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Article

Impact of Insecure Land Tenure on Sustainable Housing Development: A Case Study of Urban Housing Lands in the Republic of Benin, West Africa

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Abstract: This study focuses on land tenure in an urban environment. Specifically, it intends to elucidate the influence of land tenure security on access to housing in urban communities. The conurbation of Grand Nokoué, which is an agglomeration of five cities in the Republic of Benin, West Africa, captures attention due to its particular features as a developing city. Based on the literature, this study outlined three major factors of insecure land tenure, namely, lack of recognition by authorities, lack of protection from eviction or expulsion, and informal community-based rights. In addition, we examined four characteristics of relevant housing issues, namely, the development of shantytowns, the multiplicity of precarious housing, the loss of housing for the development of public projects, and exposure to house demolition under judicial decision to formulate our hypotheses. The results of a field observation and semi-structured interviews supported the hypotheses and demonstrated that the legal access to land, the protection of the population from anarchic eviction and informal community-based rights may positively influence the development of sustainable urban housing.

Keywords: Insecure Tenure; Land Tenure; Urban Housing; Conurbation; Benin

1. Introduction

Various studies reveal that tenure security has become an essential part of a major programmatic push that aims to increase inclusive investment in land, agricultural production, sustainable natural resource management, and the move toward market economies (Sarmiento et al., 2019; Martin et al., 2005). According to the literature, efforts are increasingly focusing on multiplying the effects of secure tenure and property rights from various sources. The Integrated Land and Resource Governance under the United States Agency for International Development (hereafter, ILRG Annual Progress Report-2019) sustains the abovementioned statements and proposes that efforts across several decades to provide secure tenure and property rights specifically focus on land law, titling/registration, administration, and the redistribution or restitution of land. According to it, the scholars in the field of development have examined ways to expand secure Land Tenure and Property Rights (LTPR) by supporting efforts to recognize and respect the customary rights to use, manage, and allocate rights to land and resources as a strategy for contributing to economic growth and sustainable natural resource management. Nevertheless, a notable reminder is that secure tenure is not a *one-size-fits-all* solution. As such, a range of categories of tenure status exists, any of which may be *sufficiently secure* to fulfill individual needs.

Tenure security is also *real* and *perceived*. For example, a family living in an underprivileged area for years without any formal documentation to prove the purchase of their home lack *real* or formal security; nevertheless, they may believe that they are highly unlikely to be evicted for various reasons such as the city is providing electrical service to the area. In this case, the family has perceived security. As described by the Food and Agriculture Organization (FAO) Report (2002), security of tenure is then the perception of people that their rights to land will be recognized and protected in the event of specific challenges. People frequently feel secure when they possess a full set of use and transfer rights of sufficient duration to recoup any labor and capital that they invest in land or property and when they can enforce these rights against the claims of others. Moreover, land tenure and access to

housing form a complex theme, which involve a wide range of approaches and practices that typically fall under regulatory frameworks. However, more often than not, land tenure practices are simply culturally accepted, which responds to deeply embedded historical processes and contexts, such that they considerably vary across countries. Whether legally or customarily defined, land tenure denotes the relationship between people, as individuals or groups, with respect to land (FAO Report, 2002). Simply put, we assume that land tenure systems determine who can use what resources for how long, and under what conditions. Kirk and al., (1998) sustain the assumption, and according to them, land tenure refers to “the conditions under which land resources are held and used”. A study on land tenure security in 15 countries conducted by Washim et al. (2014) assessed the issue to underline the still precarious state of tenure security in many countries and identify a range of issues through pragmatic approaches for improving tenure security. Along a continuum of factors of insecure land tenure, the most important ones fall under three basic categories according to the literature review, namely, (i) lack of recognition by authorities; (ii) lack of protection from eviction or exclusion; (iii) and informal community-based rights.

The current study focuses on land tenure in the urban environment and seeks to assess the impact of insecure land tenure on housing development. Specifically, it aims to understand the potential influence of land tenure security on access to housing in urban communities. Accordingly, the conurbation of Grand Nokoué in the Republic of Benin warrants investigation due to its progress into high urbanization and its recent policies for managing the use and occupation of land. Therefore, by exploring five cities in Grand Nokoué, the study intends answer to the question of whether or not land tenure factors influence housing conditions. Based on the literature, we outlined the major factors of insecure land tenure and the characteristics of relevant urban housing issues to formulate our hypothesis. We conducted a field observation in Cotonou (economic pole and densely built-up city in the conurbation of Grand Nokoué) and Abomey-Calavi (a mostly residential city) to reveal the vulnerable state of housing. Through interview sessions, we investigated the perception of land actors and householders on the influence of the factors of insecure land tenure on relevant housing issues. Discussions enabled interpreting the outcome and answering to the question on the correlation between housing conditions and factors of land tenure.

