

Cancerous expansion of the city of Baghdad

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Abstract: If we look at the previous planning experiences in the failure to implement the basic plans for the city of Baghdad since its inception, and regardless of the extent to which these designs apply the foundations of correct and sustainable development, they were not facing problems related to the lack of planning laws for the foundations of development and the protection of resources, as was sometimes rumored as justifications for negligence, but they were. It always contradicts the large expansion of slums, although they had not yet taken on their current dimensions, which were considered a reality despite all the "enforceable" laws as a result of the lack of resources necessary to implement these laws and despite all measures to adhere to these laws, they collided with the opposition, fraud, and justification. In slum areas. Among the positive indicators of these laws is that there has been a relative success in confronting the violations of building regulations in the planned areas. This relative success can be attributed to the possibility of imposing the law when the necessary will is available, and on the negative side lies in the imbalance in the treatment of slums according to the seriousness of their negative effects on natural resources, the environment, and the national economy.

Keywords: Planning, Expansion, City

1. Introduction

The best analogy to illustrate this nature is (cancerous growth). The phenomenon of cancerous growth: depends on the presence of emergency stimuli that transform (normal cells) into (cancer cells) that destroy their surroundings for their growth, which ultimately leads to their destruction as well (and there is ongoing research on the causes and manifestations of these (killer cells) or (composition and disassembly)[1]. Inevitability of matter, fortunately, the natural defenses (the body and the earth) put obstacles in front of this growth, focusing on the inability of the natural environment to respond to the requirements of expansion or the formation of bottlenecks resulting from the random nature of growth that impedes its continuity. Until the ability of cancer cells to spread is controlled, and attention must be paid when trying to eradicate these cells for the possible negative effects in the surrounding environment. One of the most interesting current practices in facing this phenomenon is the passive intervention and depends on the extension of cancer cells with new blood and raising the natural components in the degree of their expansion (up To the extent of proposals (analysis) or final settlement with the provision of free facilities).

Expansion in the city of Baghdad

Baghdad has witnessed an accelerated population and urban growth due to its hegemony over all cities in Iraq. Its administrative, economic, and political centralization has a role in the process of attracting activities, events, and residents to it. This hegemony has a negative role in some aspects, the most prominent of which was represented by crawling on the lands adjacent to the basic design boundaries, as areas of urban use changed very rapidly at the expense of agricultural lands, and upon reading the numbers mentioned in Table (2) for the stages of expansion, urban uses at the expense of land The agricultural and green areas were distributed among the fourteen municipalities that make up the city, as the table shows that some municipalities decreased the percentage of green use until it reached zero, and it is offset by an increase in urban land use. To represent the numbers on the ground, the basic designs prepared and proposed for the city of Baghdad were used, which will be implemented. He mentioned it in stages, as Figure (4)& (5) shows the nature of uncontrolled urban expansion due to the absence and delay in modernizing and developing the basic design of the city, which has been likened to cancerous growth.

The city of Baghdad has gone through several studies, comprehensive development plans, and basic designs, which were carried out by consultants from different countries specializing in city planning and modernization. During different periods to keep pace with the development in the cities of the world and control the urban expansion of the city, which is often at the expense of fertile agricultural lands, as the location of the city of Baghdad is located within an agricultural region, so that urban expansion, whether this expansion is planned or random, will invade these lands, This leads to the decline of agricultural lands, which are the food basket for the city.

In this part of the research, we will focus on the most important studies that have dealt with the basic designs and plans of the city of Baghdad since the beginning of the twentieth century, as this city has gone through many studies, the most recent of which was the studies for the development of the city of Baghdad (the comprehensive development plan 2030). Through him to identify the most prominent of these studies.

