DOI: 10.23968/2500-0055-2024-9-1-79-90

NEIGHBORHOOD RENEWAL AT STAKE: FEEDBACK ON SPECULATIVE REDEVELOPMENT IN SETIF, ALGERIA

Dhia Eddine Zakaria Lacheheb[1,2]*, Said Madani[2,3]

[1] Institute of Architecture and Urbanism, University of Batna 1, Batna, Algeria
[2] Lab PUViT, Ferhat Abbas University Setif 1, Setif, Algeria
[3] Institute of Architecture and Earth Sciences, Ferhat Abbas University Setif 1, Setif, Algeria

*Corresponding author's e-mail: zakaria.lacheheb@univ.batna.dz

Abstract
Introduction: This paper examines a type of real estate speculation that plays a key role in urban redevelopment, characterized by densification and unaffordability. **Purpose of the study:** The study aims to analyze how pericentral housing in the form of a garden city is being subjected to incremental renewal in the historic core of Setif, Algeria. It reflects on UN Sustainable Development Goal #11, Sustainable Cities and Communities, in terms of relationships between housing densification, loss of green spaces, and socio-economic implications. **Methods:** We used a survey strategy based on observation and a sustainability indicator questionnaire as quantitative sources as well as semi-structured interviews and focus groups as qualitative sources. **Results:** Our study revealed that the typological shift from single-family houses to multi-family apartment buildings is not driven by changing housing preferences, but rather by a profit-oriented land-use strategy. This shift has led to affordability issues and gentrification, which in turn challenge socioeconomic cohesion. The process of densification and apartmentization causes the erosion of the architectural character of buildings and the physical characteristics of the neighborhood. The study emphasizes the importance of proactive, participatory, and inclusive methods in urban planning and management for a bottom-up approach to counteract speculative neighborhood renewal driven by liberal policies. It proposes a densification toolkit to promote the principles expressed in the sustainable development goals (SDGs).

Keywords: neighborhood renewal, real estate speculation, densification, social capital, gentrification.

Introduction

Strategic planning and local urban management are particularly crucial in developing countries that are embracing profitability and liberalization (Bennedjai and Bencherif, 2022). The National Report on Housing (National report, 2014) stated that urban areas were already crowded and that urbanization at an unprecedented rate had made the development of new suburban areas critical. Some intermediate interior cities in Algeria's fast-growing regions have doubled in size over the past 30 years (Diafat, 2016). In parallel, there are challenges with population distribution, land use, wealth, and growth of the local and national economies (Bounoua et al., 2023). This is addressed through urban consolidation and structuring public projects (Boudjabi et al., 2018) to boost housing capacity, urban attractiveness, and competitiveness. However, while undergoing restructuring, cities concurrently accumulate deficiencies and issues (Bibri et al., 2020). The primary focus on building the city over the city is the urban reorganization and reuse of the existing urban fabric, along with social redeployment to reduce social inequalities and curb urban sprawl and segregation (Armstrong, 2023; Neuman, 2005). The redefinition of the urban physical structure is crucial for sustainability and inclusion in redevelopment (Sharifi and Yamagata, 2016). Urban renewal continues to advocate for the enhancement of the physical environment to attract more investment opportunities, while neighborhood renewal aims to upgrade existing homes (Pinnegar et al., 2015). Various stakeholders with competing needs and interests attempt to redress housing stock quality and correct market obsolescence through redevelopment (Harris et al., 2014). Indeed, valorization and prioritization enable various forms of urban densification and occupation (Giddings and Rogers, 2021). The slow and steady adjustment and commodification have affected both the collective and individual types of inherited vacant housing stock. However, when adaptation is insufficient to meet changing socioeconomic conditions, family structures and needs, the transformation and replacement of the obsolete built form become inevitable (Amer et al., 2017; Mouaziz-Bouchentouf, 2022). Developers' speculative renewal is capital (re)investment that anticipates future demand,

taking into account laws of attraction and identifying the most appropriate locations for housing or mixed-use development, commodification of space, and displacement (Cavicchia, 2023; Lees et al., 2008). It can involve the conversion, transformation, or redevelopment of single-family housing in a sequence of institutive, repletive, climax, and recessive phases, measurable in terms of building coverage, followed by urban fallow (Conzen, 1969). By doing so, it increases housing prices and, consequently, encourages overbuilding in a privately redeveloped neighborhood (Dessouky et al., 2023).

This could be the first paper to examine pericentral neighborhood renewal, building from scratch, and the correlation between the housing market and social capital in Algeria. Furthermore, this study proposes two interrelated hypotheses. First, knock down rebuild (KDR) can increase density and lead to real estate speculation. Second, speculative neighborhood renewal (SNR) may be the main reason for the shifts in demographics and typology.

There is very little monitoring and evaluation at the neighborhood level to harness available resources, stimulate central areas, and overcome the loss of welfare. Therefore, this research supports the idea that adopting a densification toolkit, morphological regulation, and an approach involving residents and stakeholders in decision-making can help mitigate the negative effects of SNR on the urban landscape and housing affordability to meet the predetermined neighborhood renewal SDGs.

Multifaceted mutations have resulted from rapid territorial and urban changes in the city of Setif (Belmahdi, 2022). The capital of the Algerian highlands now plays a more significant role in the national land development plan (SNAT 2030). We deliberately chose a former pericentral neighborhood in this mostly residential, intermediate, and monocentric city, which is experiencing visible symptoms of a brewing crisis due to the pressure of a speculative market with uncontrolled and uncoordinated redevelopment. Large-scale transformations and housing densification support our choice. While neighborhood renewal is questionable in terms of effectiveness, adequacy, and appropriateness, social capital is often overlooked.

Methods

This research primarily relies on sociological survey methodology and map analysis to study the incremental growth and site structure of a case study community. It aims to comprehend the development from housing estates to neighborhoods with changing character but lasting fame and attractiveness.

A survey was conducted over a three-month period with a randomized sample of 120 long-term neighborhood households, focusing on the KDR process, physical features, perceptions, and interactions. An 86 % response rate based on 103 questionnaires was achieved. Semi-structured interviews were conducted with diverse stakeholders with various interests and priorities, including developers, architects, scholars, and researchers, to understand the design of patterns, construction methods, redevelopment dynamics, drivers, and governance, and determine the extent to which redevelopment affects building and block land use, typology, morphological elements, and social capital. Furthermore, we used general rules of urbanism, such as overlooking (vis-à-vis), building coverage ratio (BCR), and floor area ratio (FAR), to assess the built character.

