



An Analytical Study of the Informal Housing Problem in Al-Kut City (2010-2025)

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Abstract

Studying informal settlements in the city of Al-Kut is of paramount importance, given the significant impact this issue has on the lives, living standards, and social conditions of the residents. This is particularly relevant to the study period spanning 2010 to 2025, during which cities across Iraq—including Al-Kut—witnessed a widespread proliferation of informal settlements. These settlements were driven by low-income individuals unable to purchase real estate or residential land due to population growth and high market demand, which caused property prices to soar. Given the disparity between the cost of real estate and residential land in the city of Al-Kut and the residents' meager incomes—which are insufficient to meet their housing needs—and in the absence of long-term urban planning to accommodate population growth, informal settlements have emerged. These settlements have sprung up in vacant spaces between city neighborhoods, along the banks of small streams situated amidst residential areas, and on empty lots owned by government agencies. Consequently, as this phenomenon represents one of the most significant urban planning challenges facing Al-Kut, he studies addressed the issue of informal housing—examining its negative environmental impact, the strain it places on urban infrastructure and state-provided services for the residents of Al-Kut, and the factors driving its proliferation. It analyzed the phenomenon's spatial and demographic characteristics, as well as its economic, social, and environmental consequences, while exploring ways to mitigate it. Employing a descriptive-analytical approach, the study utilized demographic and planning data, along with existing research concerning Al-Kut and Wasit Governorate. The findings revealed that informal housing is linked to several key factors: the housing deficit, high prices for land and residential units, rural-to-urban migration, and encroachment upon government and agricultural lands. The study also showed that these communities suffer from a clear lack of basic services and infrastructure, which has negatively impacted the living standards of the residents and the urban environment of the city. Therefore, the study recommended adopting integrated housing policies, providing suitable housing projects, developing infrastructure, and addressing violations according to a sustainable planning vision that contributes to improving the urban reality and achieving balanced spatial development.

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INTRODUCTION

Cities are among the most complex human phenomena on Earth, housing approximately 42% of the world's population. They are the centers of political, economic, and social power and suffer from numerous problems. Consequently, many specialists in various fields have focused on studying these problems and attempting to find successful solutions. Urban geography, in particular, has been concerned with revealing the intricate spatial relationships between the urban fabric and its functional structure, which is represented by the various human activities on the land they inhabit. One of the city's functions that has received attention is its residential function. The problem of informal settlements is a major and significant issue facing most Arab and international countries. This phenomenon has social, economic, political, environmental, and health dimensions. The topic of informal settlements has occupied many social scientists, geographers, and environmentalists, especially in developing countries that experienced significant urban growth in the 20th century. Cities attracted large numbers of people from surrounding rural areas and villages due to the advantages they offered, such as housing and job opportunities. All of this contributed to an increase in the urban population, which put immense pressure on the infrastructure and led to overcrowding in residential units and neighborhoods. This has driven people to settle in informal settlements on the outskirts of cities and in the vacant spaces between residential neighborhoods, utilizing green spaces and recreational areas, despite lacking the most basic necessities of life. These areas lack water, sewage, and electricity networks, and they also represent breeding grounds for crime, including theft, murder, armed robbery, and other offenses. The housing units in these informal settlements are characterized by the use of cheap materials such as corrugated iron, cinder blocks, and other materials. The phenomenon of informal housing has economic dimensions that are impacting the social organization of urban areas, leading to the spread of poverty, encroachment on state lands, and the expansion of unplanned construction, which in turn affects the morphology of planned urban areas. The political dimensions are no less important than the economic and social ones, including the weakening of the rule of law, the rise of tribal power, and the emergence of organized groups within the informal settlements that threaten the security and safety of urban areas. These groups are based on fanaticism, and the fear of them has become a constant preoccupation for residents, creating ongoing anxiety about urban planning and design, which in turn affects the present and future morphology of the city.

RESEARCH PROBLEM

One of the most prominent problems plaguing the city of Kut is the issue of informal housing. This problem became glaringly apparent after 2003 and intensified significantly after 2010. The political and economic conditions that followed the American invasion of Iraq, the collapse of the political system, the absence of the rule of law, and the soaring prices of serviced residential land compared to the income of a segment of the population—all these factors, among others, led to the proliferation of informal settlements on the outskirts of Kut and within its residential neighborhoods. These settlements exploited vacant spaces within the city and the lands of destroyed military camps, which were transformed by impoverished residents of Kut and migrants from other Iraqi cities into unregulated, haphazard housing areas lacking the essential services needed by the citizens of Wasit to live in a suitable environment that meets their basic rights to a free and dignified life. This phenomenon has had negative repercussions on Kut, becoming a serious problem that worsened between 2010 and 2025, resulting in a dire situation for the city's districts. This situation severely impacts Kut's infrastructure and places immense pressure on its services. The areas of Al-Kut that are provided to its residents

also distort the urban planning of the city and harm the aesthetics of its urban design. Therefore, it is necessary to study it analytically in order to solve this problem and provide solutions and proposals to solve this problem.