Table (1) shows the most prominent studies of the city of Baghdad

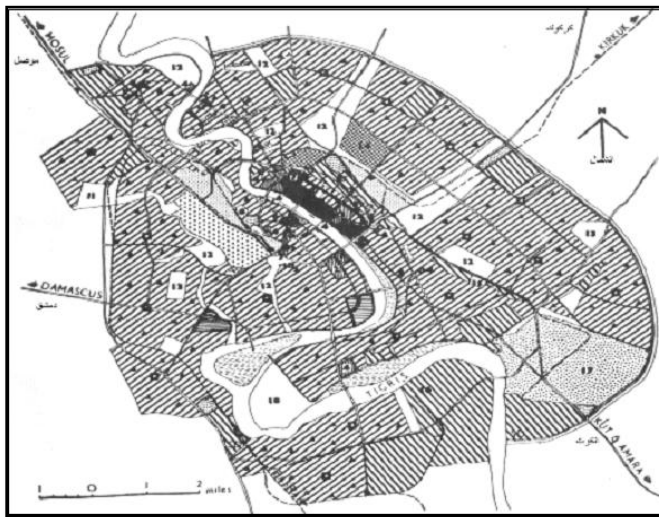
	studying	consultant	Nationality	year
1	Study the master plans of the city of Baghdad	, Brix, and others	Germany	1936
2	Study the master plans of the city of Baghdad	Monoprix et al	English	1956
3	Study the master plans of the city of Baghdad	(Doxiadis)	Greek	1958
4	Study the master plans of the city of Baghdad	(PolSERVICE)	Polish	1967
5	Study of the comprehensive development plan	(PolSERVICE)	Polish	1973
6	Study of improving urban transportation for Baghdad	JICA	Japan	1986
7	Study of the Baghdad Integrated Development Plan	JCCF	Japan	1989
8	Study to review the basic plan	Mayorality Of Baghdad	Iraq	1993

[2]Source:Mayorality Of Baghdad

The first stage: 1935-1956

The city of Baghdad witnessed three studies during this period, the first of these planning attempts was the study carried out by the German consultant (BRICS and Prosvenir) in the year (1936). Around (500,000) people. But this project was not implemented because it became inconsistent with the city's requirements before starting its implementation or completing its main lines. The reason is the arrival of the city of Baghdad to the population size in terms of density, which was planned in the year (1947), that is, a year before the target set for the prepared design. In 1954, the consulting team (Monoperio and its partners) was contracted to prepare the basic design for the city of Baghdad. A draft of the design was submitted, which was represented by an almost circular shape and with a diameter of about (18 km).

Figure (1) the proposed Monopiero plan for the city of Baghdad[3]



River, since this side is lower than the second side of the city. This design is considered the first in the ratios of implementation and completion. Figure (1).

In 1956, the basic design project for the city of Baghdad was assigned to the **Doxiades** Foundation by the (Development Council). The Foundation presented a design different from what the consultant (Monoperio and his partners) presented, and on an area of (558) square kilometers, this area is approximately twice and half the proposed area in the design the previous.

The new design came in a rectangular shape, and its dimensions reached (18 x 31), and the streets in it are straight and perpendicular, reflecting the philosophy of the **Doxiades** Design Foundation in the city planning that is designed by the company, the plan is prepared to accommodate three million people. The basic design contained five main sectors, and their boundaries were clear natural girders such as rivers, or industrial.

As the main roads for express passage. Each sector has a capacity of (500,000) people, and it also contains (14) small independent housing units in its center, each with a capacity of (50,000-100,000)[4] people. Fig. 2.