This study aims to identify redevelopment priorities and capture the perspectives of the local community. Qualitative sources, such as field observations and informal discussions, were used alongside quantitative data sources (Table 1 and 2), most notably, survey questionnaires based on the components of urban environments, attractiveness, and a set of sustainability principles and indicators (Table 3).

We also explored alternatives for more affordable and sustainable housing supply for existing communities facing gentrification. We found that implementing certain regulations is recommended to mitigate the impact of densification and apartmentization on social sustainability.

Questionnaire framework and targeted respondents

The questionnaire was designed in two languages, Arabic and French, with the aim of reaching the highest number of respondents. Afterwards, it was administered in two different formats: online (Google form), which was sent to a previously collected mailing list and via social media, and printed (distributed and collected). The electronic form was more time-saving because the surveyor and respondent did not need a second contact. However, both methods were used to ensure a comprehensive response from case study residents, developers, scholars, and researchers.

The questionnaire was divided into eight sections. The first section, based on the filter questions, aimed to gather basic information about the respondents. The definitions of the criteria were attached to the questionnaire to provide guidance and clarification whenever needed by the respondent. Dichotomous (closed) questions used to guide the discussion were typically followed by conditional questions. Multiple-choice questions (MCQs) were used to obtain further details. The Likert scale (evaluation grid) was used for experience-based aspects and open-ended response questions for explanations of pros and cons.

Case study presentation

The city under consideration is one of Algeria's major cities, located 300 km northeast of the capital,

Algiers. It sits at an elevation of 1000 m above sea level and is 80 km from the coastline of the Mediterranean Sea.

Known as the capital of the High Plateaux, Setif is an example of radiocentric urban expansion, created ex nihilo. Due to its strategic location, it has become an economic magnet at the crossroads between the east-west and north-south Algerian cities, as well as the commercial hub of the region.

According to the 2018 population census, the main town has a total area of 127.30 km^2 and a population of 287,574 people, with a density of 3,419 persons per square kilometer and a land area of 11,641 km^2.

According to Prenant (1953), Setif witnessed two main waves of real estate speculation. The first one started in 1887 through the conversion of agricultural areas into housing estates, beyond the military servitude zone (Cité Levy named after the developer also called Bon marché, now Tlidjene neighborhood) between the Negro village and the Arab market, beyond the southern city gate Bab Biskra. After 1914 World War I, came the "budget" housing estate fever to relocate and reconcile, so the upper and middle class established themselves around the main retail avenues and thoroughfares. As a result, the upper and lower train station suburbs were affected by a sudden increase in value (Fig. 1).

On July 13, 1928, with Loucheur's law (French Minister of Labor), public authorities became involved in managing the housing crisis, including housing supply, slum clearance, and the renovation of substandard housing. Land prices rose sharply after the HLM and HBM housing programs, as well as real estate development, between the Constantine and Sillegue roads.

The second, "higher", suburb of the train station, established in 1930, was a garden city-style housing neighborhood designed by the architect Berardi. The district aimed to connect the planned "lower" suburb with the large, spontaneous autochthonous ("indigenous") settlement called Tandja in the north (Fig. 1). The area under consideration is located in the eastern part of the First Ring suburb on a flat site in the pericentral area of Setif, with a regular urban fabric that has almost a century of urban history. The decumanus, tramway, and railway in the south, the double track in the east, and the former city center in the west define its boundaries.

Indigenous vernacular multi-family rental houses were introverted and organized around a patio (hara), while the veranda houses surrounding the railway workers' neighborhood (RWN) were conceived as extraverted single-family houses with front gardens and low fences open to public spaces for ostentatious and supremacy reasons (Lacheheb, 2017).

A 24,000 m^2 area consisting of eight former regular blocks and 300 m² rectangular plots stretched along the frontage of the roads. For assertion and domination, one of the 40 x 60 m blocks was initially set up as a square, garden, and playground, but now serves as an open space for social networking empowerment. Four semi-blocks were placed to the north before the extension (Fig. 2). The neighborhood extends to 1st of November Avenue and Boulevard Port Said (Fig. 3), as the former city center expands and reorganizes its functional spaces. The case under consideration is an integral part of this expansion. The area is called both "Bled", which means "city center" in the local language, and "Cheminots", which literally means "railway workers'

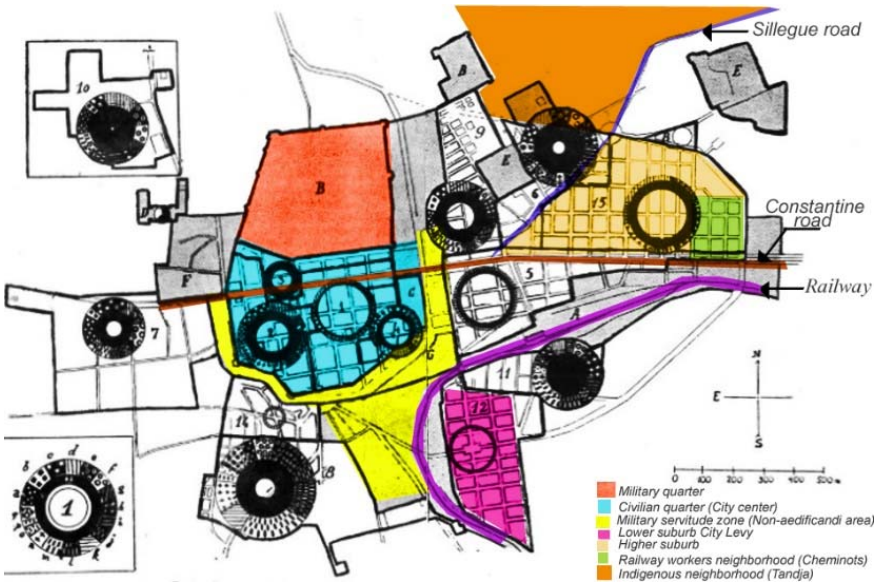

Fig. 1. Density and housing estate fever after railway passage.
Source: Prenant (1953). Adapted by the authors

neighborhood". RWN stands for "railway workers' neighborhood" for the rest of the paper.