RESEARCH HYPOTHESES

The research hypothesizes that the phenomenon of informal housing is closely linked to the political situation of the country and the weakness of the rule of law on the one hand, and on the other hand, the low per capita income and the inability to purchase a housing unit within the planned urban expansion of the city of Kut due to the high value of real estate due to the increased demand for officially planned housing units resulting from the increase in population due to the increase in births and the increasing number of migrants to the city of Kut from various Iraqi cities, due to the geographical, economic and security characteristics that make the city attractive to residents. This necessitates the study proposing strategies capable of reaching solutions that contribute to reducing unplanned urban expansion through complex geographical analysis to eliminate the expansion of informal housing and limit its spread among the neighborhoods of the city of Kut and its outskirts. Research Objective: The research aims to study the problem of informal housing in the city of Kut through an analytical study from 2010-2025, to identify the reasons for its spread during this period, and to develop sustainable strategies to reduce the spread of informal housing within the city and its outskirts.

RESEARCH METHODOLOGY

The study adopted a descriptive analytical approach to informal settlements within and around the city of Kut. This was achieved through interviews with residents of these settlements to identify the main reasons that forced them to live in these areas, the extent of their suffering from a lack of health and educational services, and the absence of the most basic necessities for a free and dignified life.



Figure .1. Map of Iraq showing the location of Wasit Governorate



Figure.2: Map of

Wasit Governorate showing administrative units

The Importance of the Study

The importance of this study lies in its analytical nature. It examines and clarifies the complex geographical relationships between the temporal and spatial factors contributing to the emergence of informal housing, and their interaction with the country's economic and political factors. The study explores the nature of these factors and their interplay, which led to the emergence of this problem, and analyzes its negative effects in order to develop sustainable strategies for finding radical solutions to the problem of informal housing within the city of Kut.

RESEARCH STRUCTURE

It includes four sections:

- *Section One: Concepts and Terminology of Informal Settlements*
- *Section Two: Spatial Distribution of Informal Settlements within and on the Outskirts of Al-Kut City and Forms of Informal Settlements in Al-Kut City*
- *Section Three: The Emergence of Informal Settlements and the Reasons for the Emergence of Informal Settlements in Al-Kut City*
- *Section Four: The Main Characteristics of Informal Settlements, the Characteristics of Informal Settlements Residents, and the Problems of Informal Settlements*

Section One: Concepts and Terminology of Informal Settlements

The term "informal" is derived from the word "randomness," which means the absence of a pattern or order. Informal settlement is unorganized housing, meaning it is not arranged according to a specific system or follows a specific pattern. It is unplanned housing. There are several terms used to describe informal settlements:

- Illegal Housing
- Informal Housing

- Slums
- Informal Settlements

Informal settlements are defined as unorganized, unplanned, and illegal residential areas characterized by poverty and a low standard of living. There are several definitions, the most prominent being that of the Arab Urban Development Institute, which defines them as areas where housing has been built without permits on state-owned land and has certain characteristics, including... 1- Population overcrowding 2- Poor infrastructure in informal settlements. The Syrian Association website summarized the concept of informal housing as a phenomenon of population growth arising from the will of individuals, unplanned and unregulated. This irregularity is evident in the unevenness of street widths and the irregular layout of dwellings, creating informal housing that blends with the urban fabric of surrounding areas, contradicts natural urban expansion patterns, and violates urban planning laws. Residents themselves plan and build these settlements, often on vacant land or empty spaces within or on the outskirts of residential areas. Informal housing is defined as (dwellings built without legal permits on land not designated for construction, owned by the government or individuals,

and in locations that may not be suitable for development). Informal settlements can also be described as (a group of dwellings built from cheap, low-strength materials such as mud, stone, or corrugated iron). They are also defined as (areas that tend to expand onto the edges of neighboring areas, allowing for continuous occupancy). Its distribution) and the informal areas include another concept such as the concept of (deteriorated areas in which social discord is common among its inhabitants and which lack the simplest services and the requirements of suitable housing, as well as lacking infrastructure services such as potable water, electricity, paved roads and other basic services.

