

An Assessment of Informal Housing Policies in Iraq

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Abstract

Housing represents a major problem in Iraq, characterized by a large quantitative and qualitative deficit. The housing problem has accumulated over time and has become deeply entrenched. After 2003, the phenomenon of informal housing has emerged and has rapidly worsened for many reasons. By 2017, the number of residents living in informal settlements had exceeded three million. The National Housing Policy 2010-2016 and its updates, which is the current policy in force, address the general housing problem through seven secondary policies, one of which deals with informal housing. These policies included executive measures within a six-year timeframe. However, the problem of informal housing has not been resolved. Instead, it has worsened.

In this context, this study identifies the defects in the policy in order to amend, update, or reformulate it. It is hypothesized that the success of the housing policy depends on the realism and objectivity of its contents and objectives. Therefore, a theoretical and practical evaluation was conducted of the current informal housing policy, including its planned implementation procedures and time limits.

The evaluation concluded that the policy is largely unrealistic and lacks objectivity. The period for implementation was also too short to achieve the policy objectives. Additionally, relative importance has not been given to the informal housing policy compared to the other six secondary policies. This study suggests updating and reformulating the policy by adding items to its implementation procedures and increasing the period. Priority should be given to the informal housing policy compared to the other policies.

Keywords: Iraq National Housing Policy, Informal Housing Policy, Informal settlements.

Introduction

By 2030, 4 billion people will live in cities, 1.4 billion in slums (Hamdi, 2010). Informal housing is one of the most significant problems in the world, with urban, social, economic, and environmental repercussions. In fact, informal settlements have become a negative phenomenon present in most third-world cities (Van Ballegooijen & Rocco, 2013). These settlements have arisen for various reasons and have become an obstacle to urban planning, as well as economic, social, and urban developments of many cities.

In Iraq, informal housing has emerged due to chronic housing problems characterized by a large quantitative and qualitative housing deficit (Al-Hafith et al., 2018), as well as political, economic, military, and security problems, especially after 2003 (PADCO et al., 2006). The absence of a serious path to deal with the early formation of informal housing is due to the weakness of the state (Kadhim, 2021). For all these reasons, the phenomenon of random housing has emerged in all Iraqi cities and has worsened over time (Steering Committee of the National Program for the Rehabilitation and Organization of Informal Settlements, 2016). Thus, the problem of the study is embodied in the inefficiency of the current housing policy in finding a practical solution to the situation of informal housing. In this context, its objective is to identify the shortcomings in the current informal housing policy in Iraq, in terms of principles, objectives, and characteristics, in order to enable modification, updating, or reformulation.

The paper consists of several sections, starting with the introduction, followed by the second section, which included the theoretical framework by identifying the basic concepts and implications related to the issue. The third section dealt with a review of previous studies that analyzed and evaluated informal housing in Iraq in light of the current housing policy. The fourth section dealt with the evaluation of the informal housing strategy in Iraq, a theoretical evaluation and another practical evaluation by specialized experts, while the final section included the conclusions and recommendations of the research paper.

The Theoretical Framework Informal Housing

Informal housing, in general, refers to dwellings that are built by future occupants without input from formal planning agencies (Esmail & Corburn, 2020), sometimes on land that is not legally owned, and deprived of basic services (Guibrunet, 2015). As cities develop, land prices increase dramatically, and high real estate prices often push poorer city dwellers into the informal housing sector.

The term "informal settlements" has been used to avoid the use of terms such as slums or encroachments (Diab, El Shaarawy & Yousry, 2020). The definition of this term covers several aspects: legal, service (Counihan, 2017), design (UN-Habitat, 2004), and social aspects (Pojani, 2019). The most applicable definition of informal settlements is provided by the UN-Habitat. It defines informal settlements as residential areas in which a group of housing units has been built on land to which the occupants have no legal claim or are illegally occupying them. The settlements are not planned and do not comply with current planning and building regulations (unauthorized housing) (Al-Rahmani, 2013). Therefore, informal settlements are not included in the urban planning of the city, and they are often areas deprived of public facilities and basic services.

