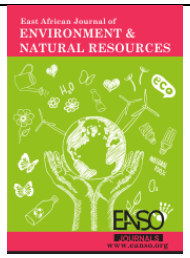
Article DOI: https://doi.org/10.37284/eajenr.8.2.3147



**East African Journal of Environment and Natural Resources**
eajenr.eanso.org
**Volume 8, Issue 2, 2025**
**Print ISSN: 2707-4234 | Online ISSN: 2707-4242**
Title DOI: https://doi.org/10.37284/2707-4242

EAST AFRICAN NATURE & SCIENCE ORGANIZATION

*Original Article*

# Impacts of Urban Decay on Makongeni Phase 5 Estate, Thika Municipality

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**Article DOI: https://doi.org/10.37284/eajenr.8.2.3147**

**Date Published:** *16 June 2025*

**Keywords**: *Effects, Impacts, Neighbourhood, Thika Municipality, Urban Decay.*

## ABSTRACT

Urban decay continues to be a major hindrance to the realization of sustainable urbanization globally. The challenge has been witnessed in major cities, medium and small urban areas and has affected parts or whole of urban areas. Thika Municipality in Kiambu County has experienced the challenge in some estates which includes Makongeni Phase 5. The purpose of this study was to reveal the impacts of urban decay in Makongeni Phase 5. The researcher engaged Thika Municipal Manager, Thika Sub-County Physical Planner and the Environment Officer in a focused interview. From a population of 242 plots, a sample size of 100 respondents was targeted and 82 were interviewed. In addition, observation was applied in assessing the impacts of urban decay through observable characteristics which were used in making comparisons with neighbouring estates. Among the impacts identified, environmental degradation was ranked highest at a score of 3.44 on a five-point Likert scale. Inversely, population loss was the least significant impact at a score of 2.17. In examining the effects of urban decay, marginalization was the most significant at a score of 3.5488 representing marginalization (28.45%) of the cumulative effects of urban decay. Urban decay was also identified to contribute to the vulnerability of the neighbourhood to disasters and impacts of climate change. Poor economic performance was the least significant effect at a score of 2.7561 representing 22.1%. The study revealed an increase in social problems manifested through insecurity, inadequacy of social services and lack of job opportunities. A strong community structure has been identified as a critical element in the management of urban decay. To manage the decay, the study has recommended improvement of the neighbourhood through renewal of the buildings and grooming of the environment by individual plot owners. In addition, a stronger community structure is recommended to help in managing security and lobbying for government intervention in the neighbourhood.

**APA CITATION**

Muraguri, D., Karanja, D. & Munala, G. (2025). Impacts of Urban Decay on Makongeni Phase 5 Estate, Thika Municipality *East African Journal of Environment and Natural Resources*, *8*(2), 104-116. https://doi.org/10.37284/eajenr.8.2.3147.

**CHICAGO CITATION**

Muraguri, Daniel, Dennis Karanja and Gerryshom Munala. 2025. "Impacts of Urban Decay on Makongeni Phase 5 Estate, Thika Municipality". *East African Journal of Environment and Natural Resources* 8 (2), 104-116. https://doi.org/10.37284/eajenr.8.2.3147

 

Article DOI: https://doi.org/10.37284/eajenr.8.2.3147

**HARVARD CITATION**
Muraguri, D., Karanja, D. & Munala, G. (2025) "Impacts of Urban Decay on Makongeni Phase 5 Estate, Thika Municipality", *East African Journal of Environment and Natural Resources*, 8 (2), pp. 104-116. doi: 10.37284/eajenr.8.2.3147.

**IEEE CITATION**
D. Muraguri, D. Karanja & G., Munala "Impacts of Urban Decay on Makongeni Phase 5 Estate, Thika Municipality", *EAJENR*, vol. 8, no. 2, pp. 104-116, Jun. 2025. doi: 10.37284/eajenr.8.2.3147

**MLA CITATION**
Muraguri, Daniel, Dennis Karanja & Gerryshom Munala. "Impacts of Urban Decay on Makongeni Phase 5 Estate, Thika Municipality". *East African Journal of Environment and Natural Resources*, Vol. 8, no. 2, Jun 2025, pp. 104-116, doi:10.37284/eajenr.8.2.3147

## INTRODUCTION

Urban decay has been a relentless challenge in urban areas across the globe (Govender & Reddy, 2020). It has been witnessed in developed and developing nations, in big cities and small urban areas (Egolum & Emoh, 2017; Henderson 2010; Cohen, 2006 and Awuah & Abdulai, 2022). The phenomena have contributed directly and indirectly to other urban challenges such as urban sprawl, high rates of crime, environmental degradation and pollution, high prevalence rate of disasters and urban decay (Zhang, Li & Zheng 2023; Shao, Sumari, Ujoh, Musakwa & Mandela, 2020). However, the benefits of agglomeration make urbanization the preferred form of human settlement compared to rural areas which are characterized by underutilization of services and low returns on investments (Haris & Selod, 2017). The opportunities and potential, and challenges in urban areas attract interest from policymakers and researchers alike.