From the French occupation to post-independence, cultural and ideological changes in the area were resisted. However, the transition from a socialist to a liberal economy has led to undesirable phenomena affecting spatial justice and the balance of social structure (Colonna, 1988), particularly impacting central and pericentral neighborhoods. Their strategic location near the city center, within a 10-minute walkable radius (Fig. 3), with multiple exits, health centers, medical care, markets, shopping centers, public transport, green open spaces, playgrounds, kindergartens, primary schools, and mosques, makes this self-sufficient neighborhood attractive.

Data collection and analysis

Our data collection was conducted using a comprehensive approach that integrated in-situ observations and a concise framework encompassing attributes specifically related to the research concepts, dimensions, and criteria listed in the previous literature review. The information was then enhanced by spatial analysis and the administration of a structured questionnaire.

First, sociodemographic data concerning the RWN users was collected to determine whether the neighborhood fostered diversity or homogeneity. Excel was used to analyze the survey findings and generate data in the form of percentages.

The housing characteristics, transformation clusters, and drivers were analyzed to examine possible causal connections.

Then the evaluation criteria were outlined as follows:

a) Users' interaction with the features and mechanisms of the physical environment

b) Comfort level and quality of public facilities

c) Aesthetic and landscape perceptions based on attractiveness and physical maintenance

d) Users' interactions with each other to assess sociability, vibrancy, and the public realm

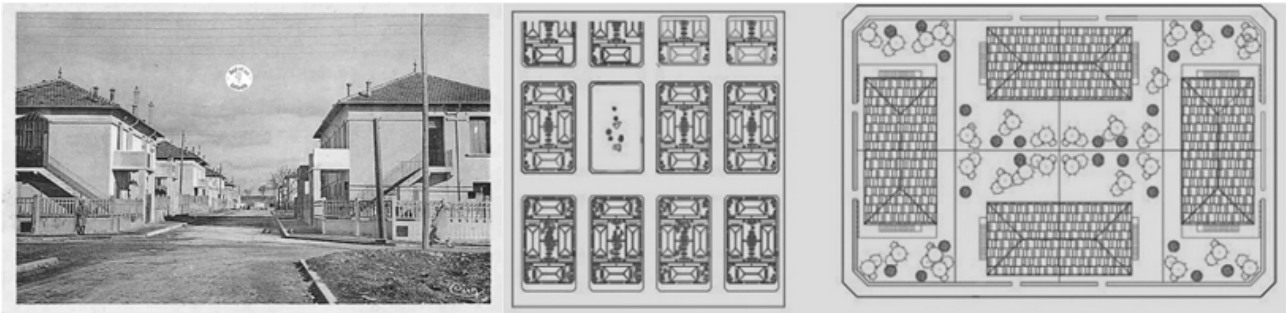

Fig. 2. Semi-detached houses with side gardens in the RWN around 1931. Source: archive, adapted by the authors

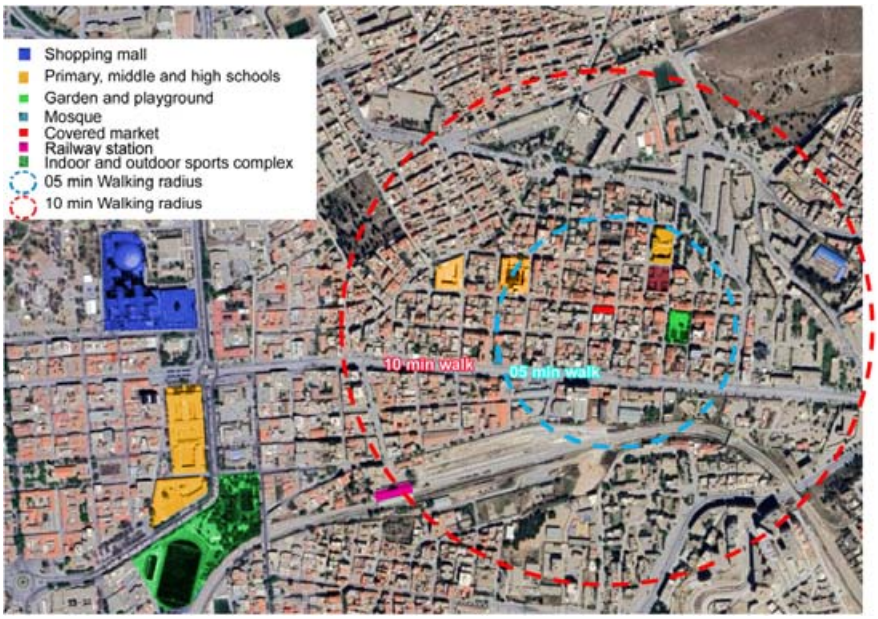

Fig. 3. Location, facilities, and walking radius. Source: Google Earth 2023, adapted by the authors

The components of the rebuilt urban environment after alterations and renewal in the neighborhood were also assessed using attractiveness indicators related to physical features, social practices, and perceptions (Table 3). The "effective" and "not effective" qualifiers assess the usability, practicality, and durability of urban environmental components and layouts. They indicate whether the built environment meets residents' expectations, with "effective" indicating a positive evaluation and "not effective" indicating a negative evaluation (Guedoudj et al., 2020). The number of responses is next to the qualifier, for example, 94 out of the total questionnaire number (103), equivalent to the percentage (91.27 %) of the total questionnaires (100 %).

Results

The accumulated histories of colonization, trial and error in constantly changing urban policies, and mismanagement by post-colonial regimes are believed to be key factors in deficiencies and shortages.