2. Outline and Characteristics of Urban Housing Issues

The rapid urbanization rates and lack of urban planning have resulted in extremely large housing deficits, which are defined as the difference between the number of households and the number of permanent dwellings. A deficit can be estimated for a given period of time (flow), such as annually or a given date, in which case it is oftentimes referred to as housing backlog (stock). Without an up-to-date census of dwellings in African countries, accurate information on housing backlogs is not readily available; however, government officials and housing professionals cite various estimates for several countries. Following extensive research and interviews with stakeholders, Bah et al. (2018) assembled the largest existing database of housing backlog in Africa with estimates for 42 countries. The study reveals that countries, such as Tunisia, Botswana, and Mauritius, lack an overall deficit, because the number of dwellings exceeds that of households, but deficits exist for the lowest income categories. Alternatively, Nigeria, which is the most populous country and with an urbanization rate of 4.8% since 2000, is estimated to have a deficit of at least 17 million in 2010 (Bah et al., 2018). However, given the annual demand of 700,000 units and an annual supply of less than 100,000, the current backlog should be at least 20 million. Whether 17 or 20 million, reducing the housing backlog in Nigeria requires a fundamental change in housing delivery. Three other countries exhibit backlogs of at least 3 million housing units, namely, the Democratic Republic of Congo (DRC), Egypt, and Tanzania. These countries have large populations but different urbanization trends (Bah et al., 2018). Another group of countries, including Kenya, Madagascar, Mozambique, and South Africa, have housing backlogs of at least 2 million units (Bah et al., 2018). This figure is increasing annually given the large supply shortfall and high urbanization rates. Finally, Bah et al. (2018) conclude that 17 African countries have housing deficits of more than 1 million units, the lack of intervention on which will lead to the development of slums and shantytowns and a multiplicity of precarious housings associated with several social problems such as overcrowding, poor sanitation, disaster risks and high crime rates.

Studies on the rapid and typically uncontrolled growth of urban areas in developing economies have focused attention on the need to improve legal access to land and services for the existing and future urban populations. Accordingly, Ghasempour (2015) conducted a study on management approaches for informal settlements and raised the fact that common policies for improving tenure security in informal settlements as well as increasing access to credit and services aimed to provide individual freehold titles to land and property. In a similar range, De Soto (2011) proposes the assumption that formal titling would raise property values. In turn, residents would be able to use the enhanced value of their properties as collateral to obtain formal credit, improve their properties, and invest in a business to lift themselves out of poverty. The author concludes that residents can improve housing stock and frequently establish and improve home-based businesses with improved security. Indeed, legal access to land prevents loss of housing for residents. Even in the name of public project development or infrastructure provision (Bajar, 2018); secure land enables residents to claim for compensation and appropriate resettlement. Alternatively, a synthesis report of UN Habitat (2022) stated that given the complexity of urban LTPR and the limited capability (or willingness) of governments at the national and local levels to meet the increasing challenge, no single form of tenure can meet the diverse and changing needs of large urban populations. For various reasons, the number of expelled populations accompanied by house demolition under judicial decision has been drastically increasing in recent decades. Table 1 below summarizes the abovementioned issues related to access to land and/or housing and the associated factors of insecure land tenure as hypotheses.

Table 1. Insecure land tenure factors and their associated housing issues.