These areas arose in the absence of general planning for cities and a departure from the laws of urbanization. In many cities, these areas have multiplied and have spread across to the outskirts of the cities at first, then gradually seeped into the suburbs and then into the interior. According to the above, the characteristics of informal settlements can be defined as follows (Guibrunet, 2015; Ghasempour, 2015; Parikh et al., 2020):

- Lack of basic services
- Substandard housing or illegal and inadequate building structures
- Overcrowding and high density
- Unhealthy living conditions and hazardous locations
- Insecure tenure or irregular
- Poverty and social exclusion
- Minimum settlement size

Most governments, especially in third-world countries, have not been able to find effective solutions to the problems of informal housing. John Turner made his influential argument four decades ago (Turner & Fichter, 1972), and since then it has become common to look favorably on the efforts of the urban poor to build and improve their informal settlements (Mathey, 1992). The basic idea of self-help housing theory is that the urban poor

are able to accumulate various assets and use them appropriately in order to improve their living environments. The theory posits that self-help housing by the urban poor is a solution to the government's failure to ensure the availability of affordable housing in rapidly growing cities. Through this view, poor people strategically improve their housing and living facilities, while weighing their changing priorities throughout their lives.

The Status of Informal Housing in Iraq

Settlements and informal housing units are spread all over Iraq in different types and patterns (Executive Management of the Poverty Alleviation Strategy, 2017; see Fig. 1). In 2017, the number of informal settlements in the governorates of Iraq, except for the Kurdistan region and the governorates of Nineveh, Salah al-Din, and Anbar, reached 3,687 settlements, and the number of informal housing units reached 521,947 units (Table 1). The population living in these houses was estimated at 3,292,606 people, constituting 12.9% of the total population in Iraq. The percentage of residential land use on which the informal complexes were built was 26%, while the percentage of non-residential use was 74%, with the highest percentage in green areas, which amounted to 36% at the national level. (Steering Committee of the National Program for the Rehabilitation and Organization of Informal Settlements 2016) (Executive management of the poverty alleviation strategy, 2017).



Fig. 1: Informal housing units throughout Iraq.

Source: Executive management of the poverty alleviation strategy, 2017

Table 1. Number of informal settlements, units and population in Iraq for the year 2017.
Source: Steering Committee of the National Program for the Rehabilitation and Organization of Informal Settlements 2016 and

Executive management of the poverty alleviation strategy 2017)

	Governorates	Informal Settlements	Informal units	Population
1	Kirkuk	279	60935	
2	Muthanna	120	21432	
3	Maysan	243	19234	
4	Karbala	88	22315	
5	Najaf	89	53810	
6	Basra	677	62602	
7	Wasit	210	42874	
8	Dhi Qar	333	37927	
9	Diyala	172	21402	
10	Diwaniyah	229	17571	
11	Baghdad	1022	136689	
12	Babylon	225	25156	
	Iraq	3687	521947	3292606

Informal Housing Policy in Iraq

Current informal housing policy in Iraq is part of the National Housing Policy (2010), which aims to meet the housing needs of the country by developing the housing sector over a six-year period from 2010 to 2016 (UN Habitat, 2010). The policy was prepared by the Ministry of Construction and Housing in cooperation with the United Nations Human Settlements Program/Habitat, as part of the project to enhance capacity building of the housing sector in Iraq - Phase II. The national housing policy document was launched in October 2010 (during the celebration of World Habitat Day).

The policy document states that the estimated size of the housing need in Iraq is about 2 million housing units, which was also adopted in preparing the national development plan 2013-2017. The housing policy is designed to address specific challenges in the post-war environment in Iraq and are to be reviewed and revised in the medium term to adapt to changing social and economic conditions in the country. The national policy included seven secondary policies, each of which includes a set of sub-policies (Vitasurya et al., 2019). This study focuses on the policy of informal housing.

