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Living between change: The impact of settlement evolution on community life and daily practice

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Abstract. Moving to a new living situation often signifies a major life change. It requires individuals to adjust to unfamiliar environments, routines, and social interactions. Driven by ongoing urbanization, this shift results in an increasing number of immigrants living in substandard housing and a transition from rural to urban areas. To reduce illegal housing, the government has constructed flats to meet the needs of low- to middle-income residents in suitable locations. By analysing historical shifts and current urbanization patterns, this paper offers insights into the relevance of settlement changes in the context of global development and sustainability. It also examines how lifestyle adjustments, including changes in daily routines, social interactions, self-care practices, and emotional resilience, facilitate successful adaptation to new living conditions. A post-occupancy evaluation [POE] was carried out through in-depth interviews with selected residents of Kampung Susun Akuarium, Penjaringan, North Jakarta, Indonesia. The collected data helps develop strategies for the sustainable future of building occupancy. Additionally, the study examines methods for fostering community ties and maintaining independence during the transition. The study revealed that the availability, affordability, and flexibility of public spaces directly affect the adaptation, negotiation, and resilience of individuals and groups living in Kampung Susun Akuarium.

1 Introduction

During the process of urbanization, many people initially settle in informal settlements, which are areas that develop without formal planning or legal recognition. Examples include slums and squatter settlements [1]. Over time, governments or urban developers may redevelop these areas into formal settlements with proper infrastructure, legal housing, and urban planning guided by sustainable development principles tailored to address environmental, social, and economic dimensions [2]. This shift marks a transformation in the physical and legal structure of communities. The transformation from informal to formal settlements affects more than just buildings; it also deeply impacts the social and cultural life of residents. Close-knit communities may be disrupted when people are relocated or new populations move in. Traditional ways of life, social networks, and communal activities may

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weaken or disappear, which undermines the sense of place that was once reinforced through daily interactions in informal neighbourhoods [1]. Moreover, residents of informal settlements often rely on informal networks and local actors to access basic services because formal infrastructure delivery tends to exclude them, further intensifying socio-economic inequalities [3]. Original residents may also experience a sense of loss of identity or belonging when they feel displaced or marginalized in the new setting.

Exploring the understanding of change reveals how evolving settlement types have led to diverse lifestyle adaptations in different environments [4]. Understanding these transformations enhances our appreciation of the interconnectedness between place and lifestyle, revealing the intricate relationship between space, culture, and human behaviour [5]. This understanding is represented by adjusting to a new way of life coupled with learning how to live in this new place [5]. In this process, lifestyle adjustment plays a crucial role in ensuring a smooth and sustainable adaptation. This adjustment encompasses changes in daily habits, personal organization, social interaction, and emotional resilience [6]. To thrive in new settings, individuals must recognize and actively engage with the demands of this adjustment. Recognizing the importance of lifestyle modification during such transitions is vital for promoting long-term well-being, stability, and personal development [3].

Changes in settlement type often do not involve the community; they follow government regulations based on the new settlement's occupancy [7]. This has a significant impact on the structure of the settlement, in this case, how the community should adjust itself in terms of appropriate settlement and how the community should adapt to ensure an appropriate settlement that meets the community's needs [4]. Changes in a community's physical space, such as redevelopment, relocation, or gentrification, bring changes in how people live, interact, and build relationships. Understanding these lifestyle shifts and evolving community dynamics is crucial for urban planners, policymakers, and social workers. This approach ensures that development is inclusive and culturally sensitive and supports the well-being of the affected communities rather than focusing solely on physical infrastructure. Numerous examples from various countries demonstrate how changes in place of residence have led to evolutionary changes that alter people's daily lives [2].