Insecure land tenure factors and their major characteristics	Associated housing issues promoted by insecure land tenure factors
(i) Lack of recognition by authorities : characterized by a default of property right or inappropriate land occupancy	(1) Development of shantytowns (2) Multiplicity of precarious housing
(ii) Lack of protection from eviction or exclusion : characterized by insufficient compensation or inappropriate resettlement	(3) Loss of housing for public projects development
(iii) Informal community-based rights : Characterized by unclear customary rights	(4) Exposure to house demolition under Judicial decision

3. The Existing Situation of Housing in the Study Area: Field Observation in Cotonou and Abomey-Calavi

3.1. Overview of the conurbation of Grand Nokoué

Concentrated on the limited coastline of Benin, the conurbation of the Grand Nokoué is characterized by a sand bank with a length of 33 km, which lies along the marine coast from Nigeria (east) to Togo (west). A review of the trends, conditions, nature, and occupation of land in Grand Nokoué in previous decades enhances the understanding of the state of urbanization prior to the vote of the new land law 2013-01 in August 14, 2013. It highlights that urbanization in Benin has been drastically increasing in recent decades (RGPH 3-INSAE, 2013) due to a demographic growth that led to the continual intensification and land occupation of outlying districts, including Cotonou, Abomey-Calavi, Seme-Podji, and Ouidah, and uncommon land occupation (IGIP Afrique, 2013). Indeed, the conurbation of Grand Nokoué constitutes a major national and regional hub of 1,984,425 inhabitants, the majority of which are living in Cotonou and Abomey-Calavi, according to the 2013 census of population and housing in Benin (RGPH 3-INSAE, 2013). Simulations predict that the number of inhabitants will reach 3 million by 2025. However, as of 2023, Cotonou and Abomey-Calavi only have reached 2 million inhabitants.

3.2. Field observation

The field observation enabled the study to capture urban progression in Grand Nokoué. The cities of Cotonou and Abomey-Calavi warrant investigation due to their specific features. The observation was made by riding a car and walking around designated areas to determine the visual characteristics that enable the identification of one or many of the abovementioned issues in relation to the factors of insecure land tenure. For the purpose of this study, we used the outcome data of field observations conducted in 2018 on eight residential/popular boroughs among the 13 that compose the city of Cotonou. These districts were surveyed again in 2021 to update the available data and information. In addition, four out of the nine districts that comprise the Abomey-Calavi commune were surveyed in 2021. The study observed an increasing number of people moving to Cotonou and Abomey-Calavi for live and business. However, the two cities were in need of better infrastructure to cater to all these people. By 2021, roads were planned to be built, renewed, and repaired. Consequently, populations established on public land without official property rights of their plot of land were forced to move out from their usual living or working place for the purpose of development projects. Alternatively, the study observed indigenous settlements on inappropriate land without minimum access to basic services, the majority of which invaded the land without permission from the government for ownership right. Other districts, bestowed with road infrastructure, access to water and electricity, sewage and drainage systems, and access to housing, displayed better images.

3.2.1 Development of shantytowns

The presence of shantytowns is not rare in specific districts of the conurbation. During the field survey, we identified numerous settlements in precarious conditions with a critical lack of basic needs. The vulnerability of these settlements is not only reflected by the weakness of housing materials but also by land occupancy across several years without appropriate ownership right [factors (i) and (iii) of insecure land tenure]. Figures 1 and 2 illustrate the chaotic situation of shantytowns in the Akpakpa Dodome district in Cotonou [housing issue (1)].



Figure 1: Shantytown in Akpakpa Dodome District, Cotonou (2021)



Figure 2: Shantytown in Ladjé District, Cotonou (2021)

3.2.2. Multiplicity of precarious housing

Figures 3 and 4 reveal Cotonou as mainly characterized by inappropriate land occupation (houses erected in water outlets), wetland occupation by settlements of populations across years [factors (i) and (iii) of insecure land tenure]. This situation leads to the multiplicity of precarious housing over time [housing issue (2)].



Figure 3: Precarious housing in Vossa District, Cotonou(2021)



Figure 4: Precarious housing in Fifadji District, Cotonou(2021)

3.2.3 Loss of housing for public projects development

Elsewhere, entire homes were removed to make way for new roads (Figures 5 and 6). Parts of houses were demolished when the new road was built through the increasingly popular Fidjrosse neighborhood, which is immediately beside the beach [insecure land tenure factor (ii)]. “Although we protested against it, there has been no compensation so far” declared a householder [housing issue (3)].



Figure 5: Loss of housing in Fidjrosse District, Cotonou (2018)



Figure 6: Public projects development in Fidjrosse District, Cotonou (2021)

3.2.4 Exposure to demolition under justice decision

The fact that a parcel of land can be sold to several individuals, which creates a war of justice that is frequently unfavorable to the party with the lowest income, is evidence of the occurring land insecurity at the time of the study. Such a situation is deemed more frequent with customary lands than modern lands in which authenticating property titles by the land administration is easier.