The second stage: 1967-1973

Two studies emerged during this period; the first of these studies was what the Polish institution of PolSERVICE did in the year (1965) when a contract was signed by the Baghdad Municipality with the aforementioned institution to prepare the basic design for the city of Baghdad. Work on design and development plan numbers continued until the year (1973). The plan included many details to cover the needs of the city from reconstruction and development to the target year set for the study (1990). Where the

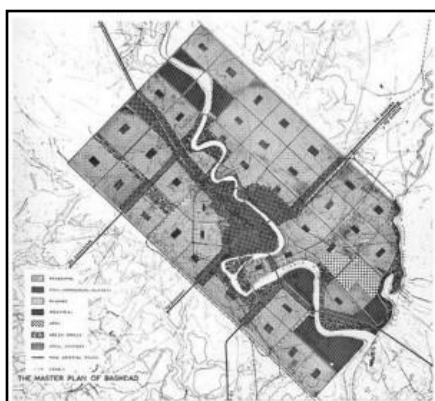


Figure (2) the proposed plan of the Doxiades Foundation for the design of the city of Baghdad[5]

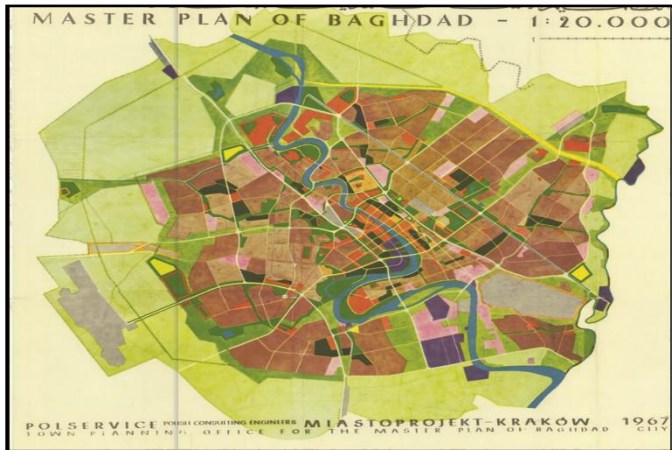
the company submitted two design documents:

The first document: general and detailed maps, according to field surveys that were conducted and with multiple drawing scales.

The second document: written documents (a comprehensive report), containing the conditions for implementation, and the legislation related to it, with the controls for construction, implementation, and the necessary stages for them[4].

The basic design, as well as the attached report, contained the necessary explanations for the various uses of the land, their proportions, and the density of each. He also presented proposals for methods of controlling implementation and the phases related thereto, in a manner that provides adequate explanations for the urban and urban plan to serve the implementation.

A contract was contracted again with a company, (**PolSERVICE**) in 1973, to set up the (Comprehensive Development Plan for the year 2000). Figure (3).



third stage: 1975-1986

Studies during this stage focused on studying comprehensive transportation for the city of Baghdad, where a group of consultants (Swiss and German) was contracted after the recommendations made by PolSERVICE on the necessity of establishing the Baghdad Metro system. The study lasted for two years between (1975 – 1977).

Figure (3) the proposed PolSERVICE Foundation plan for the design of Baghdad [4]

In the year (1979), the Iraqi Ministry of Planning contracted with Scott Wilson to prepare a study called the Baghdad Comprehension Transport Study (BCTS) as well as another study to control the traffic light system.

The third study presented by JICA (Japan International Cooperation) came as part of a study that is prepared and presented its final report in the year (1986) called (Study on Improving Urban Transport for the City of Baghdad(

UTIs) (Urban Transport Improvement Study), the company (JICA) (the Japanese International Joint Stock Company), recommended that the time limit for implementation does not exceed the year (1995) as it is a short or medium-term plan. The main objectives of the study were the most important development of some secondary centers. In the city of Baghdad, such as (Al-Kadhimiya, Al-Mansour, Sadr City, and New Baghdad), to encourage decentralization, which would secure the redistribution of traffic.

Fourth stage: 1990-2010

In the late eighties of the twentieth century, an agreement was reached between the Baghdad Municipality and the Japanese Consulting Group) JCCF) on developing and updating the comprehensive development plan for the city of Baghdad, and the target year (2015). These companies submitted multiple reports, but the work was stopped due to the Gulf War in the year (1990). The last one was in March of the year (1990). Initially, the company presented a report on Integrated Development Design (ICDP) (Integrated) JCCF.1990). This study is considered the last of the foreign studies presented in the field of urban planning, in the last century. In 2010, an agreement was reached between the Municipality of Baghdad and the Lebanese company (Khatib and Alami), to study the comprehensive development plan until 2030, through which the study of the reality of the situation for the whole of Baghdad and the development of future proposals, the study has not been completed so far (1/12/2019), where I discussed Baghdad Municipality, report of the fourth stage of the comprehensive development plan to guide the future growth of the city and define its main requirements through a comprehensive view of collecting aspects of development and development axes in all fields until 2030.

