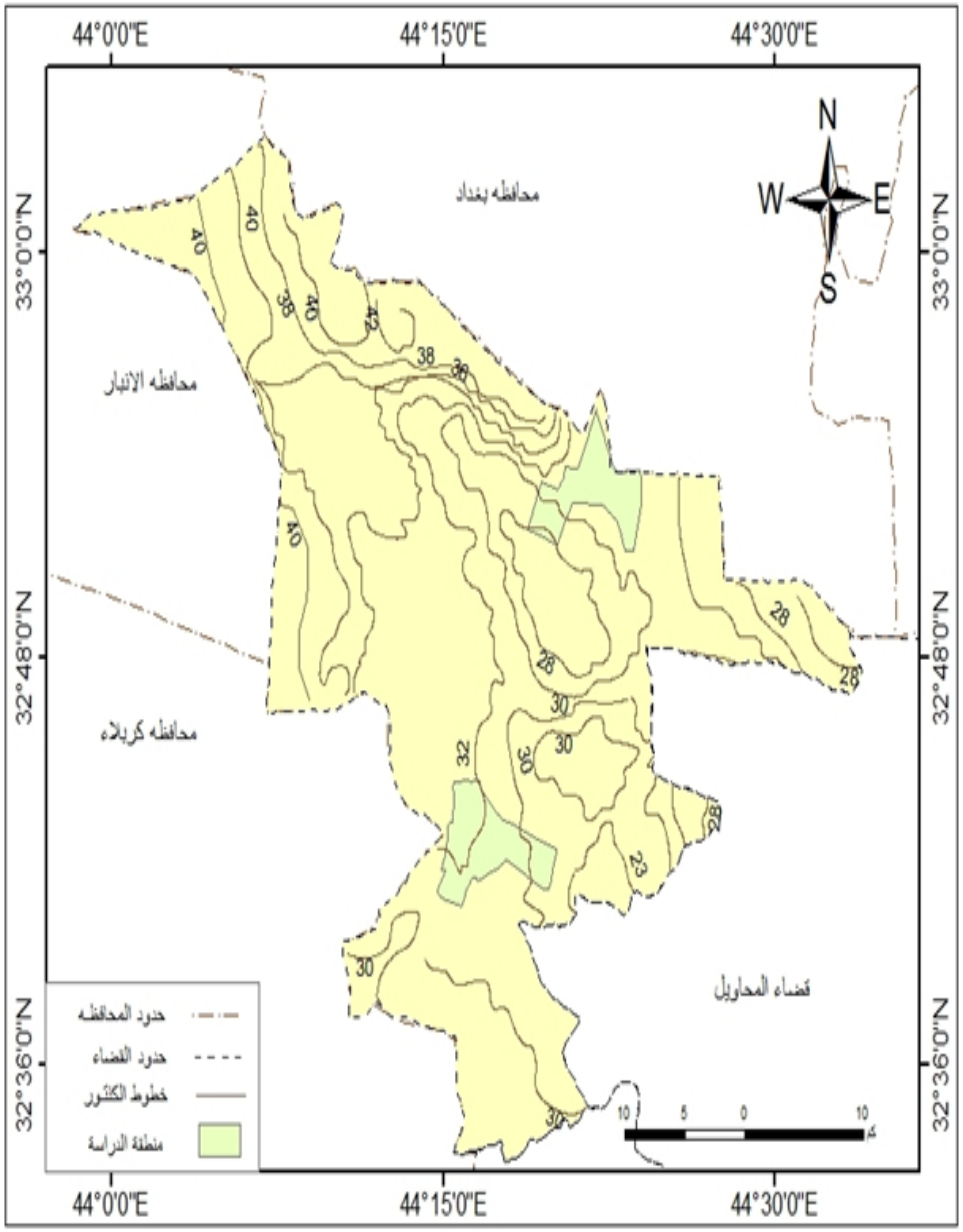
surface //

The surface is of great importance to the geographer in particular because of its clear impact on the use of land in cities , and because of the role of this section in human settlement as well as the pattern of their geographical distribution and spread on the surface of the earth, and it contributes to the formation of cities and the forms of their expansion towards the surrounding parties And adjacent to it then what is considered Its functional activity as well as its regional role .