Literature Review

Some of the studies that have dealt with the informal housing policy in Iraq are as follows:

- **“Iraq Housing Market Study”, 2006** (PADCO et al. 2006): This study is considered one of the most important studies that dealt with the reality of housing in Iraq. It was implemented with the assistance of the United Nations, and the National Housing Policy in Iraq 2010 relied heavily on it. This study diagnosed the problem of informal housing in Iraq, both quantitatively and qualitatively, and recommended the need to address it objectively.
- **“Country Programme Document 2009–2011, Iraq”, 2009** (UN-HABITAT, 2009): This study sets out the main objectives and priorities of the United Nations Human Settlements Program in Iraq. Drafted in collaboration with the Government of Iraq and other national and international partners, including other UN agencies. The overall objective of this document is to promote the Habitat Agenda. UN-Habitat in Iraq plays an active role in strengthening the housing, urban and community infrastructure sectors. The study focused on the housing shortage, the sub-standard housing stock, the deterioration of housing infrastructure, as well as the outdated housing plans and strategies, and the deterioration of the housing legislative and institutional frameworks. The study shed light on internal migration and refugees due to security and terrorist events, and the study did not clearly refer to informal housing.
- **“Meeting the Iraqi Housing Challenge: Policy Options and Development Scenarios”, 2012** (Ernst & Young, 2012): The study analyzed the housing sector in Iraq and the challenges it faces, and proposed three scenarios to fix the situation and provide housing. In evaluating the current national housing policy, including the informal housing policy, the study revealed that it would take several years for the policy to begin producing housing according to actual need and in a consistent manner.
- **“Review of the National Housing Policy in Iraq”, 2013** (Jaafar, 2013): The aim of the study was to assess the feasibility and practicality of implementing the secondary policies, including the informal housing policy. The study found that the planned periods were not sufficient to implement the secondary policies and achieve the goals.
- **“The Roadmap Frameworks of the National Program for the Rehabilitation and Regularization of Informal Settlements”, 2016** (Steering Committee of the

National Program for the Rehabilitation and Organization of Informal Settlements, 2016): The study adopted a strategy to reduce the exacerbation of the informal housing phenomenon, address the causes of its emergence to prevent its recurrence, and propose solutions to solve it. This strategy is fully in line with the current national housing policy, especially the informal housing policy.

- **“Iraqi National Housing Policy Modification”, 2017** (Rawan , 2017): The study was conducted in cooperation with UN-HABITAT to identify the main issues plaguing the current policy, which are as follows:
 - All secondary and sub-policies have the same weight, level of importance, and order of implementation priorities.
 - The period for implementing the policies is unrealistic and impossible to achieve.
 - The implementation of some policies is beyond the capabilities of some parties.
 - The study identified six policies with priority for implementation, except for the informal housing policy, which will have special treatments and periods.
- **"Evaluation of Spatial Factor' Impact on Physical Integration of Informal Settlements: Erbil City – Iraq", 2018** (Mawlan, 2018): This study involved urban integration through the spatial dimension. The integration of informal settlements takes into account all dimensions of urban development such as social, economic, and spatial. The objectives of this research are to identify the main spatial factors that influence the physical integration of informal settlements into the urban fabric of Erbil City and its surrounding neighborhoods. The study proposed local physical treatments and did not link them to national policies and strategies for informal housing.
- **“Towards a Flexible and Sustainable Housing Enabling Approach in Iraq”, 2018** (Al-Essawi, 2018): The study aimed to find flexible objective frameworks for housing empowerment in Iraq. It proposed an enabling formula and procedural mechanisms. The study applied this formula to the national housing policy in Iraq, including informal housing. The study found that enabling policy measures lack comprehensiveness and sustainability, especially with regard to informal settlements.
- **"National Development Plan 2018 – 2022"**, (Ministry of Planning, 2018): this study involved the poor effectiveness of urban planning and the absence of a national housing policy that is responsive to the reality about risk management resulting from crises and conflicts. As poverty rates increased, the informal housing in Iraq expanded to (8%) of the total population living in informal housing and by (7%) of the total number of housing units, where the number of informal units is (347,000) houses which explains the causes and consequences of the lack of urban planning.
- **"Informal settlements in Baghdad City", 2021** (Repeva, 2021): The research deals with the issue of informal housing, urban sprawl on agricultural land, and its impact on the city of Baghdad, which has become a problem facing the city of Baghdad through recruiting agricultural lands and converting them to residential use. This research deals with the causes of informal housing, irregular urban sprawl, and risks of excesses on land uses of land in Baghdad. The research did not refer to the national strategy for informal housing and was limited to approaching the issue physically and at a local level.
- **“Analytical Study of National Housing Finance Policies and Implementation Strategies, Case Study: Baghdad Governorate”, 2022** (Abod, 2022): The study aimed to identify housing financing in light of the “Iraqi National Housing Policy 2010” and its application in Baghdad Governorate. It appeared that the lending policy was difficult to implement due to limited government allocations. Therefore, low-