In the event of litigation, the first purchaser to register an estate in the tax and estate departments of the Ministry of Economy and Finance is the only state-recognized owner [insecure land tenure factor (i)]. Any other purchaser is evicted due to a judicial decision with neither compensation nor resettlement measure [insecure land tenure factor (ii)]. The judicial corruption on the land subject and the illiteracy of the populations worsens the already delicate situation. Economically weak families who generally cannot afford to pay the bribes demanded by corrupt officials may lose their domains [housing issue (4); Figures 7 and 8].



Figure 7: House demolition under justice decision in Aitchedji District, Abomey-Calavi(2018)



Figure 8: House demolition under justice decision in Tokan District, Abomey-Calavi(2021)

3.2.5 Zoning disparities

Taking various areas in the region, the observation clearly demonstrated that disparities exist in the levels of development and related proportions. Indeed, the conurbation of Grand Nokoué is also rich with good-quality housing erected in city centers, where basic service access and road infrastructure are available. Figures 9 and 10 depict housing in mixed commercial and residential zones in the city center of Cotonou. Nevertheless, a few residential boroughs also propose middle- and high-standard housing, as observed in the districts of the Airport Zone in Cotonou (Figure 11) and Zopah in Abomey-Calavi (Figure 12). According to certain householders that the researchers met during the field observation, the reason behind the observed disparity is the lack of secure land tenure, which exposes settlements to eviction at any time by a strong government from a place informally occupied over decades.



Figure 9: Coexistence of office, commercial and residential buildings (Taken by the Author in Houeyiho District, Cotonou,2021)



Figure 10: Mixed residential and commercial buildings (Taken by the Author in Saint Michel District, Cotonou,2021)



Figure 11: High standard residential housings(Taken by the Author in the Airport zone District, Cotonou, 2021)



Figure 12: Middle standard residential housing (Taken by the Aithor in Zopah District, Abomey-Calavi,2021)

In summary, the field observation enables the study to state that the situation is redeemable and that managing access to housing through land access is imperative for investigating the level of development in the conurbation of Grand Nokoué. Therefore, the next section focuses on the methods

of access to land through interview sessions with land actors (e.g., administrative officers and independent specialists) and householders, who were carefully identified in the conurbation of Grand Nokoué.

4. Influence of Factors of Insecure Land Tenure on Urban Housing Issues

The interview method is used to obtain objective evidence that demonstrate the relationship between the factors of insecure land tenure on housing issues. The study identified and examined three factors, namely, lack of recognition by authorities, lack of protection from eviction or expulsion, and community-based rights through the semi-structured interview. Primary data were obtained in October 2021 by interviewing local government officials (two from each city from the conurbation of Grand Nokoué) and experts in charge of land administration (two from each city as well) in various positions at mayors' offices. The respondents were selected using convenience sampling and by considering their busy schedules and difficulty of contacting them at their offices. In addition, we used a database of surveys among householders from a previous study conducted by the authors in the five cities of Grand Nokoué in 2017–2018. Table 2 provides the basic information of the respondents. The following sections summarize the relevant responses of the interviewees for each issue and analyze the results.

Table 2. Category and origin of the informants.

Area of survey	Respondents from each category		
	Officers	Experts	Householders
Cotonou	2	2	6
Abomey-Calavi	2	2	6
Seme-Podji	2	2	4
Porto-Novo	2	2	4
Ouidah	2	2	4

4.1 Development of shantytowns

The outcome of the interview survey and field observation revealed the predominance of informal settlements in the districts, which is characterized by the crucial lack of basic infrastructure and access to services. In these districts, a common observation is that houses are built using precarious materials and are overcrowded by the number of people living in small backyards. The situation led to the emergence of shanty housing, which escaped the attention of administration control and management across the years. Tables 3, 4, 5 summarize the major responses from informants on the issue of the development of shantytowns. The officers and experts explained the high density of shanty houses in the cities of Cotonou, Abomey-Calavi, and Seme-Podji as caused by the lack of recognition of land rights by land authorities. However, according to householders, the lack of community-based rights is the major cause of the increased development of shanty houses. The trend differs in Ouidah and Porto-Novo, where the community-based rights emerged as the major concern.

Table 3. Comments of officers on the development of shantytowns.