And since the study area is located within the region of the sedimentary plain, where it is characterized by its low elevation, low slope, and erosion, and this is due to the nature of the geological structure, which we indicated previously that

it was formed from sediments carried by the floods of the Euphrates River, as well as wind sediments . This is what led to the surface of the study area being mostly flat with the exception of the river shoulder areas as well as the sand dunes that rise above the surface level of the surrounding areas, where the study area is characterized by a flat surface as shown in map 3 which shows Through which the contour lines of the study area were analyzed , which ranged between 28 m in the southern sides and 44 m above sea level in the northern sides .

Map 3. Lines of equal height



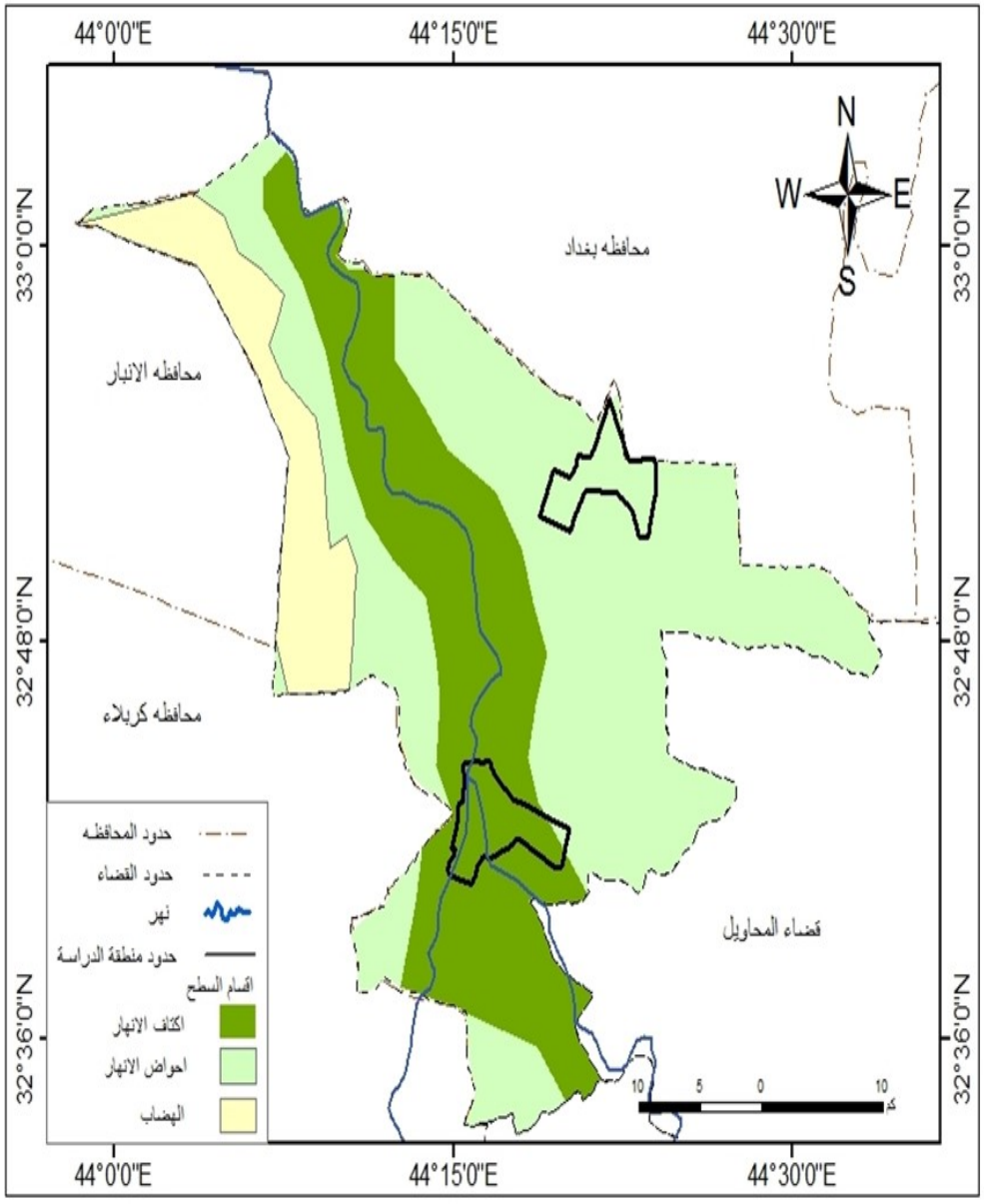
Source: Republic of Iraq, Ministry of Water Resources, General Directorate of Survey, Department of Map Production, Topographic Map of Babil Governorate, 2014.