interest government funds were not directed to low-income families, most of whom are residents of informal settlements. In other words, the housing financing policy did not efficiently address informal housing.

- **"Urban Improvement Strategies for Informal settlements", 2022** (Abbas, 2022): The study dealt with the rehabilitation of substandard settlements in Iraq into ones with sustainable standards by adopting improvement and development strategies and methods of advancement, empowerment, and participation. In its evaluation of the existing informal housing policy, the study indicated the weakness of the state and the ineffectiveness of its practical measures.
- **"Random Change of Residential Use and Its Repercussions on The Environment of Baghdad City", 2022** (Hamdan, 2022): This study examined the residential physical environment situation in Iraq and the city of Baghdad in particular after 2003, where many social and economic variables had a significant impact on the high cost of housing units, which was accompanied by high population growth. All of these factors contributed to the exacerbation of the housing crisis. The increasing demand for Housing led to the emergence of a new housing market (the housing units subdivision market), as a type of organized informal neighborhood that spread very quickly and is characterized by non-observance of the rules of urban planning laws and the provisions of building regulation established by official authorities. The study did not evaluate or critique the national housing policy and its strategies with regard to addressing informal housing

Discussing Previous Literature

In light of the examination of the previous literature, the following findings were made:

- After 2003, informal housing in Iraq became a problematic phenomenon of significant size, in terms of the number of settlements and illegal residents. This has resulted in illegal encroachment on public land for non-residential uses in all cities of Iraq.
- The government was aware of the seriousness of the phenomenon of informal housing, which led to decisions, reports, studies, and workshops aimed at reducing the phenomenon, addressing its causes, and proposing solutions. This was supported by the National Housing Policy 2010-2016 and its updates. However, the phenomenon has continued to worsen with its negative consequences magnified.
- There is a relatively large number of scientific studies that have dealt with informal housing in general, but there is a relative scarcity of studies that have dealt with an objective evaluation of the informal housing policy that falls under the current national housing policy. This has left a knowledge gap that requires further study to objectively reassess the policy in preparation for updating and reformulating a strategy that realistically addresses informal housing.

Research Methodology

The research took a descriptive-analytical approach, in determining and testing the contents of the two sub-policies of informal housing, which were included in the document of the Iraq National Housing Policy 2010. The Assessment involved the following steps:

Step 1: Theoretical assessment (documental analysis), which includes determining the quality of the policy, in light of testing its sub-policies, and its organizational,

institutional, and technical procedures, to determine its suitability for the Iraqi reality and the nature of the informal housing problem.

Step 2: Practical assessment (expert questionnaire), which includes determining the quality of the policy in light of its relative importance and the level of presence of its basic characteristics.

Step 3: Overall assessment, which represents the outcome of the two aforementioned assessments.

The Theoretical Assessment

Table 2 includes details of the informal housing policy document, one of the seven secondary policies included in the Iraq National Housing Policy 2010, currently in effect.

Table 2: Sub-policies of the informal housing policy and its implementation procedures.

Source: (UN Habitat, 2010).