Table 1. **Household profiles**

Users' characteristics and categorizations			
		(*N* = 103)	(%)
Gender	Female	12	11.65
	Male	91	**88.34**
Age	10–15	01	0.97
	15–20	03	2.91
	20–30	26	25.24
	30–50	69	**66.99**
	50+	04	3.88
Number of years lived in the neighborhood (duration)	0–5 5–10 10–15 15–30 30+	24 23 17 25 11	**23.30** 22.33 16.50 **24.27** 10.67
Previous housing (reference)	Apartment Villa	64 36	**62.13** 34.95
Commuting distance	Close	71	**68.93**
	Distant	26	25.24
Means of transport	Walk Car ownership Public transport	45 19 33	**43.68** 18.44 32.03
Academic level	Uneducated Primary Secondary Higher	10 24 31 32	9.70 23.30 30.09 **31.06**
Income * Minimum income = 20,000 DA/month 1 DA = 0.0073 USD)	Low Moderate High	26 39 32	25.24 **37.86** 31.06
Employment status	Student	22	21.35
	(Self) employed	31	**30.09**
	Unemployed	27	26.21
	Retired	17	16.50

The process of reinvesting in the existing urban territory has only recently begun, with its pros and cons. First, the shift in the land value from the patrimonial value to the market value per square meter after the 1981 vacant housing law provided impetus for transformation. Second, the economic and political crises of 1986 sparked liberalization and increased the value of land in the aftermath of the transition from a socialist to a market economy system.

Sustainable neighborhood renewal on a house-by-house basis, without improving the transparency and fairness of decision-making and setting clear economic boundaries, is challenging. Likewise, KDR, lacking mature planning tools and local urban management, is far from being entirely positive. Even though it is still feasible and practical for rundown, old, and inefficient properties, it can generate substantial unexpected and adverse effects.

Accordingly, we divided the multifaceted findings into five sections, starting with the environmental, urban design, economic, social, and governance perspectives.

From an environmental perspective

In the case study, the apartment-based KDR process intensified property ownership, increased building co-ops, and improved the housing landscape.

The population density rate formula calculates the total number of residents by multiplying the number of occupied housing units by the occupancy rate per house (6.7 from the 2008 census). Originally, 72 houses had a density of 482 residents. After speculation-driven renewal, 46 houses were preserved, and 26 properties were redeveloped into an average of three-unit

Table 2. **Housing characteristics**

Housing characteristics and categorizations of transformation			
Housing characteristics	Preserved Refurbished Built from scratch	50 24 29	**48.54** 23.30 28.15
Type	Single-family house (SFH) Multi-family house (MFH) Apartment building (AB)	26 18 32	25.24 17.47 **31.06**
Use	Residential Mixed use Non-residential	83 16 01	**80.58** 15.53 0.97
Transformation driver(s)	Surface Functional Reconstruction Income generation Embellishment	16 14 14 04 44	**15.53** 13.59 13.59 3.88 **42.71**

Table 3. **Indicators of urban environment and neighborhood attractiveness**

Neighborhood urban environment	**Neighborhood observations and questionnaire results**			
Attractiveness indicators	**Railway workers' neighborhood (RWN)**		**RWN (N = 103)**	**(%)**
Accessibility *- Layout, conditions, and comfort of streets and sidewalks*	- Safe, with some narrow sidewalks - Footpaths with rough pavement and uneven corners	Effective	9	8.73 %
	- Pedestrian ways easily accessible from all directions (not suitable for mobility-impaired users) - Poor maintenance of the cycling path - Rush hour congestion hindering accessibility - Limited parking availability - Improved street lighting - Integration of CCTVs (security systems) - Traffic calming features near schools	Not effective	94	**91.27 %**
Affordability	- Increased prices due to the proximity to the city center, making it difficult for low- and moderate-income groups to afford housing	Not effective	71	**68.93 %**
		Effective	32	31.07 %
Urban density	- More mixed-use buildings creating greater vibrancy and enhancing the public realm	Not effective	51	49.51 %
		Effective	52	50.49 %
Residential density	- Conversion of SFHs into MFHs and ABs, increasing residential density	Not effective	50	48.54 %
		Effective	53	51.46 %
Distance and overlooking (vis-à-vis)	- Decline in privacy after KDR and increasing neighborly conflicts	Not effective	74	**71.84 %**
		Effective	29	28.16 %
Open spaces	- Less open space, sun exposure and more overlooking	Not effective	81	**78.64 %**
		Effective	22	21.36 %
Vegetation	- Less vegetation cover and access to green spaces after KDR	Not effective	57	55.33 %
		Effective	46	44.67 %
Cleanliness and waste management	- Increasing waste due to the mismanagement of cleaning contractors, not to the population increase	Effective	51	49.51 %
		Not effective	52	50.49 %
Social conditions & networking	- Increased interpersonal interactions but decreased communal support networks after KDR - The garden provides a meeting place, playground, benches for sitting, and shelter from the weather	Effective	38	36.89 %
	- Shade and shelter are provided by the garden trees and surrounding coffee shops	Not effective	65	**63.11 %**

apartment buildings, resulting in 52 new units. The total number of units now equals 98, equivalent to 656.6 residents, with a 35 % increase from 20 to 27 persons per hectare.

Without ancillary mechanisms, the local environment is experiencing adverse environmental effects, such as decayed and congested streets with poor air quality and pollution, accumulated trash, declining greenery, lack of parking spaces, and, consequently, straining infrastructure (Fig. 4).

The change in the urban form also increases energy and water use in the neighborhood, according to the residents' responses. It should be noted that 64.1 % of the respondents cited sun exposure and ventilation, while 57.6 % added the decline of garden surfaces, trees, and vegetation cover.

Concerns about the declining housing situation, social conditions, and the rebuilding process, often characterized by extremely high costs and longer timelines, push many residents to oppose large-scale KDR.

From an urban design perspective

A highly connected grid-pattern road network is beneficial for densification and enhances communication between urban spaces and buildings. With numerous access points, it ensures a transitional and bridging role. However, the increasing scale of monolithic development leads to a decline in the permeability of grid patterns (Fig. 5).

The implementation of housing densification focuses on upgrading physical and demographic conditions rather than improving living conditions. KDR is more common in 40–70-year-old housing due to outdated built forms or inefficient renovations. KDR is more prevalent in areas parallel to tramways and gardens, with no redevelopment plan, but opportunistic logic. The survey revealed that 80.4 % of respondents confirmed that overlooking, the distance between newly built buildings, negatively impacts privacy. The (re)built environment is not always shaped according to densification capacity; the extreme BCR at ground level is chosen

automatically. Horizontal extensions and vertical uplifts often violate regulations, increasing the height and street aspect ratio (Fig. 6).

The study found that although ABs in high-density environments offer amenities, transportation, and walkability, discrepancies in physical characteristics and architectural treatment led to a loss of positive morphological qualities.