In conditions of urban decay previously functioning districts fall into disrepair and disuse and become decrepit (Akabuilo & Okeke, 2018). Urban decay causes a drop in property prices due to among other reasons, diminished natural lighting, increased pollution, obstructed views, increased noise, business flight, decline of social and economic activities, insecurity and disaster risk which causes further decay (Swanepoel & Smallwood, 2019). According to Ndhlovu and Matai, (2019), although urban decay is a matter of public concern, it has not been given enough attention in urban planning and management platforms. With the projected increase in urbanization, the health of cities should be at the centre of their planning and management if the quality of life of the inhabitants is to be improved. Increased urbanization comes with the possibility of good outcomes, such as a reduction in poverty and inequality. However, poorly planned, urbanization can aggravate congestion, increased crime rates, pollution, inequality and social exclusion (UN Department of Economic and Social Affairs, 2020), all strong indicators of urban decay.

The projected urban growth and the ensuing demand for services make it paramount to look into the challenges facing sustainable urbanization. Urban decay has been found to have negative impacts on the environment and natural resources within urban areas which are critical for urban development. As urban areas fail to provide resources to the urban population, the demand is transferred to rural areas through urban sprawl and the extraction of resources such as water and food. Addressing the challenge of urban decay provides an opportunity for urban areas to reduce pressure on rural areas and environmentally fragile areas (Kapucu, Ge, Rott, & Isgandar 2024; James, 2024; Kenya Institute for Public Policy and Research, 2023).

Of interest in urban planning and management, however, is the fact that urban areas and cities are experiencing two contradicting phenomena; urban decay and urban sprawl. While some sections are decaying, other sections, often the periphery of urban areas are fast expanding into new rural territories. According to Karakayaci (2016), inner-city problems such as unsafe environments, social

 

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problems, noise and poor quality of social and physical infrastructure are some of the factors driving urban sprawl. While urban sprawl has been attributed to urban population growth due to an increase in demand for housing (Maina & Waiganjo, 2024), housing stock has continued to be lost or underutilized in inner-city neighbourhoods due to urban decay.

Kenya has invested heavily in the management of urban areas. The existing policy and legal frameworks in Kenya have established structures and systems for the governance and administration of urban areas. For example, the Kenya National Urban Development Policy (KNUDP), 2016 has identified poor governance, low level of investment in infrastructure and unplanned development as the main challenges of urbanization. KNUDP, the precursor to the Urban Areas and Cities Act of 2011, the Act has also put emphasis on the governance of the urban areas and the establishment of the structure through a hierarchy of urban areas. The challenges of urban areas are left to be addressed through urban planning where the Physical and Land Use Planning Act of 2019 outlines the matters to be dealt with in a Local Physical and Land Use Development Plan. The Act has however not explicitly identified urban decay among the issues to be addressed.

However, multiple challenges persist; the biggest being a lack of reliable infrastructure, a major hindrance to development. These challenges have been attributed to a lack of human and financial resources and appropriate institutions. The results are evident in growing but failing urban areas (Mireri 2014), with precursor indicators of urban decay evident in many urban areas.

This paper brings to the fore the challenge of urban decay in residential neighbourhoods in Kenya with Makongeni Phase 5 being the area of study. The choice of Makongeni Phase 5 has been informed by the location which is next to a thriving urban node.