Through map 3, it is clear that the difference in height and depression between the highest point and the lowest point reaches about 16 m, as the slope of an area is approximately 15 cm per kilometer

The surface sections in the study area vary into several sections, including

1. lands shoulders Rivers : - These lands were formed as a result of river sedimentation processes , which consist of mud, silt and sand , and these sediments are considered the most widespread in the study area, because the study area is located on the banks of the Euphrates River and its irrigated branches . , and as shown in map 4 .

Map 4 . Surface sections in the study area



Source: Republic of Iraq, Ministry of Water Resources, General Directorate of Survey, Department of Map Production, Topographic Map of Babil Governorate, 2016.

1. River basin lands: These lands appear clearly in the study area and the nearby areas, which are the areas far from the river, in which some relatively low areas that resemble basins appear . As well as the area between the Alexandria streams in the north and the Musayyib stream in the south, and it also appears within the Alexandria sub-district and the area confined between Shatt Al-Hilla and

Al -Hindiya St. .

3- The climate

The variation in the rates of rise and fall for the different elements of climate is temperature Humidity and solar brightness have a significant impact on various human activities, as well as on buildings, human settlements , dwellings, and the type of material used in construction, as well as on agricultural and industrial activity, and others. The high temperatures in the study area reach their highest levels in the months of July and August , due to the vertical position of the sun or The semi -perpendicular is the result of thermal accumulation The output is the number of hours of increase in actual solar brightness .

As for the decrease in temperatures, which is represented in the months from November until the end of February, and that the reason for the decrease in temperatures is due to the apparent movement of the sun in A and B , its distance from the northern hemisphere towards the southern hemisphere, and that any planning work, as it did not take into account the climate and its elements In his calculations, this work will not be successful, given that the climate and its elements are among the most important determinants of planning , and the most important elements that must be well studied are heat and what it causes through the direction of the sun's rays, the number of hours of brightness, the types of precipitation, the winds, their directions, and the consequences of that . The study area is located within the semi-arid and dry climate, due to the increase in the daily temperature range due to the increase in the hours of solar brightness, the increase in evaporation rates, the lack of humidity and the rain that falls only in the winter season, due to the dominance of the Indian depression over Iraq for a period of two months July and August, which is characterized by thermal characteristics High and what is characterized by this low is dryness .

And that this rate of heat, drought, lack of rain and humidity, and increased evaporation have a clear effect on the city and its urban fabric. Here, it must be taken into account when constructing houses, residential complexes , and other buildings , that their direction be determined in a way that is consistent with the characteristics of the prevailing climate in those areas and even material type used in construction must be studied when planning cities, as well as the distribution of water needs and green areas, as well as agricultural patterns, all of which are determined by the different climatic effects of climate elements, and urban land uses are affected by these climatic elements , so residential areas Industrial and road directions taken into account The climatic conditions, as well as the size and quality of housing units The buildings , their direction, the quality of development and other activities , and since the study area is located between three main climatic stations surrounding it, then it will take the averages of three stations, namely Baghdad , Hilla and Karbala and what these stations record is what the study area enjoys and we start with the monthly and annual average of the quantity The solar radiation reaching the three stations, as shown in Table 4

Table 4 . Monthly and annual average of the amount of solar radiation reaching stations surrounding the study area in milliwatts/ Q2 for the period from 1990 to 2020.

station the month	Hilla	Baghdad	Karbala
_ k2	306,9	306	270
February	381,7	389,2	379,3
March	479.3	487.5	478,4
April	584,2	581,6	586,8
Mays	672,4	655,5	670,9
June	769,8	739,2	769,2
July	741,6	726,8	756,8
dad	698.1	671,7	700,2
September	601,3	579,8	602
October1	447,9	452,7	443,3
October 2	326,5	364,1	321,4
K1	280,8	280,6	255,7
annual rate	524.2	519,6	519,5

Source // Ministry of Transport, General Authority for Weather weather and seismic monitoring j , data na, m 2020.

It is clear from Table 4, and as we have noted that the study area is located between three main stations, what these stations record is almost the real criterion for the reality of the study area, and therefore the study area enjoys a large annual solar radiation amount estimated at between 524.2 to 519.5 and that the discrepancy between the months of solar radiation is due to the difference in the length of the day in summer compared to that in winter.