Category and number of Officers					Summary of responses from the informants	Associated insecure land tenure factors
Coto nou	Abomey- Calavi	Seme- Podji	Ouid ah	Porto- Novo		
0	0	2	0	0	The majority of the occupants of shantytowns are low income people	(i) Lack of recognition by authorities

2	2	2	0	0	The lack of provision of basic service access reduces communities incentive to invest important amount of money in properties	(i) Lack of recognition by authorities
2	0	0	2	1	Under some kind of customary rights , kin groups settled over years are not likely to relocate despite a crucial lack of basic services and infrastructure in their living area	(iii) Informal community based rights
0	2	0	2	1	The coexistence of customary and modern systems gave communities a sensation of security and illusion to pretend to some kind of property right based on a long term land occupancy	(iii) Informal community based rights

Table 4. Comments of experts on the development of shantytowns.

Category and number of Experts					Summary of responses from the informants	Associated insecure land tenure factors
Coto nou	Abomey- Calavi	Seme- Podji	Ouid ah	Porto- Novo		
2	1	0	0	0	Many of the shantytowns occupants are delocalized populations under justice decision or in the name of development project	(i) Lack of recognition by authorities
2	0	1	0	0	Poor land zoning and development do not encourage populations to invest in housing	(i) Lack of recognition by authorities
0	1	1	0	0	Land dualism opens door to a multiplicity of planning tools which make complex the regulations on land property right	(i) Lack of recognition by authorities
0	0	0	1	1	Under some kind of customary rights , kin groups settled over years are not likely to relocate despite a crucial lack of basic services and	(iii) Informal community based rights

					infrastructure in their living area		
0	0	0	1	1	The coexistence of customary and modern systems gave communities a sensation of security and illusion to pretend to some kind of property right based on a long term land occupancy	(iii) Informal community based rights	

Table 5. Comments of householders on the development of shantytowns.

Category and number of Householders					Summary of responses from the informants	Associated insecure land tenure factors
Coto nou	Abomey-Calavi	Seme-Podji	Ouid ah	Porto-novo		
2	0	0	0	0	We have been living in this place since more than 30 years without any support from the authorities	
0	1	1	1	2	We are the first occupants of these lands, so they belong to our community...	
2	1	0	0	1	Our community was established here since the independence of Benin...we will never feel home anywhere else	(iii) Informal community based rights
0	0	1	0	0	Many governments have passed since we were here but none has decided to evict us...	
2	2	1	2	0	When we settled here more than 30 years ago there were no access road, no electric power, no drinkable water...but we survived until today by our own management	
0	2	1	1	1	These lands have been inherited over generations ...even though they don't have a formal title, we remain the only owners	(i) Lack of recognition by authorities

4.2. Multiplicity of precarious housing

Various reasons may explain the multiplicity of precarious housing such as the weakness of property rights over land that leads to the lack of recognition by authorities and the establishment of settlements in inappropriate zones due to economic activities. Indeed, all interviewees rated the direct occupation of land as very influential on decent housing access with an extremely low investment amount. The reason is the permanent risk of sudden eviction by the real landowner or by the government who owns the land. House rental also exposes residents to sudden eviction, if

householders decide so. Therefore and given that the house rental sector remains unregulated, occupants will feel unsafe and prefer living in a precarious house, which is their property (Figures 3 and 4) than be exposed to eviction by a householder due to late rental payments. In addition, by investing the minimum amount of money on a land that do not belong to them, occupants a certain degree of control on their level of loss in the case that the government decides to recover its property in the future. Notably, the officers and experts fully agreed on the lack of recognition by authorities as the major cause of the multiplicity of precarious housing, while the householders blame the lack of community-based rights. Tables 6, 7, 8 summarize the trend.

Table 6. Comments of officers on the multiplicity of precarious housing.

Category and number of Officers					Summary of responses from the informants	Associated insecure land tenure factors
Coto nou	Abomey-Calavi	Seme-Podji	Ouid ah	Porto-Novo		
1	0	0	0	0	There is a high predominance of precarious houses (mainly bamboo made) established without permission along rivers or sea sides;	(i) Lack of recognition by authorities
1	0	0	0	0	Most precarious settlements along sea side are those involved in fisheries activities since decades	(i) Lack of recognition by authorities
0	1	2	0	2	The main reason for populations living in precarious houses is their low income level; they settle on vacant without an official owner	(i) Lack of recognition by authorities
1	1	0	0	0	The longtime living in precarious conditions without eviction by the authorities has led to the extension of precarious housing	-
1	0	0	0	0	Precarious housing is one of the immediate consequences of the development of shantytowns	-
0	0	0	2	0	Due to the historical characteristic of the city, many people think houses have to keep their authentic cultural features	-

Table 7. Comments of Experts on the multiplicity of precarious housing.