Sub-policy	Regulatory Procedures	Institutional Procedures	Technical Procedures
Informal settlements will be upgraded or redeveloped on a case-by-case basis. A standardized settlement evaluation will be used to define approaches and design interventions tailored to each settlement.	Prepare guidelines for informal area development based on approved legal framework and land use. (2), (MoMPW, MB, and LAs). - Prepare guidelines for redevelopment projects in line with approved land uses. (2), (MoMPW, MB, LAs). - Prepare regulations & procedures for slum development projects and redevelopment projects. (3), (MoMPW, MB)	Technical assistance & capacity building for local governments, in preparing & implementing upgrading projects & redevelopment projects. (3), (MoMPW, Govs).	Carry out feasibility studies on individual informal settlements, and categorize them for upgrading or redevelopment. (2), (MoMPW, MB, Govs, LAs) - Prepare feasibility and design studies for upgrading & redevelopment of informal settlements. (3), (MoMPW, MB, LAs). - Execute upgrading & redevelopment projects. (3), (MoMPW, MB, LAs).
Resettlement will take place fairly, based on thorough consultation with the affected community, residents will be compensated in accordance with the law	Prepare resettlement regulations & procedures for redevelopment projects, which incorporate international best practices. (2), (MoMPW, MB).	Technical assistance to local governments, in preparing & implementing resettlement action plans. (3), (MoMPW, Govs).	Prepare a resettlement action plan for each redevelopment project, including compensation, implementing arrangements, and timeline. (3), (MoMPW, Govs, MB and LA).
Legend: (2) = Medium-term action (starts before July 2011), (3) = Long-term action (starts after July 2011). (MoCH) = Ministry of Construction and Housing, (MoMPW) = Ministry of Municipalities and Public Works. (Govs) = Governorates, (MB) = Municipality of Baghdad, (LA) = Local Authorities.			

First sub-policy "re-development of informal settlements on a case-by-case basis" (UN Habitat, 2010) is impractical and unrealistic given that the number of informal settlements is so large (Executive Management of the Poverty Alleviation Strategy, 2017). It is difficult to deal with each case separately, and therefore, the informal settlements can be classified into a specific number of cases according to their similarities to facilitate dealing with them and developing appropriate solutions.

The procedures planned to help implement the informal housing policy, organizationally, institutionally, and technically, have been partial, fragmented, and inconsistent with the local reality, and have not taken into account the economic, social, political, and demographic changes that have occurred during the period of implementing the policy. The plan has not relied on the planning legacy, nor has it benefitted from previous

policies and experiences. The time limit specified for the implementation of the policy of 6 years has been very short and insufficient to achieve the policy objectives.

The executive procedures were supposed to be within the framework of a comprehensive national housing strategy that reflects the spirit of the policy and includes stages of planning and implementation, distribution of roles and responsibilities within an appropriate institutional system, and a long-term period of no less than 20 years, with five-year stages and annual programs.

The second sub-policy "fair resettlement on the basis of consultation with the affected community" (UN Habitat, 2010) is realistic and objective largely, as it fits mostly the situation of Iraqi society and the variables taking place. For assessing the procedures for implementing the second sub-policy, the same assessment of the first sub-policy applies.

The Practical Assessment

An expert survey was conducted for the period from July 8 to August 2; 2023 to evaluate the current housing policy in Iraq. Eighty-one experts with high academic qualifications participated in the questionnaire, including those with Ph.D., M.Sc., and Bachelor's degrees in architecture, engineering, and urban planning. The experts are working in teaching, research, design, planning, and project management, with years of experience ranging from 15 years and more.

Before analyzing the responses to the questionnaire, a Cronbach's alpha (or coefficient alpha) test was performed by the reliability analysis test in the SPSS program to determine the validity or reliability of the hypotheses. Cronbach's alpha is 0.817 (81.7%), which is the acceptable value of reliability (excellent if $a \geq 0.9$, good if $0.9 > a \geq 0.8$, acceptable if $0.8 > a \geq 0.7$, questionable if $0.7 > a \geq 0.6$, poor if $0.6 > a \geq 0.5$, unacceptable if $0.5 > a$). See Table 3.