Schedule 5 . Annual and monthly average temperatures of the stations surrounding the study area in degrees Celsius for the period 1990-2020

station the month	Hilla	Baghdad	Karbala
– k2	9,8	9,5	9,8
February	12,7	12,1	12,6
March	17	16,4	87,1
April	22,6	22,6	23,1
Mays	28,5	28,6	29
June	32,7	32,8	33,1
July	34,5	35.4	35,5
dad	34	34,6	34.9
September	30,6	30,9	31,5
October1	24,7	24,6	24,9
October 2	16,9	16,6	17
K1	11,2	11,1	11,4
annual rate	22,9	22,9	23,3

Source // Ministry of Transport, General Authority for Meteorology and Seismic Monitoring, Climate Department, data G, M

And it is the variation of the hours of solar brightness that affects the rise and fall of temperatures and their annual rates, and since the study area is located between the above-mentioned stations, the average annual temperature for the study area is close to between 22.9 - 23.3 .

Schedule 6 . and annual maximum temperatures of the stations surrounding the study area for the period 1990 _ 2020

station the month	Hilla	Baghdad	Karbala
_ k2	**16,5**	**15,4**	**15.5**
February	19.3	18,2	18.6
March	23,9	23	23.3
April	27,6	19,4	29.6
Mays	25,8	25,9	36.1
June	41	40,5	40.6
July	43,2	43.4	43.4
dad	41	43	44.9
September	37,2	29.9	40.1
October1	29,3	32,8	32.8
October 2	21,2	23.8	23.8
K1	17,5	17	17
annual rate	29,5	20.2	30.3

Source // Ministry of Transport, General Authority for Weather Meteorological and Seismic Monitoring, Climate Division, Data NA, M

The average maximum temperature ranged between 29.5-30.3 between the three stations , and the average minimum temperature ranged between 14.79-15.2 , and this variation in temperature and the accompanying variation in hours of solar brightness It has a great impact on the quality of materials used in building and the structural structure, as well as on the internal structure of housing, as well as its impact on the infrastructure and urban fabric . In cities and their roads paved with asphalt , and buildings praised Concrete and coated B. Materials that retain heat, which are considered the most important main causes of high temperatures in cities in summer, where local differences in temperature appear because they are subject to the extension of streets parallel to the direction of winds and the sun, and their height and fall relative to sea level, and this shows the difference in average temperatures within the city in summer and winter . And that the construction materials used in building and constructing the city are asphalt and building materials that help separate and maintain temperatures in cities than in the neighboring countryside .

Table 7. and annual minimum temperatures of the stations surrounding the study area for the period 1990-2020 in degrees Celsius

station the month	Hilla	Baghdad	Karbala
_ k2	4,3	4,1	3,4
February	6,2	6	6,7
March	10	9.8	10,2
April	15,1	15	16,1
Mays	20,2	20,8	21,1
June	23,5	23,9	25
July	25,1	26	26,2
dad	24.5	24	25
September	19	61,9	17,5
October1	14,1	13,3	13.7
October 2	10	9,4	10.8
K1	5.5	5,5	6
annual rate	14,79	14,6	15.2

Source // Ministry of Transport, General Authority for Weather Meteorological and Seismic Monitoring, Climate Division, Data NA, M. ,As for rain

which is considered one of the most important forms of precipitation, it is water droplets formed as a result of condensation of water vapor in the upper layers of the atmosphere, and its size is approximately 0.5 mm . The Mediterranean Sea, where it begins to fall coinciding with the activity of air depressions whose source is the Mediterranean Sea. The rains of Iraq and the study area begin to fall starting from the month of October and decrease at the end of the month of May . Iraq in general with its fluctuation from year to year

As we indicated during the types of climate, the study area is located between three climatic stations, and the study area is characterized by low amounts of precipitation, as shown in Table 8 .

schedule 8. Monthly and annual rainfall amounts for stations surrounding the study area mm for the period 1990 _ 2020

station the month	Hilla	Baghdad	Karbala
_ k2	27,4	25	22
February	20	25	19
March	22	22	18
April	22,5	19	16
Mays	8,6	6	4
June	0,7	0,1	0.1
July	0	0	0
dad	0	0	0
September	0	0	0,4
October1	5	4	4
October 2	17	16	13
K1	22	24	20
annual rate	114,3	141.1	116,5