From an economic perspective

The demographic demand for affordable housing is increasing; however, the impact of densification on affordability is complex. Limited land availability and unbalanced density-based housing supply barely ensure housing affordability.

The house price-to-income ratio in Algeria is a reliable indicator of housing affordability (Bellal, 2009), with 71 % of the respondents stating ownership as the dominant tenure (Centre for Affordable Housing Finance in Africa, 2021). Middle-income families need to save their annual income for over nine years to purchase an average housing unit (Deniz et al., 2008). According to the interviewed private real estate agency, the private real estate market in Algeria has seen a 26.1-fold increase in 2022 due to such factors as location and reputation. However, the gap between the National Minimum Wage (NMW), approximately $145 per month ($1 = 137.55 DA), which amounted to $1,740 per year in 2023, and real estate developer prices ranging between $8,725 and $11,632 per square meter, is significant. Moreover, 38 % of respondents believe that neighborhood house prices are controlled by real estate developers, making private market houses unaffordable for most residents of Setif. Likewise, higher prices for newly built houses also contribute to inefficiencies in the housing sector in the RWN.

According to the interviewed single respondents and young couples, the SNR resulting supply has exacerbated affordability challenges for lower- and moderate-income groups. This has created new opportunities for high-income individuals, especially those who have faced income shocks or job losses due to the COVID-19 pandemic.

From a social perspective

Social stress, often seen as a direct result of density, seems to have been reduced by the presence of urban voids. This gender-inclusive urban space element is associated with numerous positive outcomes for urban liveability, such as physical and mental health benefits (Sugiyama et al., 2018). It allows neighbors of different age groups from different blocks to sit together, which is particularly valuable during summer and during Ramadan after evening prayers. Such a creative strategy is equally valuable for densification, serving as a buffer zone for social and cultural activity. It represents a dialectical amalgam that connects public and private interests, thereby increasing the economic and social benefits for the community of residents. From a garden to a playground, and a meeting place after rehabilitation, this urban void is crucial to address smaller dwelling units and apartment living resulting from densification (Nebbad et al., 2023). During Covid-19, these voids were valuable assets for hosting isolated neighbors.

The co-ownership status (property of La Société Coopérative des Chemins de Fer de Sétif) and non-transferability have been key to preserving these voids against infill development. Indeed, the residents' associations opposed attempts to build the garden, as they considered the high cost of social connectivity, public realm restoration, and the recovery of place memory. A total of 19.7 % of the respondents experienced financial, social, and emotional costs due to displacement, resulting in the loss of proximity to parents, friends, and relatives, leading to community dissolution and gentrification.

Young and elderly respondents expressed confusion about KDR demolitions, resulting in displacement, and dissatisfaction with environmental alterations leading to high costs, inconvenience, and unpopularity (Power, 2009), negatively impacting surrounding neighborhoods.

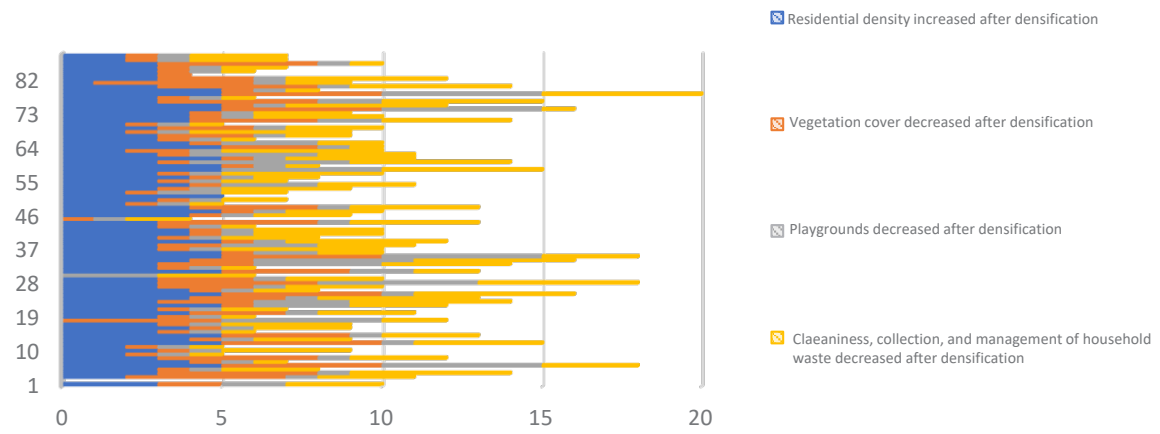

Fig. 4. Increasing residential density / vegetation cover, playgrounds, and cleanliness. Source: survey results

From a governance perspective

The public administration's disengagement in managing these renewal operations is disturbing and has a negative impact on the quality of the urban environment.

Conversely, the residents acknowledged that private development is not favorable to shared governance. Many respondents opposed a top-down structure because it primarily concerns their own built environment and quality of life. Although the survey did not mention governance questions, concerns regarding control and responsibilities surfaced during the interviews. The residents are recognizing the limitations of a resident-centered approach, and there is a noticeable divergence in opinions about governance when it comes to open-ended questions. There is a 50-50 split between those who demand top-down regulations and those who advocate for dependent residents within a corporate environment, along with a complaint system and a client satisfaction approach. Such disagreements affect the performance of local management in the neighborhood.

SNR lacks resident involvement in decision-making, yet their position is critical. Early consultation and inclusion of residents with diverse backgrounds are crucial for the success of urban renewal schemes. Moreover, top-down regulations or voluntary standards are not the only mechanisms to achieve sustainability in urban development. There are also co-regulation and self-regulation.

Discussion

In the late 1980s, public spending cuts led to a shift in housing policy funding, resulting in the withdrawal of costly housing and refurbishment programs, and prioritizing new housing units over preserving existing dwellings. As a result, housing renewal initiatives are being transferred to new entities because existing institutions are unable to deliver new housing at a local level (Djafri et al., 2021).