And after more than 37 years have passed since the last development plan was prepared for the city of Baghdad, as it included the comprehensive development plan in its reports in its early stages, as well as the description of the study's work, this comprehensive development plan should be different from previous studies, and what distinguishes it from it as being a flexible and updated plan that deals with Obstacles and developments related to the city's continuous expansion

Table (2) The stages of urban use expansion at the expense of green cover

fourth stage			third stage			second stage			first stage			Municipal	
Other Use %Percent	Green utilization %rate	total Km ²	Other Use %Percent	Green utilization %rate	total Km ²	Other Use %Percent	Green utilization %rate	total Km ²	Other Use %Percent	Green utilization %rate	total Km ²		
63.85	36.15	5775	41.1	58.9	375	33.49	66.51	1085	19.65	80.35	1085	Al shaab	1
81.92	18.08	1305	75	25	1075	68.77	31.23	5.61	62.11	37.89	1071	AlGhadeer	2
74.46	25.54	1565	38.4	61.6	1741	36	64	1705	36.65	63.35	13975	NewBaghdad	3
98.05	1.95	14325	100	0	1235	100	-	1665	87.15	2.85	17325	Rusafa	4
79.25	20.75	1315	44.6	55.94	1175	41.44	58.56	1172	41.77	58.23	12175	Karrada	5
74.16	25.84	18175	73.96	26.04	1992	41.21	58.79	1.37	60.03	39.97	11725	ALsader / 1	6
63.52	36.48	1966	62.1	37.9	1245	52.35	47.65	5.61	49.85	50.15	11615	ALsader / 2	7
91.83	8.17	17775	80.24	19.76	1075	33.49	66.51	1085	64.75	35.25	16075	Adhamiya	8
76.16	23.84	1545	55.6	44.4	1093	50.86	49.14	1125	45.13	54.87	15375	Total Rusafa	
59.49	40.51	1458	43.39	56.61	1133	33.51	66.49	0.83	31.28	68.72	18275	Mansour	9
54.28	45.72	1016	46.76	53.24	1125	21.8	78.2	15375	10.02	89.98	1016	Rashead	10
59.1	40.9	13925	31.95	68.05	1385	23.38	76.62	15375	12.46	87.54	18875	Shualaa	11
100	-	15475	100	-	188	76.8	23.2	15475	62.88	37.12	15475	Karkh	12
40.37	59.63	16175	34	66	1175	23.37	76.63	11175	8.26	91.74	13312	Doarah	13
53.14	46.86	1942	44	56	1175	33.13	66.87	14025	21.11	78.89	16642	Kadhimiya	14
52.26	47.74	17175	45.62	54.38	1175	31.23	68.77	19225	19.46	80.54	19625	Total Karkh	
14.69	37.27	1675	48.4	51.6	1105	39.34	60.66	1335	30.01	69.99	1505	Total Baghdad	

[5] Source: The researcher depends on the Ministry of Water Resources, the General Directorate of Surveying, the Map Production Department, the aerial image of Baghdad Governorate for different years and the map of Baghdad for different years,

[6] Program (ARC, GIS 10.6) from ESRI.



Figure (4) the stages of urban use expansion at the expense of green cover (Baghdad morphology from 1970 to 2010) [2].