Category and number of Experts					Summary of responses from the informants	Associated insecure land tenure factors
Coto nou	Abomey-Calavi	Seme-Podji	Ouid ah	Porto-Novo		
0	1	1	0	0	Economic issues are main reasons for settlements on unregistered lands	
1	1	0	1	0	Communities settled on unregistered or informal lands don't invest too much on properties as they can be subject to land gripped by the authorities	(i) Lack of recognition by authorities
1	0	1	1	0	The lack of basic infrastructures reduce the land value which do not promote investing in housing	
0	0	0	0	1	Modern constructions in the past 10 years are erected on lands registered under the enacted new law	
0	0		0	1	There is an unbreakable link between the multiplicity of precarious housing and the development of shantytowns	-

Table 8. Comments of Householders on the multiplicity of precarious housing.

Category and number of Householders					Summary of responses from the informants	Associated insecure land tenure factors
Coto nou	Abomey-Calavi	Seme-Podji	Ouid ah	Porto-Novo		
2	1	1	0	0	The amount of money invested in a house construction depends on the strength of the property right over the land:	(i) Lack of recognition by authorities
1	2	0	1	2	"If one feels on a safe land, it's easy to invest in a high standard building"...	
2	1	2	2	0	" I had better prefer live a community precarious life than feel lonely in a modern apartment"...	(iii) Informal community based rights
1	2	1	1	2	"With the risk of sudden eviction from a rental decent house, it is safer to by even a poor land and erect precarious but own house on it"...	

4.3. Loss of housing for public projects development

The perception of the informants on the possible reasons for loss of housing due to public projects stipulate that the lack of protection from eviction or exclusion as a major influential factor. As a common rule, development projects, such as road and public infrastructures, give rights to land compensation and/or resettlements when authorities allow land occupancy. However, in many cases, the compensation amount may not meet the expectation of the beneficiaries. Moreover, cases of communities, which are established without any permission or property rights, being forced to move out when public infrastructure needs to be constructed in the name of development are common. Throughout the interview, we observed that even presumed community-based rights lacked power against development goals. This notion is sustained in the Fidjrosse district of Cotonou (Figures 5 and 6), where a householder declared, "Although we protested against it, there has been no compensation so far." Therefore, the lack of property rights and inappropriate occupancy expose occupants to housing loss with various consequences (Tables 9, 10, 11)

Table 9. Comments of officers on the loss of housing due to public projects.

Category and number of Officers					Summary of responses from the informants	Associated insecure land tenure factors
Coto nou	Abomey-Calavi	Seme-Podji	Ouidah	Porto-Novo		
0	1	0	0	1	It is easier for houses to be lost in the name of development projects when they are erected on lands that are not recognized by authorities	(ii) The lack of protection from eviction or exclusion
1	1	1	0	0	Development project like roads and public infrastructures give rights to land compensation when the land occupancy is recognized or allowed by authorities	(ii) The lack of protection from eviction or exclusion
1	0	1	0	0	Inappropriate land occupancy such as wetland and flood prone areas is a major cause of housing loss when governments decide for zones redevelopment	(ii) The lack of protection from eviction or exclusion
1	0	0	0	1	Constructions in zones declared inappropriate by authorities , expose occupants to a permanent risk to lose their property, when comes the time for development	(ii) The lack of protection from eviction or exclusion
1	0	0	2	0	When populations are involved into the new coming project at its important stages starting from the design stage they feel more concerned and cooperate more in their resettlement procedures	-

Table 10. Comments of experts on the loss of housing due to public projects.

Category and number of Experts

Cotonou	Abomey-Calavi	Seme-Podji	Ouidah	Porto-Novo	Summary of responses from the informants	Associated insecure land tenure factors
0	1	0	1	0	In many countries public projects development have priority on existing housings	(ii) The lack of protection from eviction or exclusion
1	0	1	1	1	When comes the time for development, it is recommendable that governments involve populations into decision making such as eviction, resettlement, compensation, etc.	(ii) The lack of protection from eviction or exclusion
1	0	1	0	1	Wet lands and river side are not appropriate for housing in principal; housing there exposes occupants to sudden eviction soon or later	(ii) The lack of protection from eviction or exclusion
1	1	0	1	0	Inclusive approach of projects development may mitigate the impact of housing loss at the communities level	-

Table 11. Comments of householders on the loss of housing due to public projects.