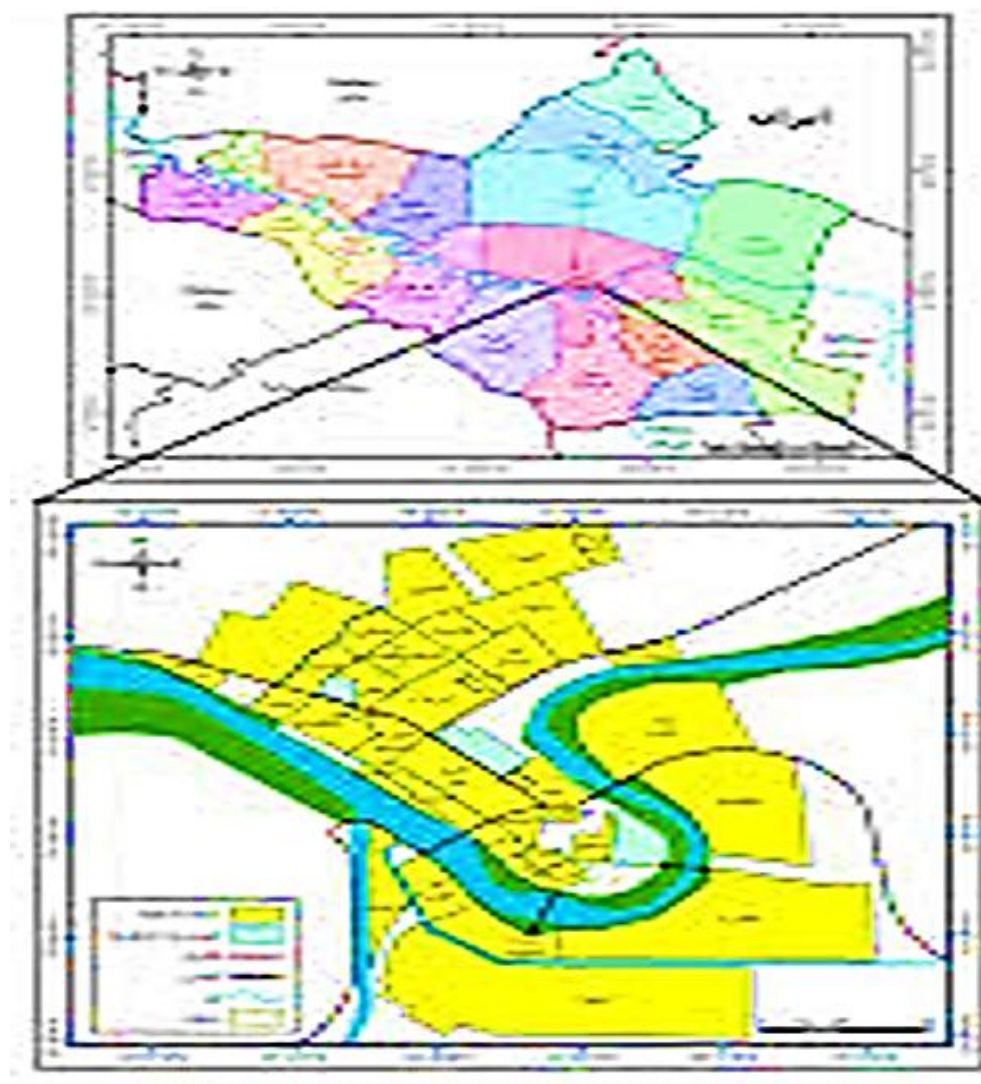


Figure 3: Geographical distribution of informal settlements in the city of Kut

The most comprehensive and internationally accepted concept is the definition of the United Nations Human Settlements Centre, which is (informal settlements are a population gathering with economic and social characteristics in poor construction that lacks

basic services. As for the legal aspects of ownership, they are illegal, and the types of construction and its materials, although they are important characteristics, are secondary). Informal housing is classified according to its legal names, which are as follows: 1- Informal housing 2- Cancer housing 3- Marginal housing. All these names fall under the name of informal housing.