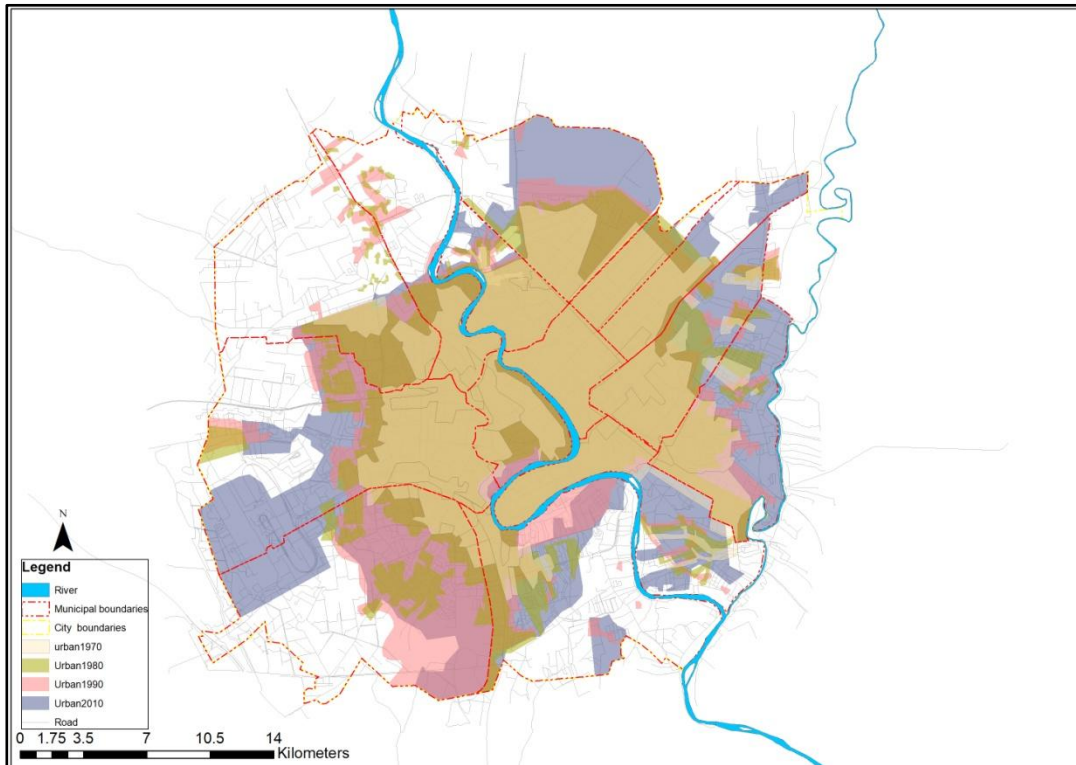


Figure (5) The nature of urban sprawl or cancer expansion in Baghdad [2].

Findings and Recommendations:

-One of the most impressive current practices in facing this phenomenon is the decision to own lands for transgressors outside of the basic designs of cities in exchange for a sum of five percent of the plot allowance, and the rest in installments for 20 years. This negative, unplanned intervention on agricultural lands is similar to supplying cancer cells with new blood and raising the natural elements in the degree of expansion that reach the point of proposals or final resettlement with the provision of free facilities.

-To reduce the obstacles that may arise as a result of these decisions, a preventive study must start in accordance with limited material resources and lead to high economic feasibility, and then enter treatments that include stages based on priority or importance and the availability of capabilities, so studies must be expedited Preventive planning according to approved standards, especially in comparison with the high costs of treatment, its complications and its disadvantages in the future, and the necessity of spatial organic containment and reducing the areas of slum spread to preserve the remaining threatened lands and stop the accumulated causes of destruction, so this requires drawing the limits of containing the random tide within what has been termed. Redline. Through monitoring and law enforcement capabilities, and this is done after taking preventive intervention measures depending on the zoning of lands according to their yield, use, and density, and addressing their problems inappropriate ways, whether by eradicating some of them that are incompatible with the environment and preserving others that may be integrated with the urban environment in all economic, social and environmental aspects.

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