Cronbach's Alpha	N of Items
.817	43

The most important questions answered by experts regarding the informal housing policy in Iraq are:

- 1. The level of characteristics presence:** The evaluation of the Informal Housing Policy shows that none of the characteristics are fully present ($81 \geq N > 54$), or in partial presence ($54 > N > 27$), instead, it shows that all characteristics are absent ($27 \geq N > 0$), as determined by the approval of 18 experts for the objective characteristic, 27 experts for the realistic characteristic, 11 experts for the practical characteristic, 14 experts for the flexible characteristic, and 8 experts for the sustainable characteristic.
- 2. The relative importance of the policy:** The experts were asked to rank the seven secondary policies of the National Housing Policy, according to their relative importance. The informal housing policy ranked fifth, as shown in the Table 4.

Table 4: The rank of the informal housing policy according to its relative importance among the rest of the secondary policies, according to the experts

Secondary Policies	N	Mean	Std. Deviation	Rank
Land Management Policy	81	2.4321	1.91009	1
Production Policy	81	3.3951	1.66342	3
Financing Policy	81	3.0247	1.52459	2
Infrastructure Policy	81	3.4198	1.36807	4
Management & Maintenance Policy	81	5.4074	1.44722	6
Construction Materials Policy	81	5.1605	1.34589	5
Informal Housing Policy	81	5.1605	2.22181	5

Discussion of the Findings

The most important results of the study are summarized as follows.

- In terms of the relative importance of the informal housing policy in Iraq, it was found to be important compared to the rest of the secondary policies of the national housing policy. However, this assessment was the result of two contradictory assessments. The experts' opinion was that the informal housing policy is unimportant compared to the urban land management policy and the financing policy, while this study shows through the theoretical assessment, that the policy is very important as it represents the outcome of the rest of the policies and is not a separate policy in itself.
- In terms of the quality and suitability of the policy in light of its three characteristics, objectivity, realism, and flexibility, both theoretical and practical assessments confirmed that the policy is not objective, realistic, and flexible. This means that the policy is not suitable for the Iraqi reality. See Table 5 for more information.
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Table 5: The outcome of the theoretical and practical assessments

	Relative importance			Compatibility					
				Realistic		Objective		Flexible	
	Very Important	Important	Unimportant	Yes	No	Yes	No	Yes	No
Theoretical Assessment	x				x		x		x
Practical Assessment			x		x		x		x
Overall Assessment		x			x		x		x

Conclusions and Recommendations

The phenomenon of informal housing has worsened in Iraq after 2003 due to political changes, followed by economic, social, demographic, and urban changes. The government has attempted to address the disastrous results of this phenomenon by adopting the National Housing Policy 2010-2016, along with some accompanying decisions and measures. However, all of these attempts have not worked. On the contrary, the problem has continued to worsen until the number of residents living in informal settlements exceeded three million people by 2017. This has necessitated studying the reasons for the failure of the informal housing policy.

It has become apparent that the informal housing policy has not been given the required relative importance in the national housing policy. Additionally, its formulation in terms of content, implementation procedures, and period have not corresponded to the local reality and has not been suitable for the circumstances. The policy has not been objective in achieving its goals, not realistic in addressing the problem, and inflexible in employing implementation tools within its short time frame.

This study shows the informal housing policy as one of the most important secondary policies. Updating the informal housing policy should not be done individually but within the framework of a comprehensive housing policy, that includes all other secondary policies. Thus, the number of housing units resulting from the rehabilitation of informal settlements will be counted within the housing need required to bridge the housing deficit. Similarly, the institutional system that manages and implements the informal housing policy is part of the main housing system.

Accordingly, the research recommendations will include sequential steps that constitute a road map for updating the current informal housing policy, as follows:

1. Comprehensive Survey and Classification according to Priorities

- Conducting a comprehensive survey of all informal settlements throughout Iraq, according to their geographical distribution within governorates, cities, and towns. Including the number of informal settlements, housing units, and residents. In addition, the locations of settlements within the master plan, the date of establishment of the settlement, and the date of occupancy of the housing units are recorded.
- After the comprehensive survey, the data will be classified according to certain priorities. The priority of eligible families, the priority of settlements in terms of their urban status, and the priority of housing units in terms of their architectural and structural status.