the second section covers the spatial distribution of informal settlements within and around the city of Kut, and the forms of informal housing in Kut. The geographical distribution of these settlements in Kut is divided into four sections, each differing from the others in terms of land ownership, type, functional use, and other factors. It is noteworthy that most of these informal settlements are located on the city's outskirts, occupying surrounding agricultural lands. Additionally, some of these settlements are situated within or interspersed with planned and organized neighborhoods, exploiting vacant spaces designated for other uses. Green spaces and recreational areas are frequently encroached upon. The field study of these informal settlements reveals that housing in Kut takes only two forms: 1. Informal settlements within city neighborhoods – these are often located within residential areas, utilizing vacant spaces near rivers, such as those at the ends of the first and second Khajiyah districts, and in the Damouk and Tashash districts, among others. These settlements are characterized by their unsuitability for habitation and the inability to modify them, impacting the city's morphology. 1- Intentionally exploiting lands within the city that are designated for other uses. 2- Informal settlements on the outskirts of the city and riverbanks – These neighborhoods are located on the outskirts of the city and are often outside the master plan for development and construction. They thus exploit agricultural lands surrounding the city and some lands designated for industrial use. They are divided into two categories: 1- Permanent residential areas – where the type of buildings is solid, good quality, and suitable for human habitation, such as Al-Hakim 1st and 2nd neighborhoods, Al-Jawadain neighborhood, Al-Khadraa neighborhood, Al-Amiri neighborhood, and the New Kut area. 2- Temporary areas, characterized by the nature of the housing units, which are fragile, dilapidated, and unfit for habitation and can be easily demolished, as their building materials are made of corrugated iron and concrete blocks, such as the Military neighborhood and Sayyid Hashim neighborhood. Informal housing in all its forms and types is characterized by being unofficial and violating planning regulations and laws because it is built on lands not designated for residential use and without legal permits, thus exploiting the absence of law. Third section: The emergence of informal housing areas in the city of Kut and the reasons for the emergence of informal housing in the city of Kut. The emergence of informal settlements dates back to the beginning of the 20th century, linked to the rapid urban expansion of cities, the concentration of government services and institutions in major urban centers, and the rise of numerous modern industries and good job opportunities. This led to increased internal migration and displacement from rural to urban areas in search of better employment. The proliferation of informal settlements in Iraq generally increased after the political events that followed the US-led invasion and the collapse of the Iraqi political system in 2003. This period was marked by security lapses, lawlessness, and the rise of sectarianism and terrorism within Iraqi cities, affecting various segments of civil society. The subsequent war against ISIS in 2014 further exacerbated the situation, leading to the displacement of thousands of citizens from ISIS-occupied areas to safer Iraqi cities, including Kut. The Central Statistical Organization released the results of its comprehensive survey of informal settlements in Iraq for 2013, estimating their population at approximately 2.4 million, excluding the Kurdistan Region, where the number of dwellings reached 346,881, representing 7.3% of the total population. The total number of housing units in Iraq is estimated at approximately (4.752) million. Baghdad Governorate recorded the highest percentage at (33.4%), followed by Basra Governorate at (13.8%), while Muthanna Governorate recorded the lowest percentage of informal housing units at (0.3%).



Figure 4: Spatial Distribution of Informal Settlements in Al-Kut City

Researcher's Source: Based on the GIS Division Map of Al-Kut Municipality Directorate for 2022

ام حلاثة 45				السفحة 44				number	
Area_m2	unm_of	NAME	number	Area_m2	unm_of	NAME	number	الوافد	62
21117	45	حي الجامعة	29	137434	44	السفحة	36		
155253	45	حي الجامعة	30	197887	44	السفحة	37		
58241	45	حي الجامعة	31	12712	44	السفحة	38		
47011	45	حي الجامعة	32	88046	44	السفحة	39		
100281	45	حي الحوراء الاولى	33	1481622	44	السفحة	40		
9236	45	حي الحوراء الاولى	34	187896	44	السفحة	41		
593102	45	حي الجامعة والمنظر	35						
الخاجية 38				ام هليل 37				number	
Area_m2	unm_of	NAME	number	Area_m2	unm_of	NAME	number		
41367	38	الكفاءات	15	63828	37	مقاطعة	22		
22120	38	العمارات السكنية	16	186568	37	مقاطعة	23		
145427	38	الخاجية	17	2966022	37	ام هليل	24		
11526	38	الخاجية	18	48020	37	ام هليل	25		
				348047	37	ام هليل	26		
				267469	37	ام هليل	27		
396547	46	نصف الدجيلي	الوافدين	61	202037	28	النبيه	63	

Figure .5; Distribution of informal residential areas by municipal sector in Al-Kut city for the year 2025. Source: Researcher based on the GIS map of the Al-Kut Municipality Directorate.