When the public administration becomes increasingly disengaged from urban renewal, the private sector's growing involvement in KDR is seen as a gentrification driver favoring speculative markets and real estate development. Indeed, with building from scratch becoming a legitimized tool,

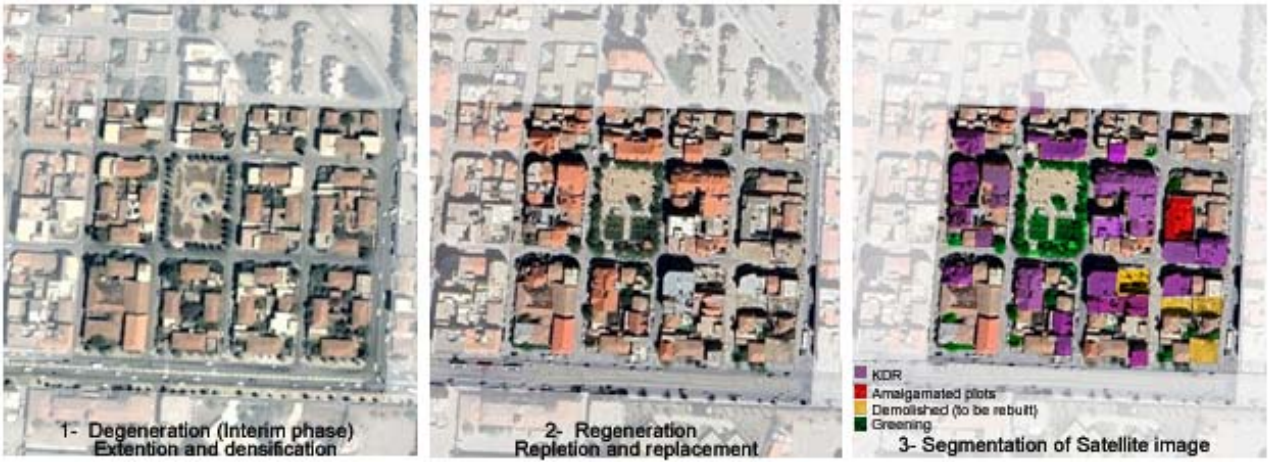

Fig. 5. Building footprint segmentation related to the RWN. Source: Google Earth 2004–2023, adapted by the authors

Fig. 6. Apartment buildings with increasing FAR in the RWN. Source: authors (2023)

69 % of respondents viewed the trickle-down public strategy and laissez-faire attitude as abandonment, with concerns that local authorities may relocate residents far from their social networks.

The study found that inadequate inherited housing stock, unbalanced supply and demand, and delays in public rental housing programs exacerbate space shortages for growing families. Real estate developers capitalize on this opportunity to increase housing density and, thereby, their profitability. Speculators often purchase older, centrally-located properties with low-income and middle-class tenants who may be vulnerable to tempting offers. However, certain types of housing stock and locations are more vulnerable, such as blocks surrounding the garden, which are undergoing extensive regeneration due to access to green spaces and recreational opportunities (Fig. 7).

Multimodal transportation networks, including buses, taxis, trains, and trams, are being developed as thoroughfares with mixed uses and commercial functions. Road networks, especially tramway routes, provide services that are accessible by car and within walking distance. Location, housing ownership, and distance from the city center are important factors in shaping identity and social status. The key drivers of SNR include the growing household needs for accommodation, identity creation, and income generation.

31 % of the respondents approved the shift to multi-family housing (not necessarily in ABs), but 63 % confirmed the emergence of a new pattern of apartment buildings in the RWN (Fig. 8). With over 26 with KDR out of 72 houses (37 %) (Fig. 5), we recognize this shift in housing pattern and typology, leading to a 35 % increase in population density, which is even higher around the garden and multimodal transportation axis (Fig. 7). Both the surrounding neighborhoods and city center experience spillover effects. The interviewed developers confirmed that they prioritized maximizing FAR over plot and block structures. In doing so, they ignored the integration of buildings with other morphological elements. They neglected other elements, such as the size, proportion, and style of the openings. This led to increased building coverage, heterogeneous urban patterns, and vertical roughness, thereby creating a patchwork landscape. Renewal was limited to replacing semi-detached villas with pitched roofs with higher flat-roofed blocks, affecting housing stock consistency and negatively impacting infrastructure, facilities, and satisfaction, particularly in historic urban areas. This disregard for part-to-whole relationships in the urban form has significant implications for housing infrastructure and satisfaction.

The involvement of building professionals in neighborhood renewal led to increased speculation and a surge in prices due to the focus on redevelopment potential and densification capacity. This urban dynamic resulted in significant price increases in the first and second rings of the city over the past three decades. This intensified speculation caused land prices to soar, resulting in the condemnation of traditional urban fabrics and the proposal of functional solutions to transform architectural and urban morphology, evolving from single plots of SFH units to large-scale MFH blocks and ABs (Fig. 8). In addition, large-scale neighborhood renewal has accelerated.

However, the change in the urban form is not necessarily an adverse effect, but when coupled with overlooking (vis-à-vis) and the decline in garden surfaces, trees, and vegetation cover, it can have negative consequences. By 2023, some demolished properties with high potential were still vacant despite the decline in prices following bans on apartment building permits.

Fig. 7. Redevelopment magnets. Source: authors

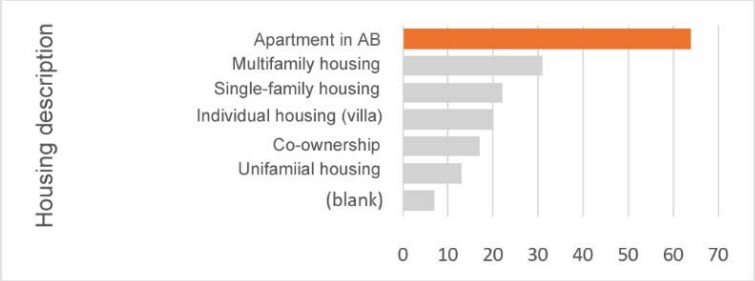

Fig. 8. Shift in housing type and typology from SFHs to ABs. Source: survey results

A part-to-whole renewal program can provide energy and time savings, economic advantages, and community benefits, thereby contributing to a sustainable environment. Furthermore, a participatory approach and local management are crucial for mitigating residents' reactions.

Conclusion

This study examines the urban landscape of the RWN from a morphological process perspective to understand how individual plot changes impact the urban environment.