The change of lifestyle experienced by the Kampung Susun Akuarium [KSA] community in Penjaringan, North Jakarta, Indonesia, initiated by the government, exemplifies how the government can collaborate with a specific community to achieve mutual goals. This type of settlement change produced anxiety in the community related to adapting to the new settlement. Both the government and the community must carefully consider the social and cultural impact of the change. This study aimed to develop strategies for the sustainable occupancy of future buildings. Additionally, it examines methods for fostering community ties and maintaining independence during the transition. Understanding and addressing the factors that influence the transition process can help the community achieve a smoother and more positive adjustment to their new living environments.

2 Literature review

Analysing the transformation of communities from horizontal settlements to vertical living spaces can be achieved by integrating Lefebvre's theory of everyday life. This approach explains the production of social space, community resilience, and community adaptive capacity. It also measures social cohesion and evaluates changes in social bonds within vertical contexts. All of these factors are examined through the lens of post-occupancy evaluation perspectives (1991) [8]. The transformation of horizontal slum settlements into vertical housing is a complex global phenomenon involving changes in spatial practices, community resilience, and social cohesion [9].

Lefebvre viewed the concept of everyday life as the site where social relations are reproduced, negotiated, and resisted. Shaped by capitalism and urban design, transforming daily practices is essential to any social revolution (1991). Furthermore, everyday life is experienced through the rhythm of urban life, which is related to time, space, and movement, and shapes the social existence of a community [10]. Lefebvre's theory of everyday life provides the foundation for understanding how space is socially produced through three interconnected dimensions: spatial practices [perceived space], representations of space [conceived space], and spaces of representation [lived space] [11]

In the context of the transformation from horizontal to vertical, this theory explains how spatial practices change from horizontal face-to-face interactions on streets to more limited, vertical interactions [8]. Lefebvre emphasizes that space is not merely a physical container, but rather a product of living social practices [12]. This transformation changes the representations of space from communal to individual logic and transforms spaces of representations from collective meaning to more fragmented experiences [8].

In horizontal settlements, spatial practices [perceived space] are characterized by direct ground-level interactions; informal economic activities in shared spaces; and flexible use of public areas. However, the transition to vertical living fundamentally alters these practices. Residents must adapt to elevator-mediated access, shared corridors, and limited communal spaces [8]. Representations of space or conceived space shift from organic, community-driven spatial organization to planned, regulated vertical structures. This transformation often creates tension between residents' lived experiences and the formal spatial concepts imposed by planners and architects [10]. In this case, spaces of representation [lived space] transform from horizontal community networks to vertical social arrangements. Residents must renegotiate their understanding of privacy, community, and belonging within the constraints of vertical architecture [12]

Community resilience is defined as a community's ability to manage and adapt to change. This includes resistance, mitigation, and adjustment at all levels [13][14]. In the context of vertical relocation, community resilience encompasses maintaining social functions while adapting to new physical environments [15][16]. Research shows that effective coping strategies include problem-focused coping, support-seeking, and cognitive restructuring [16][17]. Communities that successfully adapt to vertical housing demonstrate the ability to develop new social networks while maintaining existing ones [15]. Eight main aspects influence community resilience in vertical contexts: economic, social, cultural, human resources, ecological, physical, political and governance, and technological [18].

State legitimacy toward informal communities is critical for developing resilience skills [13]. Communities rebuild social networks by developing new mechanisms for maintaining social connections across vertical spaces. These mechanisms include creating informal gathering spaces and adapting traditional community practices to vertical constraints [15]. Residents adapt their livelihood strategies to vertical living conditions, often requiring innovation in home-based economic activities and new forms of resource sharing [13]. Successful adaptation to vertical living conditions involves finding ways to preserve important cultural practices within the limitations of vertical architecture, which often requires the creative use of available spaces [14].

Resilience encompasses more than just about bouncing back; it also involves transformation and social justice by addressing systemic vulnerabilities [6,19,20]. One example of resilience is the ability of a community or system to absorb disturbances, adapt, and retain core functions. This can benefit a community by enabling it to learn and respond to change through flexible institutions, diverse knowledge systems, and social networks.