Source // Ministry of Transport, General Authority for Weather Meteorological and Seismic Monitoring, Climatology Department, data na, m

The study area is characterized by low precipitation , and the previous table shows the stations surrounding the study area. It is also shown that the annual average amount of precipitation ranges between 104.2-141.2 mm per year

And that the rains are distributed over nine months in the study area, and the peak is during the months December and second

As for the percentage of humidity and its effect, humidity is defined as the percentage of water vapor that is actually present in the air , or it is the amount of water that the air can hold at a certain temperature when saturation is at the same degree . The humidity percentage in the study area averaged between 43.8 – 45.3 and as shown in Table 10 , which we indicated previously that the study area is in the middle of three climatic stations surrounding it, as it reached its highest percentage during the months of December and second. It decreases in the summer

schedule 10 . Monthly and annual average humidity Percentage at stations surrounding the study area % for the period 1990-2020

station the month	Hilla	Baghdad	Karbala
_ k2	**73**	**75**	**72**
February	74	73	71
March	65	63	61
April	54	65	52
Mays	43	44	41
June	33	32	31
July	25	25	25
dad	22	23	22
September	25	27	26
October1	28	29	29
October 2	29	40	40
K1	56	57	56
annual rate	44,75	45.3	43,8

Source // Ministry of Transport, General Authority for Weather Meteorological and Seismic Monitoring, Climate Division, data g ,M

It is clear from Table 10 that the study area has high humidity during the months of December and the second at a rate ranging between 56- 57 and decreases to a rate ranging between 25- 24 During the summer , when the lowest average was recorded in July, which recorded an average of 25 , and the annual average for all surrounding stations ranged between 43.8-45.3 .

Soils in the study area are divided into several types, the most important of which are

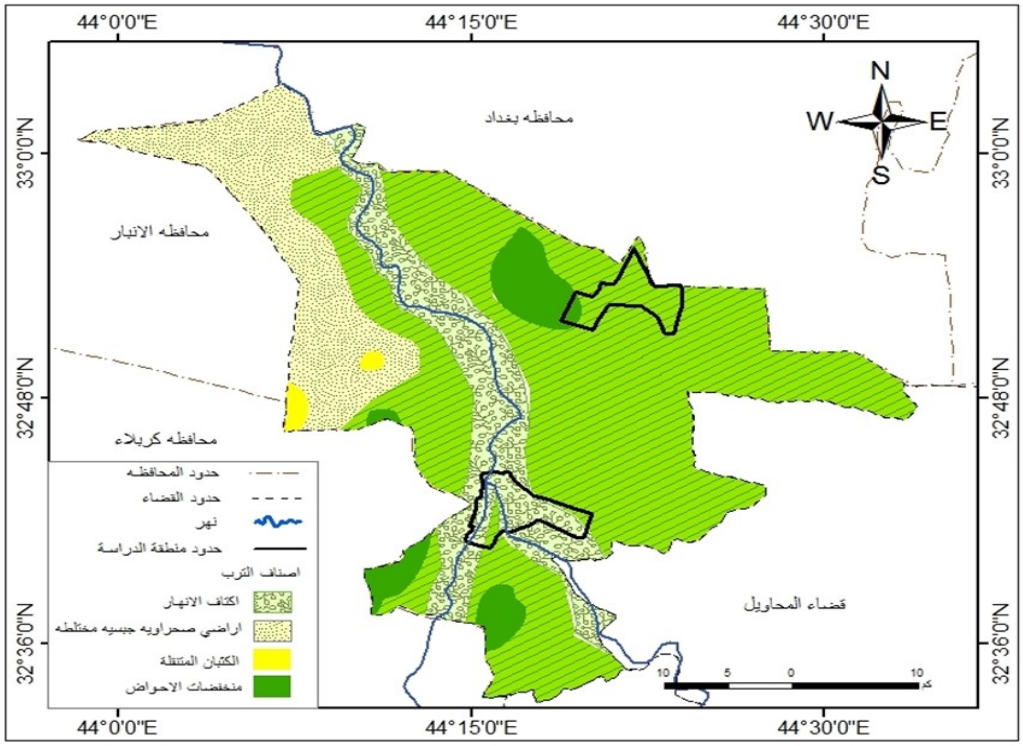
1- Shoulders soil Rivers // This type of soil is common in the study area, but it is considered the most widespread, as it is characterized by the shape of a narrow strip that accompanies the Euphrates River since it entered the study area to where it left it. This soil was formed As a result of the successive floods of the Euphrates River, and the components of this soil are fine and coarse sediments , and accordingly it is called soil . mixology or alluvial _ Or a loamy mix soil Because of the repeated and continuous irrigation processes, a layer of soil was formed on top of it This area is distinguished by its higher relative location than the areas behind it, as it is higher than the next area the river basin area from 2-3 meters , and due to the high soil surface of the shoulder of the rivers , the groundwater level is deep. This is what the study area was like, which led to the construction of the Indian Dam , and this soil is considered one of the best types of soils for the cultivation of vegetables and date palms extensively.