Table .1. Distribution of informal housing units by municipal sector in the city of Kut. Source: Researcher based on field study.

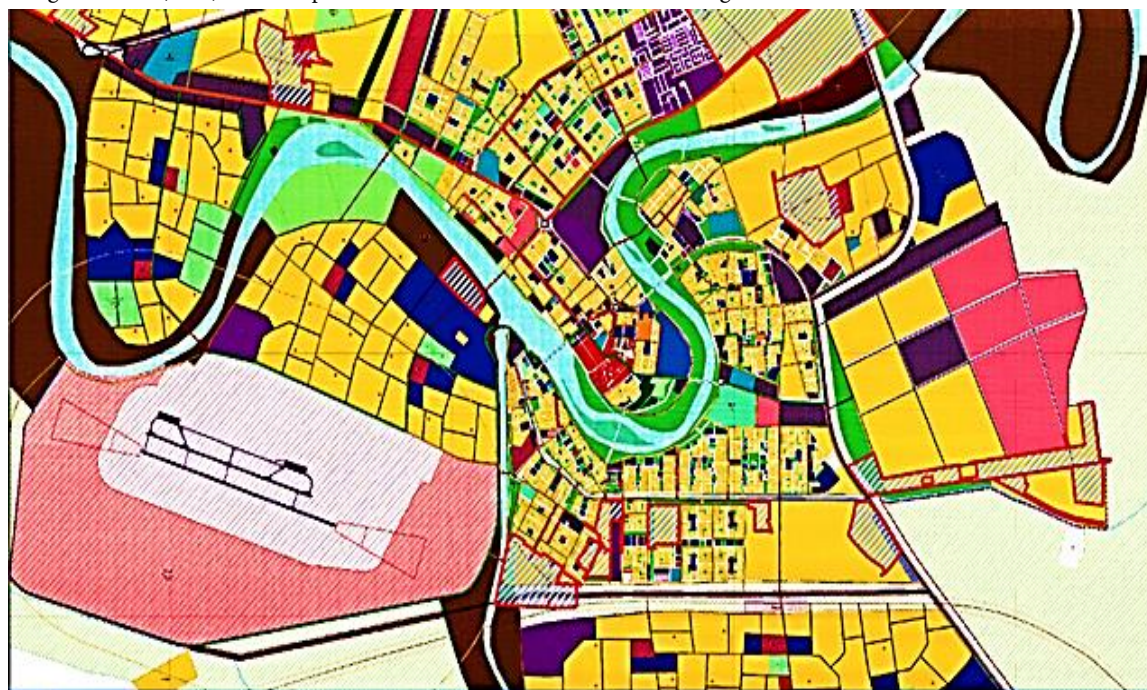
Municipal Sectors	Number of Dwellings	Percentage of Master Plan
Al-Kut City Center Municipal Sector:	270	23,22
Al-Ijahad District Municipal Sector: 2905, 19.57	2905	19,57
Al-Anwar District Municipal Sector: 5060, 36.55	5060	36,55
Damouk Al-Tashash District Municipal Sector: 906, 40.88	906	40,88
Al-Khajiyah District Municipal Sector: 50, 4.11	50	4,11
Al-Khadra District Municipal Sector: 223, 3.27	223	3,27
Al-Kut Al-Jadeeda Area Municipal Sector: 423, 7.64	423	7,64
Al-Amiri District Municipal Sector: 290, 6.83	290	6,83
Al-Hakim District Municipal Sector: 1, 2, 5940, 14.03	5940	14,03
Al-Jawadin District Municipal Sector: 196, 5.86	196	5,86
Al-Hawraa District Municipal Sector: 259, 6.95	259	6,95
Al-Safha Al-Zanabra District Municipal Sector: 385, 95, 7	385	7 , 95
Al-Safha Al-Tadhamun District Municipal Sector: 269, 6.90 Al-Jiyazna Municipality Sector 340 20, 7	269	6,90
Al-Karama Municipality Sector 59 46, 4	340	7 ,20
Total	18575	100%

Reasons for the Emergence of Informal Settlements in Al-Kut City

There are a number of underlying reasons that led to the emergence of informal settlements in Al-Kut City (the study area). These can be classified into direct (natural) and indirect (human) causes, as follows:

First – Direct (Natural) Causes: A number of natural causes affecting the emergence of informal settlements include natural population growth. Developing countries, including Iraq, witnessed a significant and noticeable increase in population during the latter half of the 20th century. This is attributed to improvements in living standards in these countries, particularly in healthcare, where the number of births exceeded the number of deaths. This was accompanied by the spread of hospitals and health clinics, increased cultural and health awareness among the population, and advancements in medical science, which led to the control of most diseases.