Social cohesion in high-rise housing experiences significant transformation compared to horizontal settlements [21][22]. Research indicates that high-rise buildings' most significant social impacts are anti-social behavior, a lack of social cohesion, and reduced social contact

with neighbours [21]. Social cohesion in vertical contexts can be measured through three main, validated factors: social interaction, community participation, and a sense of belonging to the environment [22].

Outdoor and indoor interactional spaces significantly contribute to strengthening residents' social cohesion [22]. However, vertical housing presents unique challenges to community formation. These challenges include physical barriers to spontaneous interaction, reduced visibility of neighbours, and limited shared spaces for community activities [21][23]. Together, these theories provide a critical lens through which to examine the politics of space. These perspectives are particularly important for analyzing urban transformation, participatory planning, and the role of design in creating equitable cities.

Post-Occupancy Evaluation (POE) is a structured framework used to assess building performance after occupancy, closing the gap between design intent and actual use. It integrates user feedback, technical measurements, and operational data to identify performance gaps, improve occupant satisfaction, and inform future projects. A typical POE framework begins with defining objectives aligned to client needs and standards, then proceeds through staged levels—indicative [quick scans], investigative [surveys, walkthroughs, spot tests], and diagnostic (detailed monitoring and analytics) [24] Core methods include standardized occupant surveys to evaluate comfort, usability, and productivity proxies [24], walkthroughs and interviews for contextual insights [25], and environmental/energy measurements to correlate physical conditions with user experience [26].

Effective POE processes follow a clear cycle: planning scope, collecting data, analyzing and triangulating findings, reporting actionable improvements, and benchmarking outcomes for continuous learning [27]. Frameworks such as PROBE and Soft Landings emphasize embedding POE as a routine feedback loop, ensuring lessons inform both operations and future designs [24,28,29]. Thus, POE is selected to be adopted in this research since the method of occupant surveys to evaluate comfort, usability, and productivity proxies through a walkthrough [observation] and interviews is the most appropriate method to gain more contextual insights.

3 Method

This research uses a qualitative methodology based on the Post-Occupancy Evaluation (POE) framework to understand residents' experiences and adaptation processes following relocation to government-provided apartments. The study was conducted in the Penjernihan Municipality of North Jakarta, Indonesia. The study site consists of multiple residential apartment buildings. Data were collected during the 2023-2024 academic year through interviews with household residents and the KSA management team. The primary respondents were former *kampung* (urban village) residents who had been relocated to government-provided apartments as part of an urban development program. The respondents who took part in this research were the population of the KSA, with the following criteria:

1) Flat residents with a minimum length of stay of 3 years
2) The respondent must be at least 17 years old and can express opinions logically
3) Respondents have experience recognizing the site history and daily life of the inhabitant group.
4) Permanent residents, or tenants who have been living in the flat since it was built.

To collect data on three key areas, comprehensive interviews were conducted: community engagement through individual and institutional participation in the implementation of new settlement programs; the standard of infrastructure built within the residential units; and the community's sociocultural transformation, including changes to social structures and cultural practices when adapting to new settlement arrangements.

To address the problems in this study, data were collected to focus on the following issues, together with the sample questions that align with the problems addressed in this study.

1) The change of lifestyle with the following questions:
   - How has your daily routine changed since moving into the apartment?
   - What are the biggest differences between life here and life in your previous kampung in terms of facilities and services?

2) Adaptation to vertical and formal living is related to the following questions:
   - What challenges have you faced in adapting to vertical living [e.g., elevators, shared spaces]?
   - How comfortable do you feel with the rules or regulations in the apartment complex, such as the relationship with neighbors?

3) Negotiation of changes in social relations and community solidarity through the following questions:
   - Have community interactions changed since relocation or are there new forms of cooperation or social gatherings among residents?
   - How do you maintain a sense of togetherness and support within this new setting?