2. Regulatory Preparation

- All laws, statutes, regulations, instructions, and guidelines that have been included in the current informal housing policy should be reviewed to determine which laws are valid for the next phase. Then, new draft legislation related to the new requirements should be prepared according to the economic, social, environmental, and urban variables to expedite their issuance by the Iraqi legislative authorities. The final goal is to create a realistic, practical, and flexible legislative environment.

3. Institutional Reforms

- Since the announcement of the current national housing policy in 2010, many changes have occurred in the structure of the institutional system. These changes include the merger of the Ministry of Construction and Housing (MoCH) with the Ministry of Municipalities and Public Works (MoMPW) in 2016, in addition to other structural changes. These changes have certainly caused confusion in the housing process in the country. Updating the informal housing policy requires a stable institutional system with clear powers and tasks.
- Based on previous studies and experiences (Dhumad, 2006), this study proposes an institutional structure that includes all parties to the housing relationship, including the Ministry of Housing with other relevant ministries, under the name "High Council for Housing" linked directly to the Prime Minister.

4. Implementation Programmin:

The last step includes three stages, as follows:

- Number of required units: After the comprehensive survey and prioritization (the first step), it should be possible to determine the number of housing units required to be implemented to address the phenomenon of informal housing. Certainly, the required number is not as much as the existing informal units, because many wealthy families have taken advantage of the unfavorable conditions and have settled in public lands illegally.
- The sites: It is not possible to implement the required housing units in the same places as their current existence. Therefore, the redistribution of them should be according to the master plans of the cities and towns, within the residential use, and according to the planning indicators in force.
- Implementation period: Since the informal housing policy will be implemented within the framework of the updated National Housing Policy, their time ceilings will be overlapping. One of the reasons why the informal housing policy did not achieve

its goals is the short implementation period. Therefore, the updated policy should adopt long-term periods of up to 20 years, medium-term periods of 5 years, and annual programs, in order to enable feedback during the implementation period. Accordingly, the first three steps of the roadmap of the updating should be implemented within a medium-term period 5 years, while the last step, which is the implementation of the quantitative program (housing units), should be implemented within a long-term period 20 years.

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References

- Abaas, Z. R. (2022) Urban improvement strategies for informal settlements. *Association of Arab Universities Journal of Engineering Sciences*, 29(1), pp.31-42.
- Abod, Z. A. (2022) Analytical Study of National Housing Finance Policies and Implementation Strategies Case Study: Baghdad Governorate. *Journal of the planner and development*, 27(1).
- Al-Essawi, K. F. D. (2018) Towards a Flexible and Sustainable Housing Enabling Approach in Iraq. *KnE Engineering*, pp.16-29.
- Al-Hafith, O. *et al.* (2018) ‘A systematic assessment of architectural approaches for solving the housing problem in Iraq’, *Frontiers of Architectural Research*, 7(4), pp. 561–572.
- Counihan, C.H. (2017) An incremental intervention in Jakarta: An empowering infrastructural approach for upgrading informal settlements.
- Dhumad, K. F. (2006) *The Housing According to A Comprehensive Perspective - Balancing the Structure of the Urban Housing System in Iraq*. Ph. D. University of Baghdad, College of Engineering.
- Diab, Y., El Shaarawy, B. and Yousry, S. (2020) Informal Settlements in the Arab Region: Towards Arab Cities without Informal Areas, *UN-Habitat: Giza, Egypt* [Preprint].
- Ernst & Young (2012) *Meeting the Iraqi Housing Challenge: Policy Options and Development Scenarios*. Amman, Jordan.
- Esmail, S. & Corburn, J. (2020) Struggles to remain in Kigali’s “unplanned” settlements: the case of Bannyahe, *Environment and Urbanization*, 32(1), pp. 19–36. Available at: <https://doi.org/10.1177/0956247819886229>.
- Executive management of the poverty alleviation strategy (2017) *Fixing the sites of informal housing complexes*. Baghdad.
- Ghasempour, A. (2015) Informal settlement: Concept, challenges, and intervention approaches’, *Spec. Journal of Arch. Construction*, 1, pp. 10–16.
- Guibrunet, L. and C.B. V. (2015) The sustainability of the informal city: An urban metabolism approach, in *11th International Conference of the European Society for Ecological Economics (ESEE)*.
- Hamdan, S. S. (2022) Random Change of Residential Use and Its Repercussions on The Environment of Baghdad City. *Journal of Al-Farahidi's Arts*, 14(50| Second Part.
- Hamdi, N. (2010) *The placemaker's guide to building community*. Earthscan.
- Jaafar, H.A. (2013) *Reviewing the National Housing Policy in Iraq*. Baghdad.
- Kadhim, J. (2021) *Urban Sustainable Integration in the Informal Areas*. M.Sc. University of Baghdad, College of Engineering.
- Mawlan K. A. (2018) Evaluation of Spatial Factor’: Impact on Physical Integration of Informal Settlements: Erbil City – Iraq, Unpublished Ph.D. Thesis, Universiti Sains Malaysia.
- Mathey K. (1992) *Beyond Self-help Housing*. London: Mansell.
- PADCO et al. (2006) *Iraq Housing Market Study-Main Report*. Baghdad.