Studying the relationships between socioeconomic changes and housing densification will enhance the theoretical framework for a better understanding of the developmental cycle with morphological periods and the conceptualization of the gradual transformation of the urban landscape from adjustment and repletion to climax. The development of the case study goes through three main phases: generation, degeneration, and regeneration. Generation begins with the cooperative society of railway workers in Setif, followed by the transformation and densification of single-family houses. Degeneration is the interim phase, followed by regeneration, which involves the proliferation of multi-family houses and apartment buildings.

The study found that partnerships between landowners, contractors, and developers have accelerated the process of SNR, with building from scratch becoming the new modus operandi. Densification alters cityscapes, neighborhood character, and residents' redeployment, with quantity issues and profits becoming more important than the hierarchical arrangement of morphological elements.

The complex process of urban renewal is a social and technical partnership that requires a multifaceted approach involving politicians, designers, and the community. Factors such as a lack of corporate mechanisms, communication issues, unequal public participation, misguided regulations, and an immature legal framework hinder the renewal process. Urban renewal aims to improve transparency, fairness, and community involvement. Intrinsically sociological, it is not just about physical and financial aspects, but also about cultural, economic, and political aspects. To create a better society, the living space must be reconstructed according to the inherent values of housing in the neighborhood and changing socioeconomic contexts, as well as residents' expectations, promoting sustainability and inclusion.

A posteriori, on the one hand, prioritizing FAR over building heights, types, setbacks, and street widths limited the necessary latitude and flexibility in the relationship between the plan and (re)development to provide more coherence to the renewal process in a responsive planning approach. On the other hand, under-prioritizing sustainability goals leads to speculation, gentrification, unbalanced affordability, and difficulty in accessing decent housing for low- and moderate-income households.

Although this study only covers the RWN, the findings apply to other surrounding neighborhoods and monocentric Algerian cities. It offers a nuanced vision to provide decision-makers with insights that can enable more affordable housing and guide socially sustainable strategies, prompting them to reconsider applied housing densification and SNR processes.

An additional thorough investigation would logically follow this study. The first step involves a comparison with another pericentral neighborhood undergoing significant transformation to determine if the processes have similar drivers and outcomes. The second step involves a morphological investigation before and after new planning decisions regarding restrictions on apartment buildings in subdivisions. A more holistic approach is needed to understand correlations and make evidence-based attempts to assess post-occupancy performance in a way that targets the core obstacles to sustainability.

References

Amer, M., Mustafa, A., Teller, J., Attia, S., and Reiter, S., (2017). A methodology to determine the potential of urban densification through roof stacking. *Sustainable Cities and Society*, Vol. 35, pp. 677–691. DOI: 10.1016/j.scs.2017.09.021.

Armstrong, G., Wilkinson, S., and Cilliers, E. J. (2023). A framework for sustainable adaptive reuse: Understanding vacancy and underuse in existing urban buildings. *Frontiers in Sustainable Cities,* Vol. *5*. DOI: 10.3389/frsc.2023.985656.

Bellal, T. (2009). Housing supply in Algeria: affordability matters rather than availability. *Theoretical and Empirical Researches in Urban Management*, Vol. 4, No. 3 (12), pp. 97–114.

Belmahdi, H. S. and Djemili, A. (2022). Urban landscape structure anatomy: Structure patterns and typology identification in the space-time of Setif City, Algeria. Frontiers of Architectural Research, Vol. 11, No. 3, pp. 421–439. DOI: 10.1016/j.foar.2021.12.004.

Bennedjai, R. and Bencherif, M. (2022). Local urban management for improving the quality of life in Algerian collective housing estates. *Journal of Urban Planning and Development*, Vol. 148, Issue 2. DOI: 10.1061/(ASCE)UP.1943-5444.0000820.

Bibri, S. E., Krogstie, J., and Kärrholm, M. (2020). Compact city planning and development: Emerging practices and strategies for achieving the goals of sustainability. *Developments in the Built Environment*, Vol. 4, 100021. DOI: 10.1016/j.dibe.2020.100021.

Boudjabi, N. H., Bouzahzah, F., and Bouchareb, A. (2018). Urban strategies for a renewal of Algerian Cities: Constantine of tomorrow. *Civil Engineering and Architecture*, Vol. 6, No. 1, pp. 18–24. DOI: 10.13189/cea.2018.060102.

Bounoua, L., Bachir, N., Souidi, H., Bahi, H., Lagmiri, S., Khebiza, M. Y., and Nigro, J. (2023). Sustainable development in Algeria's urban areas: population growth and land consumption. *Urban Science*, Vol. 7, Issue 1, 29. DOI: 10.3390/urbansci7010029.

Cavicchia, R. (2023). Urban densification and exclusionary pressure: emerging patterns of gentrification in Oslo. *Urban Geography*, Vol. 44, Issue 7, pp. 1474–1496. DOI: 10.1080/02723638.2022.2100174.

Centre for Affordable Housing Finance in Africa (2021). *2021 Housing Finance in Africa Yearbook*. Johannesburg: Centre for Affordable Housing Finance in Africa, 258 p.

Colonna, F. (1988). Marc Côte, L'Algérie ou l'espace retourné. *Annales. Histoire, Sciences Sociales*, Vol. 43, Issue 6, pp. 1406–1409. DOI: 10.1017/S0395264900073807.

Conzen, M. R. G. (1969) Alnwick, Northumberland: a study in town-plan analysis Institute of British Geographers Publication 27, 2nd edt. London: Institute of British Geographers, 131 p.

Dessouky, N., Wheeler, S., and Salama, A. M. (2023). The five controversies of market-driven sustainable neighborhoods: an alternative approach to post-occupancy evaluation. *Social Sciences*, Vol. 12, Issue 7, 367. DOI: 10.3390/socsci12070367.

Deniz, B., Peltier, N., Buckley, R., De Brular, L., and Larbi, H. (2005). The Macroeconomic and Sectoral Performance of Housing Supply Policies in Selected MENA Countries: A Comparative analysis. [online] Available at: http://documents.worldbank.org/curated/en/724091468248086869/The-Macroeconomic-and-sectoral-performance-of-housing-supply-policies-in-selected-MENA-countries-a-comparative-analysis [Date accessed August 4, 2023].

Djafri, R. and Osman, M. M. (2021). Housing crisis in Algeria: challenges and perspectives. *Planning Malaysia*, Vol. 19, Issue 5, pp. 220–232. DOI: 10.21837/pm.v19i19.1073.