4) Resistance is the impact of change on cultural identity and collective practices
   - Have you noticed any loss or change in cultural practices from your kampung life?
   - Do you think residents are trying to preserve old traditions in this new environment or any aspects of previous community life that you would like to bring?

Data analysis employed thematic and narrative techniques to identify key patterns related to lifestyle change, adaptation to vertical living, and sociocultural transformation. Triangulation was used to ensure the reliability and validity of findings by cross-referencing information obtained from in-depth interviews, participatory observations, and visual documentation. The interviews, conducted with ten household residents and four members of the management team, were transcribed and coded using qualitative data analysis supported by field notes and logbooks. Data organization and respondent information were managed using spreadsheet tools, while visual data were interpreted through annotated photographs and site observations. This analytical process enabled a comprehensive understanding of the residents' adaptation experiences, shifts in community solidarity, and the negotiation of cultural identity within the new settlement environment.

4 Result and Discussion

4.1 Background of the site

Since the 1980s, KSA residents have been primarily fishermen, market workers, factory and warehouse workers, and small-scale traders. They settled in unplanned settlements. These settlements developed organically on illegally occupied land, lacking any clear horizontal or vertical structure. The area was previously home to the Batavia Fisheries Laboratory (Visscherij Station Batavia), which operated in the early 20th century (around 1923), before being decommissioned after Indonesia gained independence. The area can be accessed from

the east via the Maritime Museum, which served as a warehouse during the VOC era. Access is also possible from the west via Kampung Ziarah Luar Batang and from the north via the North Coast of Jakarta and Sunda Kelapa Port. Sunda Kelapa Port has been the largest port in the region since the 16th century [30][31].

Over time, illegal settlements have become increasingly dense and more widespread. They have encroached on canal areas in the form of "*Kotakan*" dwellings, which has caused the river to narrow. In 2016, evictions were carried out because the settlements were deemed incompatible with the city's spatial planning and were considered slums [32]. Some residents were relocated to apartments built based on the Innovative Self-Sustaining Living Kampong concept, which prioritizes resident participation in every stage of planning, construction, and maintenance [10][33]. The shift from landed to vertical housing has impacted how space is occupied [8][9] the spaces and types used for livelihood activities and socialization, how living spaces are managed, and freedom of space occupation [8,9,12].

The location of the KSA site is closely linked to the occupations of its residents, including manual labourers at Sunda Kelapa port, port and market traders, Old Town souvenir artisans, and fishermen. According to the initial agreement between the community and the government, the location must remain unchanged; therefore, the KSA cannot be moved elsewhere, as doing so would cause serious economic problems for residents, most of whom work in the informal sector and would need to find new sources of income. Therefore, any proposals must be developed within the existing KSA area. However, a spatial planning study of the KSA area revealed that the zone was not designated as a green zone, but rather as local government zoning. This zoning allows for the construction of government-organized, funded, or built housing. Ultimately, this loophole opened the door for government-involved area development, as residential development is permitted in that area.

4.2 The change of lifestyle

The most significant physical and spatial changes in KSA were seen in the configuration of public and communal spaces [4][7]. Before the village was relocated, its layout promoted fluid social relations. There were front yards, narrow paths between houses, and open areas that served as spaces for economic activities, social interactions, and cultural events. These spaces served as physical connectors and nodes of interaction that strengthened social cohesion among residents [21][22].

When a community moves from a traditional, often horizontal settlement to more modern, vertical or formal housing, such as apartment blocks or flats, people experience major shifts in how they live their daily lives, as was the case in KSA [8][12]. However, the minimal space for communal outdoor areas affects social interactions and other factors, such as different schedules, which may reduce accessibility to traditional markets or neighbourhood services [23][21]. Different schedules or constraints, such as building rules, alter routines and reduce accessibility to traditional markets or neighbourhood services [34]. Table 1 shows how residents develop adaptation, negotiation, and resistance strategies in response to these changes.