- Parikh, P. *et al.* (2020) Barriers and opportunities for participatory environmental upgrading: Case study of Havelock informal settlement, Durban', *City and Environment Interactions*, 5, p. 100041.
- Pojani, D. (2019) 'The self-built city: theorizing urban design of informal settlements', *Archnet-IJAR: International Journal of Architectural Research*, 13(2), pp. 294–313.
- Rawan, A. (2017) *Iraqi National Housing Policy Modification*. Baghdad.
- Repeva, A. (2021) Informal settlements in Baghdad city. In *E3S Web of Conferences* (Vol. 263, p. 05001). EDP Sciences.
- Sabah Fadel, Al-Rahmani (2013) *Housing Policies and Planning*. 1st ed. Amman, Jordan: Dar Al-Hamid for Publishing and Distribution.
- Salih, A. B. M. & Al-slik, G. (2023). The Concept of Home as Manifested in the Baghdad Houses in Iraq. *ISVS e-journal*, 10(2), 33-56.
- Steering Committee of the National Program for the Rehabilitation and Organization of Informal Settlements (2016) *The Roadmap Frameworks of the National Programme for the Rehabilitation and Regularization of Informal Settlements*.
- The Ministry of Planning, *National Development Plan 2018 – 2022, Summary*, 2018
- Turner, J. F., & Fichter, R. (1972) *Freedom to build: dweller control of the housing process*. New York: Macmillan.
- UN-Habitat (2009) *Country Programme Document 2009–2011, Iraq*. United Nations Human Settlements Programme, Regional Office for Africa and the Arab States.
- UN Habitat (2010) *Iraq National Housing Policy*. Baghdad.
- UN-Habitat (2004) 'The challenge of slums: Global report on human settlements 2003', *Management of Environmental Quality: An International Journal*, 15(3), pp. 337–338.
- Van Ballegooijen, J. & Rocco, R. (2013) 'The Ideologies of Informality: informal urbanisation in the architectural and planning discourses', *Third World Quarterly*, 34(10), pp. 1794–1810. Available at: <https://doi.org/10.1080/01436597.2013.851890>.
- Van Ballegooijen, J. & Rocco, R. (2013) The Ideologies of Informality: informal urbanisation in the architectural and planning discourses. *Third World Q*, vol. 34, no. 10, pp. 1794–1810.
- Vitasurya, V. R., Hardiman, G. & Sari, S. R. (2019). The Influence of Social Change on the Transformation Process of Traditional Houses in Brayut Village. *ISVS e-journal*, 6(4), 64-71.