**Statement of the Problem**

Established in the 1960s by the Kenya Canners Workers Union, Makongeni Phase 5 is the second oldest estate after Kamenu Estate in Kamenu Ward, Thika. While other estates have grown and developed into attractive neighbourhoods, Makongeni Phase 5 has deteriorated and lost prestige. Absence, unreliability and inadequacy characterize the provision of infrastructure and services in the estate. Urban decay is observed in the dilapidated structures, haphazard alteration of structures, unkempt open spaces, lack of and poor drainage systems and roaming herds of cattle and goats. During a public participation exercise conducted in 2015 during the preparation of Thika Municipal Integrated Strategic Urban Development Plan, 2035, drainage, solid and liquid waste management and street lighting were identified as the pressing needs for Makongeni Phase 5, (County Government of Kiambu, 2018). Central waste collection/ transfer points are lacking, making residents dump solid waste in open spaces, often in undeveloped parcels of land, (Teresia, 2023). The existing sewer system is characterized by blockage and spillage onto the open spaces and roads. There are no security lights on the internal streets, (County Government of Kiambu, 2018). The neighbourhood has retained the low housing typology designed for single rooms, which is only attractive to the low-income segment of the urban population. This state has perpetuated the degeneration of the estate exacerbating further loss of appeal.

Thika Municipality continues to sprawl into prime agricultural land, and ecologically sensitive areas at a rate of 0.91% while vegetation has been reducing at a rate of 1.12% over the past 34 years (Muiruri & Odera, 2018). Despite the close proximity to a thriving urban node and connectivity to infrastructure such as piped water, trunk sewerage and electricity, availability of education and health facilities and security installations, Makongeni Phase 5 is rapidly degenerating into an eyesore.

 

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The neighbourhood is characterized by rusty roofs, blockage of access roads through encroachment by buildings, scattered litter and foraging livestock, informal, abandoned and dilapidated buildings and poor road surface, Ntarangwib & Odera, (2017); Mugure & Kibutu, (2023). The purpose of this study, therefore, is to investigate the phenomena and draw the attention of stakeholders to the challenge with the aim of reversing the continued decline.

## LITERATURE REVIEW

### Concept of Urban Decay

Urban decay is the condition of observable indicators of the physical deterioration of the built environment that end up attracting crime, vandalism and pollution and results in the decline of social and economic activities, (Vigdor, 2010; Slater & Higgins, 2000). Urban decay affects neighbourhoods socially, politically and economically while compromising environmental sustainability and reducing the quality of urban life (Ndlebe, 2017). The concept has also been used to describe the effects of new developments on the existing or old ones. New developments have been found to occasion physical deterioration when residents abandon the old in preference for the new. This phenomenon has variably been described as urban decline, urban degeneration and urban blight. Urban decay can also be described as the process of negative physical and functional change in the built environment, (Lea, 1972; Govender & Reddy, 2020; Alade, Ogunkan & Alade, 2021; Ndlebe, 2017) taking the form of physical deterioration of buildings, or lowering the quality of the environment of a whole neighbourhood. It is instructive to note that urban decay can take place in relatively new developments as well (Lea, 1972).

Urban decay leads to the relocation of businesses to more prosperous areas where infrastructure and services are adequate and development opportunities exist. It is attributed to a decline in urban environmental and economic resilience through the decline in economic performance, environmental functionality and aesthetics (Ndhlovu & Matai, 2019). This contributes to the loss of opportunities for business and employment.

Decaying neighbourhoods exhibit physical and social problems that disfigure the urban landscape. These neighbourhoods are often dilapidated and uninhabited places devoid of decency and places to be excluded (Andersen, 2018). Consequently, these areas foster poverty but repel high- and medium-income communities and hinder capital infusion, (UN Department of Economic and Social Affairs, 2021). Segregation is considered a cause and effect of urban decay.

Urban degeneration is a challenge experienced in many cities all over the world. The phenomenon is caused by rapid urbanization, inadequate provision and maintenance of housing, infrastructure and other services as well as the disparity in the location of these facilities. These occasions development of untidy and degraded spaces; scarcity and poor-quality resources; air pollution; vulnerability to poor health; increased traffic challenges; deteriorating and ageing infrastructure and buildings, and inefficient waste management (Govender & Reddy, 2020, Alade, et. al. 2021).

Urban decay is an urban development challenge in both developed and developing nations, Leo (1998); Burak et al., (2017) and Swanepoel & Smallwood (2019). According to Fertner, Groth and Hersland (2015), since development and populations are higher in the metropolitan regions, urban decay ought to concentrate in small towns characterized by the low and ageing population, service and building stock dysfunction and obsolescence, and deindustrialization as the knowledge economy outpaces small town production.