Category and number of Householders					Summary of responses from the informants	Associated insecure land tenure factors
Cotonou	Abomey-Calavi	Seme-Podji	Ouidah	Porto-Novo		
2	1	2	0	2	The compensation provided in the name of development project is often insufficient for appropriate relocation	
2	1	0	0	0	In many cases, eviction is accompanied by no compensation nor resettlement measures	(ii) The lack of protection from eviction or exclusion
2	1	2	0	2	Even when decision is taken on the compensation, it is very hard to receive it	
0	3	0	0	0	There is a huge corruption regarding compensation provision. If you are lucky you may receive it	

4.4. Exposure to house demolition under judicial decision

The informants mentioned two factors of insecure land tenure that exert an influence on housing due to the many land conflicts that occurred in the city during the previous decades. Figures 7 and 8 are illustrations of insecure land transaction that led to housing demolition and families being out of shelters. The judicial corruption that occurred in the city in the past 10 years exacerbated the risk of unsafe land purchase. A head of household from Abomey-Calavi declared that, "In Benin, justice is corrupt, the rich are crushing the poor, and legal practitioners would have no morals". Another

interviewee from Cotonou mentioned the following: "In general, when land is purchased in respect with laws, the risk of contestation is very low." According to the owner of several plots of land in the Fidjrosse district in Cotonou, the majority of high-standard housing in the city is erected on land recognized by authorities or the so-called *secure land*. The two factors of insecure land tenure are the lack of recognition by authorities and lack of protection from eviction or exclusion, which may expose various ranges of population to loss of housing. Tables 12, 13, 14 summarize this trend.

Table 12. Comments of officers on exposure to housing demolition under judicial decision.

Category and number of Officers					Summary of responses from the informants	Associated insecure land tenure factors
Coto-nou	Abomey-Calavi	Seme-Podji	Ouid-ah	Porto-novo		
0	2	1	0	0	In the recent decades, a parcel of land could be sold to several individuals, creating a war of justice that is often unfavorable to the party with the lowest income	(ii)
1	2	1	1	2	The high illiteracy level of populations is cause for misunderstanding of land acquisition procedures	The lack of protection from eviction or exclusion
1	0	0	1	0	Land registration fees are sometimes cause for many unregistered lands as the fee seem to be expensive for some category of landowners	

Table 13. Comments of experts on exposure to housing demolition under judicial decision.

Category and number of Experts					Summary of responses from the informants	Associated insecure land tenure factors
Coto-nou	Abomey-Calavi	Seme-Podji	Ouid-ah	Porto-novo		
1	1	2	0	1	The low extension of the land law may explain its misuse by land officers and its misunderstanding by populations	(ii)
1	1	0	2	1	Land dualism opens door to a multiplicity of planning tools which make complex the regulations on land property right	The lack of protection from eviction or exclusion

Table 14. Comments of householders on exposure to housing demolition under judicial decision.

Category and number of Householders					Summary of responses from the informants	Associated insecure land tenure factors
Coto-nou	Abomey-Calavi	Seme-Podji	Ouid-ah	Porto-novo		
0	1	0	1	0	In Benin, justice is corrupt, the rich are crushing the poor, and legal practitioners would have no morals...	(ii)
2	1	2	1	2	Poor land administration also contribute to the extension of land war	The lack of protection from eviction or exclusion
2	2	0	1	2	Government did not take responsibility on the land plot price; each seller fixes a price and this creates confusion	
2	2	2	1	0	If land price is categorized properly and vulgarized among population,	

buyers will feel safer and there will be
less conflict on the land matter

5. Discussion

The results of the combination of field observation and interview provide various answers to the question of the factors of land tenure influence housing conditions. In summary, the study asserted the statement of the FAO (2002) on land tenure studies, which stipulates property rights to land as one of the most powerful resources available to people to increase and extend their collection of assets beyond land and labor. It highlights the unbreakable link between security of tenure and housing issues as developed by the UN Habitat (2022) World Cities Report. Finally, it provides a better understanding on the four identified housing issues as follows.