Second – Indirect (Human) Causes: These include significant and increasing internal migration from rural to urban areas. This migration is driven by the job opportunities offered by cities, especially for young people, due to the presence of numerous factories and commercial centers in Al-Kut, such as the textile factory and the liquefied gas production plant. Thirdly - (Security reasons) These are the reasons that led to the increase in the population of Wasit Governorate and consequently the increase in the population of Kut city and the emergence of informal settlements in the city. The political events coincided with the American invasion of Iraq in 2003, the fall of the regime, the absence of the rule of law, and the emergence of abhorrent sectarianism, which was followed by the migration of many citizens of the Shiite sect from predominantly Sunni cities to predominantly Shiite cities, including Kut city. This led to an increase in the emergence of informal housing. Likewise, the events that Iraq witnessed after the entry of the terrorist organization (ISIS) into Iraq and the terrorist crimes it committed against the inhabitants of these cities led to the displacement of



thousands of citizens to the southern governorates of Iraq, including Kut city, which was a safe haven for the displaced and refugees, many of whom resorted to building informal housing settlements as a result of their difficult living conditions,

which increased the phenomenon of informal housing within Kut city.

Figure .6. Geographical distribution of informal housing areas in Al-Kut city, utilizing green spaces and vacant areas in the city's master plan.

Source: Researcher based on the GIS map of the Al-Kut Municipality Directorate for 2023.

Fourth – Economic reasons: Among the most prominent reasons for the emergence of informal housing in the city of Kut are:

The high prices of real estate and residential land due to increased demand for serviced residential land compared to the low income of some individuals with limited income, which forces them to build informal housing to accommodate their families and meet their needs, the most important of which is housing.

Fifth – Educational reasons: Some farmers resort to leaving their rural areas and settling in the city of Kut to ensure their children can attend educational institutions such as schools, institutes, and colleges. The University of Wasit and its location in the center of Kut also contributed to the migration of some rural residents to the city center.

Sixth – The absence of deterrent laws to limit the spread of the phenomenon of informal housing.

Fourth Section: Main Characteristics of Informal Settlements and Problems of Informal Housing

Main Characteristics of Informal Settlements: There is a large set of basic characteristics and features of informal settlements in the city of Kut, the most important of which are the following:

- Most of the dwellings in informal areas and those exceeding the city's master plan are of a traditional character and do not belong to the city. Regarding the supporting urban fabric in the study area:
- Most, if not all, of the residential buildings were constructed without permits from the state.
- All informal settlements lack urban planning because they are not legal and were not included in the city's urban plan.
- There is a lack of homogeneity among the buildings in informal settlements due to the variation in building materials and the different sizes of the informal residential units.
- Most buildings in these settlements do not represent an extension of the city's master plan; rather, they are haphazard areas lacking services and infrastructure because they were built randomly and without a planned architectural scheme.
- Most land uses in informal settlements are incongruous; for example, residential use is found alongside industrial or commercial use.
- Most informal settlements were built on agricultural land surrounding the city of Kut, leading to the conversion of agricultural land to residential use.
- Most settlements are subdivided and sold by individuals who own the agricultural land (agricultural title deeds). These plots are sold at low prices after being built by residents of the informal settlements as unregulated and unequal housing units. The haphazard layout of alleyways leads to urban distortion.
- Neighborhoods suffer from a lack of services and infrastructure, relying on the infrastructure of neighboring organized residential areas. This places significant pressure on services in formal residential areas.
- Most informal settlements are built with cheap building materials such as mud bricks, reeds, and corrugated iron, as these are inexpensive and do not cost residents much. However, informal settlements also contain houses built with brick and cement. The study observed many large, modern houses constructed with brick and cement.

Problems of Informal Housing in Kut

The spread of informal settlements has paralleled urbanization in developing countries due to a lack of sound scientific planning. This has hindered development in many sectors. Most informal settlements suffer from various problems, which differ from one area to another. Among the most important are: First: Housing Problems - Field studies of informal settlements in informal housing neighborhoods revealed that 60% of the total housing units are owned by residents due to the ease of construction. Informal housing is characterized by low construction costs, with 30% of residents paying very low, symbolic rent and 10% living free of charge, as shown in Table and Figure (8). Regarding the condition of the housing and the number of rooms, 27% of the dwellings are in good condition, 50% are in poor condition, and 23% are damaged due to age. They are not built according to architectural standards, and some are on the verge of collapse. The field study revealed that 45% of the dwellings consist of a single room, 22% have an area of 50-100 square meters per person, and 74% lack a separate kitchen.