After relocating to vertical housing, however, there was a major shift in the spatial structure [6,19,20]. Government apartment designs typically feature narrow corridors and closed, vertically separated units [2]. These designs reduce opportunities for spontaneous encounters and limit flexibility in how space is used [21]. Residents consider this model too individualistic and unable to accommodate the collective interaction needs that characterized the village.

Table 1. The change of individual lifestyle.

	Adaptation	**Negotiation**	**Resistance**
Friendly relations with neighbors	Focus group discussion	Reduce social isolation	Economic, culture, social, human resources
Family ties and mutual assistance	Eases adaptation process	Providing relocation preparation program	Ecological, physical, political and governance, and technological
Privacy for personal activities	Orientation on shared activities	Understanding shared activities	Reduce opportunities
Acceptance of one's personal presence by other residents	Adaptation to shared spaces within the community	Reduce social isolation	Informally modifying their spaces
Sense of ownership of the environment	Orientation on vertical living	Holding community workshop	Illegal extensions

4.3 Adaptation to vertical and formal living

Transitioning from kampung-style housing to vertical apartments requires adapting to structured environments with new rules and less flexibility [34], as shown in Table 1. The adjustment may include learning to use elevators, adhering to noise regulations, and sharing facilities [8]. The transition from organic, community-driven governance to formal housing management can be facilitated through focus group discussions, which can improve understanding among residents, both individually and in groups [8][12]. The transition to vertical living requires adaptation to shared spaces within the community (Table 1).

This adaptation can be achieved through consistent group discussions, which ease the process of adapting to shared spaces. These discussions are part of living in the vertical spaces to improve residents' sense of ownership [15]. Table 2 illustrates how adaptation can be created within groups by fostering interaction among building residents and involving them in the planning and design activities. Residents can also be encouraged to develop and share communal spaces that support social interactions and cultural practices [13]. To reach a formal decision, the community can do so through mutual agreement by considering the needs of other residents [14].

4.4 Negotiation of changes in social relations and community solidarity

Dense social networks are often disrupted when people are relocated or when their environment changes [12]. This can be due to physical separation, the result of spatial changes, and the community's adaptation to these changes, all of which can weaken neighborhood bonds. A decrease in spontaneous interaction [e.g., front porch chats or shared meals] can also be the reason for change [14]. Therefore, it is significant to propose negotiation because new social groups always emerge while older ones disappear [18].

Negotiation between neighbors, as shown in Table 2, can reduce social isolation and provide relocation preparation programs and shared activities [10][11]. They can also hold community workshops to develop mutual understanding among neighbors [13]. Negotiations between groups and [14] can also be used to request better services or exceptions, maintain community cohesion, allow for flexible space use, ensure solutions, share communal spaces, and develop mutual understanding regarding vertical living spaces (Table 2).

4.5 Resistance as the impact of change on cultural identity and collective practices

Traditional living spaces often support cultural rituals, celebrations, and shared customs. These spaces should be adapted based on the current situation, as can be seen from Table 2 [16][17]. However, challenges may arise when holding community rituals or ceremonies in confined spaces. These challenges may include loss of space for arts, religious activities, or food-related practices; cultural erosion; or transformation over time [15]. Through the Community Action Planning (CAP) process and bottom-up proposals from residents, the final design concept successfully incorporated more contextual public and communal spaces [13][14]. Residents emphasized the need for easily accessible shared spaces connected to daily activities (Tables 1 and 2). Several proposed principles that were accommodated include:

1) Communal activity centers on each floor or block that serves as a venue for community meetings, large family gatherings, and cultural activities such as religious gatherings and holiday celebrations.
2) Semi-open spaces for informal economic activities, such as small stalls, kiosks, and craft production areas. These spaces would make it easier for residents to continue running their home businesses.
3) Circulation areas encourage interaction through visual openings between floors, shared balconies, and transition areas that allow for casual conversation.

Table 2. The change of group lifestyle.