According to Alade, et al (2021), many cities in Europe and North American countries experience urban decay in the outskirts of a metropolis, while the city centre and the inner city retain high real estate values and sustain a steadily increasing

 

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population. Aguenda (2014) contradicts this assertion by pointing out that prosperity and expansion of certain parts of cities, usually the city centre occur at the expense of others through shrinkage and decay. In many African towns, decay happens at the core while the periphery experiences rapid development of new neighbourhoods. Alade. et al. (2021), opine that in Nigeria urban decay in the inner city has not been given adequate attention in research despite apparent facts about the deterioration of core areas but instead discussions on urban decay have focused primarily on the proliferation of slum areas as well as the renewal of depressed urban residential neighbourhoods. The growth of slums has been identified as one of the effects of urban decay typified by overcrowding, dilapidated structures, flooding, the existence of stagnant wastewater, and an unhygienic living environment, (Alade. et al. 2021).

**Forms of Urban Decay**

Urban decay takes different forms which are interrelated. The forms are physical, social and economic, (Lea, 1972). Urban decay has been experienced in the industrial areas, commercial zones and residential neighbourhoods. As cities age, urban decay sets in, exemplified in abandoned and neglected buildings and properties (Ndlebe, 2017).

Social-cultural decay is characterized by high incidences of juvenile crime, prevalence of mental disorders, drug and substance abuse, prevalence of single-parent families, teenage pregnancies, graffiti, domestic violence and high prevalence of school dropout. Physical decay is characterized by observable features such as surface deterioration, displaced roof units, broken glazing, timber rot, abandoned buildings, overgrown bushes, poor condition of road surface, solid waste scattering, blocked drains, offensive smell and noise, and evident setting of the fabric. According to Lea, (1972 p.p 44), physical decay is more prevalent in areas where inhabitants are less likely to have exclusive use of domestic facilities i.e. a bathroom, toilet or kitchen. The economic form of urban decay is considered a form of equilibrium where the rise of new neighbourhoods, buildings and cities causes others to die or slow down through decline. Urban decay is, therefore, an unavoidable market response to the forces of demand. In other words, there is a demand for very low-cost housing and decaying neighbourhoods and slums provide for the supply, (Lea, 1972).

Despite taking three forms, the high level of interrelationship makes it impossible for a city or neighbourhood to experience one form of urban decay in the absence of the others. Physical decay creates a supporting system for social decay by for instance creating an enabling environment for crime, (Ana, et. al, 2021; Andersen, 2002). Further, physical and social decay leads to economic decay by making neighbourhoods attractive to middle- and high-income groups and therefore occasioning low returns in the form of rent and market value when one decides to dispose through sale (Umar, 2021). Economic decay on the other hand denies property owners the capital required to be injected to maintain the attractive standards of buildings and the neighbourhood. This intricate relationship makes it imperative for urban decay to be addressed wholesomely and not in certain forms or aspects (Anelli, Morano, Tajani & Sabatelli, 2024)

According to Lea (1972), urban decay happens in the city, neighbourhood and a single building scale. Decaying buildings, neighbourhoods and cities are inhabited by two types of people, those with hope and those with despair. The neighbourhoods are inhabited by people with the hope intend to bettering themselves and therefore use their stay in the neighbourhoods as a transition period. These people will usually have their minds set on finding better places to live and they can persevere through the social decay as they work to improve their economic status to enable them to move to better neighbourhoods. This attitude only serves to promote decay since these people do not feel the need to contribute to the improvement of decay. On

 

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the other hand, the people without hope consider social decay as part of their lives and in most instances, they are the promoters of decay. According to Lea, (1972), neighbourhoods where despair is deeply rooted have the potential to grow and extend into areas that are well-to-do and therefore spread social decay.

Urban decay has been attributed to deindustrialization, capital shift and reorganization (Clark, Moonen, & Nunley, 2018). The decline is also attributed to the failure to adapt to new modes of production and the failure of the old spatial structures to fit these new production regimes (UN HABITAT, 2008). The decay in some European cities is attributed to dependence on single sectors, the failure of which leads to collapse as cities fail to adapt to change. Although neighbourhood decay has been associated with the old developments since the 80s decay has emerged in city edges (Andersen, 2018). Urban decay can be attributed to a number of factors such as politics, governance and policy, economy and planning (Swanepoel & Smallwood, 2019, p.g 1).

## RESEARCH METHODOLOGY

### Research Design

The assessment of urban decay in this study was informed by the observations made on the physical environment and condition of the physical infrastructure in the study area. It was further influenced by the observable differences between the study area and the adjacent neighbourhoods.