Secondly, there are problems related to the high percentage of young people in informal housing areas. The 4-19 age group is more prevalent than other age groups due to higher fertility rates. The age-gender structure of the population is also characterized by a high male-to-female ratio.

This is due to the large number of males who have migrated from their areas in search of work. Informal housing is also characterized by large families, sometimes reaching eight members, and by rapid population growth. It reaches 36 per thousand.

Thirdly, problems with public services and facilities: Most informal settlements suffer from a lack of public services and facilities, and even when they exist, they are insufficient and do not meet the needs of the residents. Therefore, residents resort to relying on services available in neighboring residential areas, such as illegally tapping into the water and electricity networks, as is the case in the Al-Hakim 1st and 2nd districts, Al-Jawadain neighborhood, Al-Jihad neighborhood, Al-Khadraa neighborhood, the new Al-Kut area, Al-Amiri neighborhood, and Sayyid Hashim.

Fourth - Problems with Educational Services: The lack of nearby schools forces residents of informal settlements to rely on the city for their educational needs by enrolling in urban schools.

Fifth - Problems with Health Services: Due to the inadequacy and poor quality of services available to residents of informal settlements, they suffer from numerous health problems, including drug abuse and addiction, and an increase in cases of mental breakdown. Because these areas were built without planning or consideration and are not included in the urban planning and design division of the Al-Kut Municipality Directorate, they lack health centers and therefore rely on health centers and clinics in organized and planned residential areas.

Fifth - Problems with Transportation Services: Residents of informal settlements suffer from the lack of paved roads and transportation infrastructure.

Sixth - Social and Security Problems: Informal settlements are generally described as fertile ground for crime of all types and levels, such as theft, murder, and other crimes. The emergence of organized groups within the settlements causes concern for some residents and weakens the rule of law.

Economic Problems: Residents of informal settlements suffer from high unemployment rates, particularly overt unemployment and a high percentage of unemployed individuals. The work of heads of households is limited because they are unskilled laborers in economic activities due to high illiteracy rates. Given the abundance of labor and the scarcity of job opportunities, they work for low wages to secure their families' needs. Additionally, child labor is prevalent, with children working for less than adult wages to support their families, particularly in households that have lost their breadwinner due to the death of the head of the household. Furthermore, retirees represent a facet of unemployment, constituting 4.93% of the workforce. They are classified as an inactive segment due to their advanced age. The extent of unemployment can be gauged by the actual dependency ratio for the study area (914.9%), details of which can be found in Table (2). Another economic problem plaguing informal settlements is the waste of financial revenues. While most informal settlements share the city's services, such as water, electricity, and infrastructure, they do not contribute to the associated revenue. Environmental problems also exist – some informal settlements suffer from a lack of sewage networks, leading to the accumulation of wastewater in nearby streets or open areas. It is discharged by the locals into nearby river streams, contributing to their pollution. can be observed through Table (2).

Table .2. dependency in informal settlements in Al-Kut city for the year 2025. Source: Researcher based on field study.

Informal settlements:	Population	Number of workers,	Number of dependents	Dependency ratio (%)
Al-Anwar District	738	322	416	1,29
Al-Hawraa District	575	150	425	2,83
Al-Hakim 1 & 2	3237	838	2399	2,86
Zanabra	398	121	277	2,28
Al-Tashash	365	86	279	3,24
Al-Jihad	1945	822	1123	1,36
Al-Khadraa	1520	480	1040	2,16
Al-Amiri	1469	645	824	1,27

Al-Kut Al-Jadeeda	1840	622	1218	1,95
Al-Khajiyah	300	140	160	1,14
Al-Jiyazna	1800	845	955	1,13
Al-Tadhamun Village	865	365	500	1,36
Oil Street	4579	1579	3000	1,89
Total	19,631	7015	12,616	100%

The true dependency ratio is calculated using the following equation: $100 * x = A/B$

A represents the number of non-working people

B represents the number of working people

Table .3. Housing in informal settlements in Al-Kut city in 2024, where residents suffer from social problems. Source: Researcher based on field study.