Diafat, A. and Madani, S. (2016). Urban changes in the city of Setif, Algeria: Colonial and postcolonial periods. In *Urban Planning in North Africa* (1st ed.). Routledge. DOI: 10.4324/9781315548753.

Giddings, B. and Rogers, R. (2021). Compacting the city centre: densification in two Newcastles. *Buildings and Cities*, Vol. 2, No. 1, pp. 185–202. DOI: 10.5334/bc.74.

Guedoudj, W., Ghenouchi, A., and Toussaint, J. Y. (2020). Urban attractiveness in public squares: the mutual influence of the urban environment and the social activities in Batna. *urbe. Revista Brasileira de Gestão Urbana*, Vol. 12, e20190162. DOI: 10.1590/2175-3369.012.e20190162.

National report on housing for the Conference on Housing (2014). [online] Available at: https://habitat3.org/wp-content/uploads/National-Report-Africa-Algeria-Final-in-English.pdf [Date accessed August 4, 2023].

Harris, L. R., Watts, M. E., Nel, R., Schoeman, D. S., and Possingham, H. P. (2014). Using multivariate statistics to explore trade□offs among spatial planning scenarios. Journal of applied ecology, Vol. 51, Issue 6, pp. 1504-1514. DOI: 10.1111/1365-2664.12345.

Lacheheb, D., Madani, S., and Ballout, A. (2017). Housing densification: Transformation or urban renewal (Case study for subdivision in Setif, Algeria). International conference on working class districts 2017 (Vienna, Austria), University of Applied Sciences FH Campus Wien, WienerWissens-Welt, pp. 99–105.

Lees, L. (2008). Gentrification and Social Mixing: Towards an Inclusive Urban Renaissance? *Urban Studies*, Vol. *45*, Issue 12, pp. 2449–2470. DOI: 10.1177/0042098008097099.

Mouaziz-Bouchentouf, N. (2022). De la villa à l'appartement. Analyse des parcours résidentiels dans les quartiers périphériques d'Oran (Algérie). *Territoire en mouvement Revue de géographie et aménagement*, Vol. 52. DOI : 10.4000/tem.9038.

Nebbad, T., Diafat, A., and Madani, S. (2023). Sustainable renewal of an empty block to public urban space: gentrification of the railway workers' housing estate and its garden's urban interface, Sétif, Algeria. *Green Building & Construction Economics*, Vol. 4, Issue 1, pp. 199–213. DOI: 10.37256/gbce.4120232241.

Neuman, M. (2005). The compact city fallacy. *Journal of Planning Education and Research*, Vol. 25, Issue 1, pp. 11–26. DOI: 10.1177/0739456X04270466.

Pinnegar, S., Randolph, B., and Freestone, R. (2015). Incremental urbanism: characteristics and implications of residential renewal through owner-driven demolition and rebuilding. *Town Planning Review*, Vol. 86, No. 3, pp. 279–301. DOI: 10.3828/tpr.2015.18.

Power, A. (2009). Housing and sustainability: demolition or refurbishment? *Urban Design and Planning*, Vol. 163, Issue 4, pp. 205–216. DOI: 10.1680/udap.2010.163.4.205.

Prenant, A. (1953). Facteurs du peuplement d'une ville de l'Algérie intérieure : Sétif. *Annales de Géographie*, Vol. 62, No. 334, pp. 434–451. DOI: 10.3406/geo.1953.13052.

Sharifi, A. and Yamagata, Y. (2016). Resilient urban planning: major principles and criteria. *Energy Procedia*, Vol. 61, pp. 1491–1495. DOI: 10.1016/j.egypro.2014.12.154.

Sugiyama, T., Carver, A., Koohsari, M. J., and Veitch, J. (2018). Advantages of public green spaces in enhancing population health. *Landscape and Urban Planning*, Vol. 178, pp. 12–17. DOI: 10.1016/j.landurbplan.2018.05.019.

РЕКОНСТРУКЦИЯ РАЙОНА: О ВЕНЧУРНОМ СТРОИТЕЛЬСТВЕ В СЕТИФЕ, АЛЖИР

Дхиа Эддин Закария Лачехеб[1,2]*, Саид Мадани[2,3]

[1]Институт архитектуры и урбанизма, Университет Батна 1, Батна, Алжир
[2]Лаборатория PUViT, Университет Сетиф 1, Сетиф, Алжир
[3]Институт архитектуры и наук о земле, Университет Сетиф 1, Сетиф, Алжир

*E-mail: zakaria.lacheheb@univ.batna.dz

Аннотация
Введение: В статье рассматривается один из типов спекуляции недвижимостью, который играет ключевую роль в переустройстве городской среды и характеризуется уплотнением застройки и недоступными ценами. **Цель исследования:** проанализировать, как жилье, расположенное вокруг центра, в форме города-сада претерпевает постепенное обновление в историческом центре Сетифа, Алжир. Исследование отражает цель ООН в области устойчивого развития № 11 (устойчивые города и населенные пункты) с точки зрения взаимосвязи между уплотнением застройки, сокращением зеленых насаждений и социально-экономическими последствиями. **Методы:** В качестве количественных источников мы использовали опрос, основанный на наблюдении, и анкету по показателям устойчивого развития, а в качестве качественных источников — полуструктурированные интервью и фокус-группы. **Результаты:** Исследование показало, что типологический сдвиг от жилых домов, предназначенных для проживания одной семьи, к многоквартирным домам обусловлен не изменением предпочтений в выборе жилья, а ориентированной на прибыль стратегией землепользования. Этот сдвиг привел к проблемам доступности жилья и джентрификации, которые, в свою очередь, нарушают социально-экономическую сплоченность. Процесс уплотнения и перехода к проживанию в квартирах приводит к разрушению архитектурного облика зданий и физических характеристик района. В исследовании подчеркивается важность проактивных, коллективных и инклюзивных методов в городском планировании и управлении в целях реализации восходящего подхода, направленного на противодействие спекулятивному обновлению кварталов, вызванному либеральной политикой. Предлагается набор инструментов, связанных с уплотнением застройки, для продвижения принципов, отраженных в целях устойчивого развития.

Ключевые слова: реконструкция района, спекуляция недвижимостью, уплотнение, социальный капитал, джентрификация.