The researcher developed data collection tools which included questionnaires and observation checklists to ensure standard data gathering. Spatial data was captured through the mapping of points and lines and Geographic Positioning System (GPS) coordinates for spatial representation and analysis.

For effective application of the quantitative approach, the researcher converted the attributes of the variables to measurable values through a Likert scale. A qualitative approach was applied in the assessment of non-statistical information which relates to observable features such as waste management, the state of roads and buildings.

This study adopted both primary and secondary data where household and focused interviews were conducted for primary data. A total of eighty-two household questionnaires were administered and a focused interview was conducted with the Thika Municipal Manager, Municipal Physical Planner and Municipal Environment Officer. Further, observation was deployed in gathering observable data.

### Sampling

For ease of data collection and management and getting an appropriate sample, the study area was zoned into four sampling units where the data collection methods and techniques were applied systematically. The zones were demarcated from a visual analysis of the density of buildings within the neighbourhood from Google Earth images and used the main access roads as the delineating feature as shown in Figure 1.

To examine the level of decay, the study focused on the condition of individual houses and the immediate neighbouring characteristics. The estate had 224 developed plots with 18 undeveloped at the time of the study. All houses within the study area formed the universe from which a sample was identified. The study area was zoned into four sections from which twenty 23 houses were sampled to attain the desired sample size of 10%. Zone A and B both provided four houses each while Zone C provided eight houses and Zone D provided seven houses. The determination of the number of houses from each zone was done using the proportionality principle where the zone with the highest number of buildings provided the highest size of the sample. In the four zones, simple probability sampling was applied where all buildings were clustered into strata of ten buildings. Equal stratified sampling was applied where each fifth building in the strata was selected. Where the

 

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fifth plot was undeveloped, the researcher sampled the sixth one. The identification of respondents for the household questionnaire was done through three steps; step one was zoning of the area of study into four zones where each zone was to provide an equal number of respondents. The second step involved the identification of the house/plot where a respondent was to be sourced where every three developed plots were to provide one house. For consistency, the researcher was targeting every second house. The third step was the identification of a respondent within the plot. With plots consisting of nine single-room units, the researcher would pick at random where there was more than one resident present during the administration of the questionnaire.

### Population and Sample Size

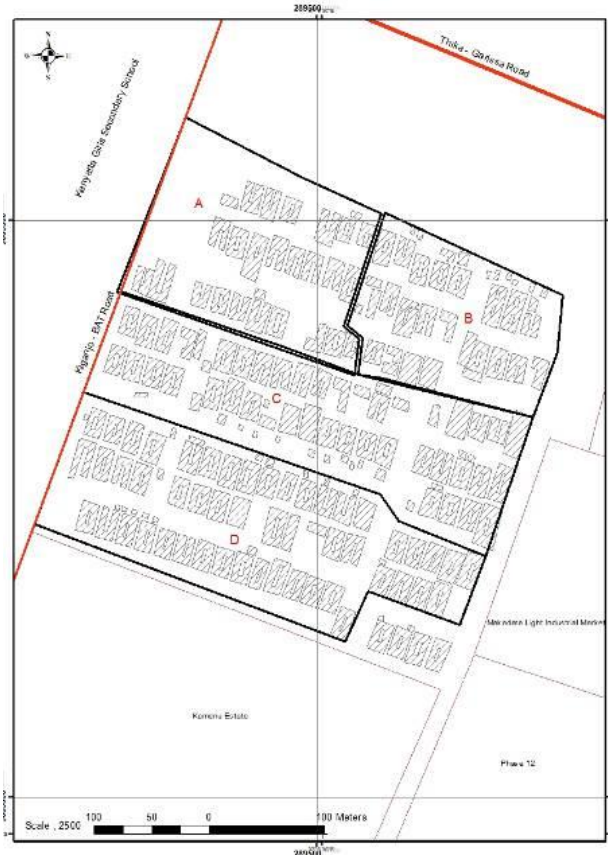
Through a census, the study established the neighbourhood to have 242 plots which are all under private ownership. From the sampled plot, the buildings were used as the subject for observation while it also provided, through random sampling a respondent for household interview.

While the study targeted 100 respondents for household interviews, 82 respondents were interviewed. Representing 82% of respondents rate, the sample size was considered sufficient for reliable analysis and reflected ethical, practical, and methodological considerations. The failure to meet the target was occasioned by time constraints and the unavailability of viable and unresponsive respondents.