	Adaptation	**Negotiation**	**Resistance**
Interaction between building residents	Adapted	Flexible space use	Shared customs, support celebrations and cultural rituals
Understanding of the building design process	Involve residents in the planning and design process	Negotiate with authorities for better services or exceptions	Loss of space for various activities
Responsibility for environmental maintenance	Shared communal spaces	Maintain community cohesion	Acceptance of chosen option
Concern for other residents	Creation of new support systems	Ensures solutions reflect residents' needs	Develop transformation over time
Management of the building	Support social interaction and cultural practices	Negotiate with authorities for better services or exceptions	Acceptance of chosen option
Decision made based on mutual agreement	Community groups	Orientation on vertical living	Acceptance
The change of social relation	Online forums	Shared communal spaces	Acceptance of chosen option

These findings reinforce the idea that the quality of public and communal spaces is a vital social infrastructure in the context of relocation-based vertical settlements, not merely an additional facility. The availability, affordability, and flexibility of public spaces directly affect social cohesion, sense of belonging, and residents' ability to manage the environment sustainably.

5 Conclusion and Recommendation

5.1 Conclusion

The study highlights that the evolution of settlements has a significant impact on daily life**,** affecting not only the physical landscape but also the social and cultural fabric. While some changes offer new opportunities, others challenge existing community identities and practices, prompting residents to respond in adaptive, resistant, or negotiated ways. Residential shifts affect communities' social structures and cultural patterns. The social context must be an integral part of designing and evaluating formal housing. Balancing spatial needs with socio-cultural values is important for community sustainability. Unlike conventional public housing, the KSA Residents' Cooperative is responsible for managing public spaces in KSA, not a third party. This system allows the community to tailor space functions and usage priorities to their needs while ensuring sustainable maintenance and supervision.

The study contributes to the understanding of how settlement evolution influences both the spatial and socio-cultural dimensions of community life. It emphasizes the importance of community-managed spaces in fostering sustainability, participation, and identity preservation. By examining the KSA Residents' Cooperative model, the research offers valuable insights into how localized governance can enhance adaptability and social cohesion in urban housing systems. Furthermore, the findings provide a framework for integrating socio-cultural considerations into housing policy and planning, bridging the gap between architectural design and community development. However, several limitations should be acknowledged, i.e., contextual specificity since the case only covers the KSA Residents; data scope relies on qualitative data from the residents' perspectives only, which may not capture all dimensions of policy or institutional factors; temporal constraints only focus on a specific period of settlement transition; and limited quantitative validation.

Future research could expand upon this work in several ways, among others, comparative studies, longitudinal research, and quantitative validation. Comparative analyses across different housing models or regions to examine how community-managed spaces function in varying socio-political contexts. Longitudinal research undertakes long-term monitoring of community adaptation to assess the sustained impact of cooperative management on social and cultural dynamics. In comparison, quantitative validation incorporates mixed-method approaches combining qualitative and quantitative data to strengthen empirical support for socio-cultural findings.

5.2 Recommendation

Several recommendations are offered based on the discussion of the current study.

5.2.1 Cultural continuity and space for traditions

These programs protect and accommodate cultural identity in the new environment. Prevent cultural erosion and support mental well-being by allocating multipurpose rooms for traditional ceremonies and allowing small-scale cultural or religious gatherings in shared spaces.

5.2.2 Policy flexibility and grassroots negotiation

Allow flexibility in building regulations to support resident adaptation and creativity. Residents often develop informal solutions to unmet needs, such as legalizing minor

modifications that are safe, like drying clothes, or creating mini gardens, and creating channels for residents to propose and negotiate changes.

5.2.3 Long-term monitoring and feedback mechanisms

Implement ongoing monitoring of social impacts after settlement changes. This helps identify emerging problems early and adjust policy accordingly. Conduct periodic surveys or community assessments and establish a feedback system between residents and authorities.

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