2- Sand dune soil // Among the areas where this type of soil is distinguished is the area between the Tigris and Euphrates rivers, as well as the area extending between the Gharf and Babel rivers, in addition to the narrow strip adjacent to the edge of the desert plateau and parallel to the Euphrates riverbed, as well as between Karbala and Samawah , where it includes The study area is part of this soil , which is characterized by its shallowness and its inefficiency for agriculture, and this type of soil is formed by the action of the wind and what it transports of flying sand particles and

when it is fixed These dunes created lands suitable for growing vegetables, due to the coarse texture of their soil Upper and that this type of soil abounded in the city of Alexandria and its affiliated areas to the region of Amelha Dry dry _ _ As for the Indian city of Saddah, such soils abound in the Al-Mahnawiya region .

3- River basin soil // This soil is located in the lands that lie behind the shoulder of the rivers and in areas far from the river and lands with a relatively low level , where it reaches 2- 3 meters above the level of the shoulders of the high rivers , and such soils are at the outskirts of the study area, and permeate each of the Indian and Alexandrian cities of Saddah with the extension of the Euphrates River in both cities , as shown in map 5.

Map 5. Soil types for the study area



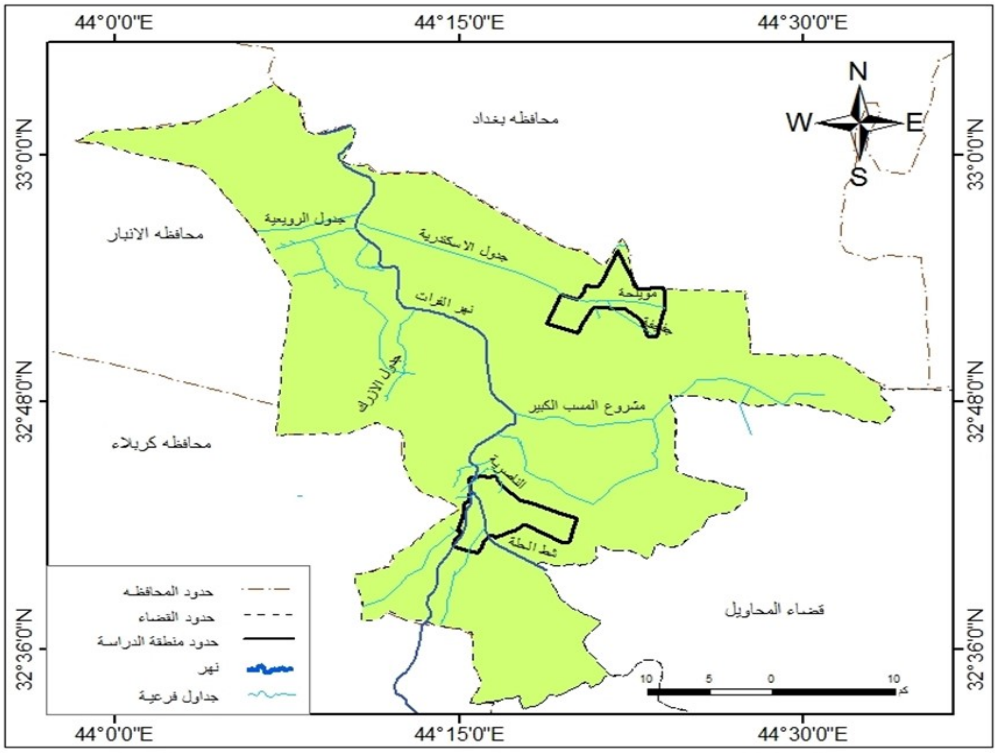
Source: Republic of Iraq, Ministry of Water Resources, General Directorate of Survey, Department of Map Production, Topographic Map of Babil Governorate, 2016.