The outcome of the interview enhanced the current understanding that the lack of investment in basic services by the governments over land that is not zoned or formally recognized has led to the lack of incentive by occupants to invest in properties. The situation induced the development of shantytowns, as predicted by Bah et al. (2018). The study revealed the predominance of land with informal and extra-legal property rights (Sarmiento, 2018) as one of the major characteristics of the surveyed shantytowns. The chaotic condition created a negative downward spiral and threatened sustainable development. Therefore, the provision of basic services and official recognition of land by governments to promoting better investment among occupants in housing needs to be examined, to enhance their security and prevent the threats of eviction and land grabbing. The abovementioned situation is complemented by the multiplicity of precarious housing accompanied by various health and social consequences.

According to Sarmiento (2018), extra-legal property rights tend not to be against the law, although the law does not formally recognize it. However, the current study demonstrated that these rights do not prevent the eviction of land occupants for various reasons. In contrast, occupants are careful at investing much money on their properties due to the weak status of such rights, which prompts the multiplicity of precarious housing. Therefore, searching for an alternative to cope with the development of shantytowns, such as the provision of basic services and mechanisms for the official recognition of land by governments, may effectively address the issue, because precarious housing is one of the characteristics of shantytowns.

The study revealed that access to basic services and the provision of infrastructure are important determinants of the perceptions on tenure security toward sustainable development. This finding supported the conclusion of Bajar (2018), who pointed out the need to improve the delivery of urban services to unlock the potential of an increasingly urbanized world. However, the author did not mention the necessary conditions for delivery. The current study reveals that the delivery of urban services and infrastructure projects should be accompanied by inclusive tenure security to reach a sustainable development. The study suggests that inclusive tenure security (which includes conditions for the delocalization and resettlements of populations) could create a positive cycle that provides an enabling environment that generates local fiscal systems, develops innovative instruments for capturing gains in land value, and recovers public and private investments (for tangible illustrations, see Figures 9–12).

The fact that the law is frequently used to manage land disputes is one of the characteristics of tenure security, in principle, that should make people feel secure in land transactions. Unfortunately, the present study revealed the precarious status of land administration, which leads to exposure to land conflicts, which in turn result in land grabbing or housing demolition. The outcome indicates that the land corruption that occurred in the recent decades worsened the situation and exacerbated the number of housing demolition. For example, low levels of literacy, which is a necessary condition for a better understanding of land transactions and legal procedures, may be one of the reasons. Increased vulgarization of land laws and their application codes combined with more professional land administration may help resolve the issue.

This study highlighted the role of social networks in the perceptions of tenure security and emphasized the importance of legitimacy as a measure of tenure security along with legality. This approach makes an important distinction between legitimacy and legality, although the two do not need to be mutually exclusive. What is legitimate is frequently what is legal; however, legitimacy, as viewed in an informal or customary context, may offer sufficient perceptions of security alternatively,

being illegal (e.g. development of shantytowns and community-based rights). The dynamics perceptions of security are likely to be higher in the presence of strong social bonds and close-knit communities; because people will be certain that, there is sufficient knowledge of where people stay. This point poses a problem regarding the perception of property as opposed to its regulation and conferred legal recognition. Indeed, informal tenure arrangements and systems can “guarantee a reasonably good level of security, even when this is not formally recognized by the state.” Recognition by the community itself and by the neighborhoods is frequently considered more important than that by public authorities for ensuring tenure security. These social relationships and networks confer a sense of security, belonging, and recognition, which are cited as reasons for why people in certain settings perceive their land (property) as secure. However, if this perception is not supported by legal rules, then it will expose occupants to expulsion and/or loss of housing for various reasons, one of which is the development of public projects, the most predominant reason.

6. Conclusion

The study found that the official recognition of property rights by authorities, protection from eviction or exclusion, and community-based rights are major factors that need to be carefully addressed to solve urban housing issues and promote sustainable housing development. If a positive momentum can be developed to support and underpin the security of access to land, then the FAO asserts that households can enjoy sustainable livelihoods, which are an important part of sustainable development. This study assumes that pragmatic approaches to land tenure security can improve access to housing in developing countries, which can be achieved at no cost by designating selected informal settlements as *unobjectionable* or announcing a ban on forced eviction without due process, adequate compensation, and the right to appeal. In addition to these, a formal recognition of community-based rights may sustain the above-described approaches. These simple measures can significantly enhance tenure security, facilitate the delivery of services, and stimulate investment in home improvement.

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