Informal settlements	bring together young		problems with neighbors		thefts,		murders		other crimes	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Al-Jihad neighborhood	26	18,27	3	14,29	8	15,69	--	--	4	7,84
Al-Hawraa neighborhood	25	17,48	2	23,81	7	13,73	2	2,5	3	5, 8
Al-Anwar neighborhood	15	10,69	2	22,20	5	9,80	--	--	12	23,53
Al-Jawadain neighborhood	39	27,35	27	42,37	12	23,53	6	7,5	10	19,61
Sayyid Hashim neighborhood	2	1,40	--	---	--	----	---	---	2	3,92
Al-Hakim First neighborhood	15	10,69	2	22,20	12	23,53	---	---	2	3,92
Al-Hakim Second neighborhood	11	11,40	2	22,20	7	13,73	---	---	5	10,25
Al-Shuhada neighborhood	21	15,24	3	24,12	--	---	---	---	2	3,92
Al-Khadraa neighborhood	--	--	--	---	--	---	---	---	5	10,25
Al-Amiri neighborhood	8	10,3	--	---	8	15,68	2	2,5	4	9,88
Total	162	100	41	100	59	100	10	12,5	49	100

note that there are some informal settlements for which accurate and clear statistics are not available due to their dispersal among residential areas.

Conclusions:

- 1- The city of Kut has expanded unplannedly (randomly) without intervention from the competent authorities, namely the municipality, as evidenced by the presence of informal settlements.
- 2- The study found that most residents of these informal settlements and the study area are poor, with a low standard of living, and work in simple and marginal jobs.
- 3- The study revealed that informal settlements suffer from a lack of services such as water, electricity, health centers, schools, and sewage networks. Therefore, residents meet their service needs by encroaching on the services of neighboring residential areas.
- 4- The low income level of residents in informal settlements places them below the poverty line, preventing them from meeting their basic needs and hindering any improvement in their economic and living standards.
- 5- The political situation in the country, the 2003 US invasion of Iraq, and the absence of the rule of law contributed to the spread and emergence of informal settlements in the city of Kut. Residents encroached on state-owned lands and destroyed military camps, exploiting them for unregulated and illegal construction.
- 6- The low cultural and educational level of residents in informal settlements and the widespread illiteracy among them.
- 7- The security situation in the country, following the emergence of abhorrent sectarianism and the forced displacement of Shiites from predominantly Sunni areas, and the subsequent influx of Shiite individuals into predominantly Shiite areas, including Kut, has led to a significant increase in the population. This has resulted in some residents resorting to building and spreading informal settlements.
- 7- These informal settlements have posed an environmental challenge, as most lack sewage networks. This has led to the accumulation of sewage in areas close to residential areas, forcing residents to divert it into rivers, resulting in pollution, disease outbreaks, and the spread of epidemics.
- 8- High rates of crime, theft, murder, and drug trafficking have been observed in some informal settlements.
- 9- The urban landscape of Kut has been marred by the presence of these unplanned settlements, which are inconsistent with the city's urban planning and design. Kut was once considered one of the safest cities, and this situation, particularly after the events of 2014 involving ISIS, has contributed to the displacement of many people from the governorate.

Recommendations:

1. It is recommended The study aims to raise the living standards and income of residents in informal settlements through financial assistance provided by the government and financial institutions, such as loans or grants.
2. The study recommends allocating serviced plots of land within the city's urban planning and design for residents of informal settlements in Kut.
3. The study recommends focusing on the cultural and educational level of residents in informal settlements and ensuring their children's access to schools to combat ignorance and illiteracy, thereby creating a conscious and educated generation that contributes to the country's development. This can be achieved by building schools near their neighborhoods within the cities.
4. The study recommends taking deterrent legal measures to prevent encroachment on public lands, holding violators legally accountable, and imposing penalties on them.
5. The study recommends that the private and public sectors contribute to establishing projects and investments to provide job opportunities, especially for residents of informal settlements, to combat unemployment and poverty.
6. The study recommends utilizing modern geographic methods in urban planning and design for the city of Kut. This includes incorporating projected population growth statistics and developing a long-term plan for a period of 50 years to accommodate the anticipated population increase. A plan and strategy to reduce and eliminate the phenomenon of informal housing:

7. Replace public ownership contracts and grant ownership of the land and informal housing units currently occupied by citizens, with payment made in installments to the state over 20 years.
8. Construct low-cost housing complexes to accommodate low-income citizens and reduce the spread of informal settlements in Kut.
9. Remove encroachments by informal settlements on green spaces and vacant lots within cities.
10. Improve services provided by the Kut Municipality to informal areas, such as electricity, water, sewage networks, and asphalt paving.

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