resources :- Water is the basis for the formation of cities , as all major civilizations and cities were established on the banks of rivers , and it is the lifeblood of life and the strongest attraction for the population, and the prosperity of industry and agriculture is due to its abundance of water. The most important factors influencing the growth and development of the city. The greater its size, the greater the demand for water consumed by its residents. Most of the urban centers were established on the banks and extensions of rivers . No human activity can be carried out in isolation from water resources . Among the water resources, it must be optimally exploited without depleting this great wealth, and the cities that are located within the arid regions, as they need large quantities of water to be civilized and work to create a civil environment in them, and to work on conducting climate treatments that reduce the risk of drought. Gardens, parks, green spaces, fountains , swimming pools, etc.,

and work to create a local climate within the human settlement and also have a beautiful view , The study area has an excellent water resource, so the Euphrates River that passes through the study area Alexandria the second region , from which several streams branch out , forming A network of irrigation branches, and one of the most important streams that passes through the first region. It is the Alexandria creek that branches from the left side of the Euphrates River, which is about 37 km away from the second region Sidat al- Hindiya , where the Alexandria creek branches into two main branches: the first A Milha with a length of 3 km, which runs in an eastern direction, and the second is Jifgafa . It is 8 km long, and it is the longest and feeds 232,000 dunums of agricultural land. Its direction is western. A sequential regulator has been established on the stream, and its purpose is to regulate the distribution of water between these two branches.

Upon the arrival of the Euphrates River to Sad Al- Hindiya the first region , it also branches into two main branches, the first from the southeastern side , which is called the Shatt Al-Hillah , which is considered the eighth most important stream in Iraq, which passes through the cities of Al-Hillah and Al-Hashimiyya, and is also divided into two parts at the city of Al-Hashimiyya. The Euphrates in the Al-Hindiya Dam , which heads south is the Al-Hussainiya or Al-Hindiya River , and is considered the main course of the Euphrates River, which continues to flow through the city of Tuwairij and is also divided It is divided into two parts : Kufa and Shamiyya . , as shown in map 6.

Map 6. Water resources in the study area



Source: Republic of Iraq, Ministry of Water Resources, General Directorate of Survey, Department of Map Production, Topographic Map of Babil Governorate, 2016.

The Euphrates River is the main and essential factor for the establishment of the Indian cities of Saddah And Alexandria , which knew his existence and his

passage through them Agriculture and industry existed in these two cities due to the presence of this river, which feeds all the agricultural lands in them and became a center of attraction for the residents of these two cities, as well as the establishment of electricity stations, which are among the largest power stations in Iraq, established on the banks of this river and many industries that were found in its presence in addition to the possibility of exploiting it for tourism Recreational If it was rationally exploited in the economic and investment aspect .

4- Conclusions

1- The good location enjoyed by both cities, which contributes greatly to the establishment of urban cities that seek to reduce the pressure on the surrounding major cities.

2- The flatness of the surface and the lack of erosion contribute greatly to the construction of infrastructure projects, urban, residential and industrial facilities, and reduce the cost of backfilling, modification and other operations that precede construction, residence and urbanization.

3- The appropriate climate for the cultivation of a lot of agricultural yields of various varieties that fall within the food industries. This climate is also appropriate for the establishment of many industries within these cities.

4- These cities enjoy good fertile soil within their agricultural hinterland, which is characterized by the multiplicity of its agricultural crops, which is one of the biggest factors in establishing agricultural development that complements and complements the urban development process of these cities.

5- The presence of the most important basic pillar for the establishment of the city, which is water, which is represented by the Euphrates River that passes through both cities, which has the largest and most important role in the existence of these cities and the agriculture and industry in them, and has the largest role in the concentration of the population near it, which can be exploited to establish tourist and entertainment resorts that are among the basics urban necessities.

5- Recommendations

1- The possibility of investing in the strategic location of these cities and establishing a development program that will benefit these cities.

2- Carrying out more surveys, exploratory and scientific studies, and agricultural research, which would develop agricultural development, and whose return would be to the overall development operations and the rest of the development projects in these cities.

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