### Limitations of the Research Methodology

The research adopted a household questionnaire, focused interview and observation as the primary methods of data collection. The direct involvement in the design of the tools, administration and analysis posed the challenge of bias by the researcher. Additionally, the use of standard tools occasioned rigidity in data collection.

**Figure 1: Map Showing Data Collection Zones**




## RESULTS, ANALYSIS AND DISCUSSION

The data collected during the study was analyzed through SPSS to provide an understanding of the impacts of urban decay in Makongeni Phase 5.

### Impacts of Urban Decay Manifested in the Neighbourhood

The manifestation of urban decay in Makongeni Phase 5 was assessed through the residents and researchers' perspectives. The residents' perspective was obtained through their responses to the household questionnaire while the researcher's perspective was obtained through observation.

The residents' view was assessed through eight attributes whose prevalence was measured through a five-point Likert Scale. Table 1 presents the results from the respondents.

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**Table 1: Measure of Urban Decay**

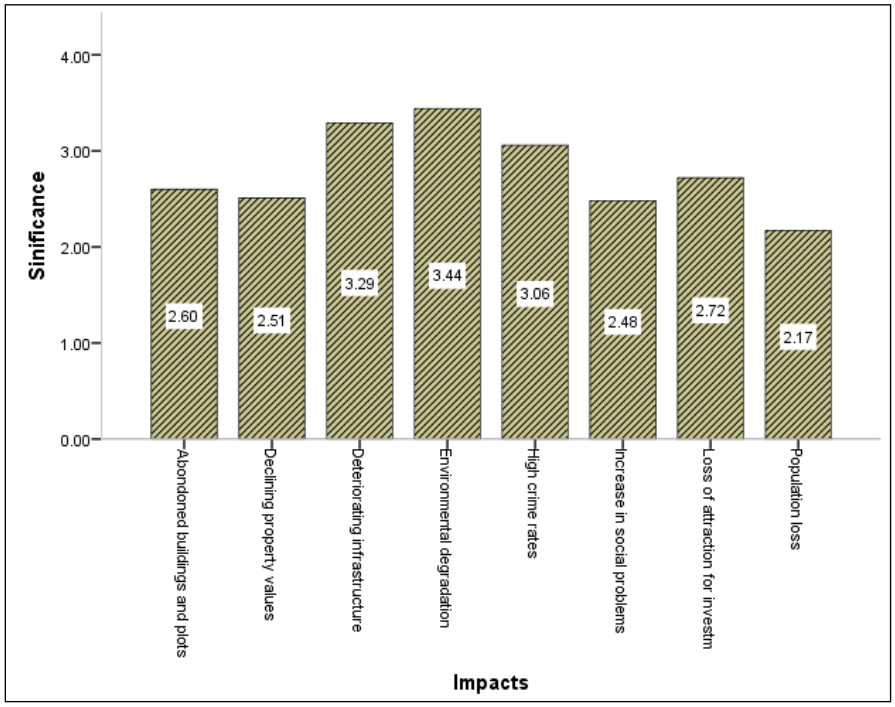
| No | Attribute | Mean Score |
|---|---|---|
| 1. | Increase in abandoned buildings and vacant lots | 2.60 |
| 2. | Declining property values | 2.51 |
| 3. | Population loss | 2.17 |
| 4. | High crime rates | 3.06 |
| 5. | Deteriorating infrastructure such as roads | 3.29 |
| 6. | Loss of attraction for investment | 2.72 |
| 7. | Increase in social problems | 2.48 |
| 8. | Environmental degradation | 3.44 |
| **Total (Mean)** | | **2.78** |

The table provides insights into the manifestation of urban decay in Makongeni Phase 5, using mean scores for various attributes that indicate the severity of each manifestation.

Impacts of urban decay were presented from the household interview findings and the researcher's perspective. From the eight impacts identified through a household interview, the scores ranged from 3.4 to 2.1 out of five.

Mean scores from the household interview were applied to test the prevalence of the attributes of urban decay in Makongeni phase 5. From the household interview, it emerged that environmental degradation and deterioration of infrastructure were the leading impacts with scores of 3.44 and 3.29 out of five respectively. This could be associated with their visibility. Declining property values, abandoned buildings and loss of attraction for investment were within the same range in terms of significance at 2.5 score out of five. Population loss was the lowest-rated impact at 2.17.

**Figure 2: Significance of the Impacts of Urban Decay**



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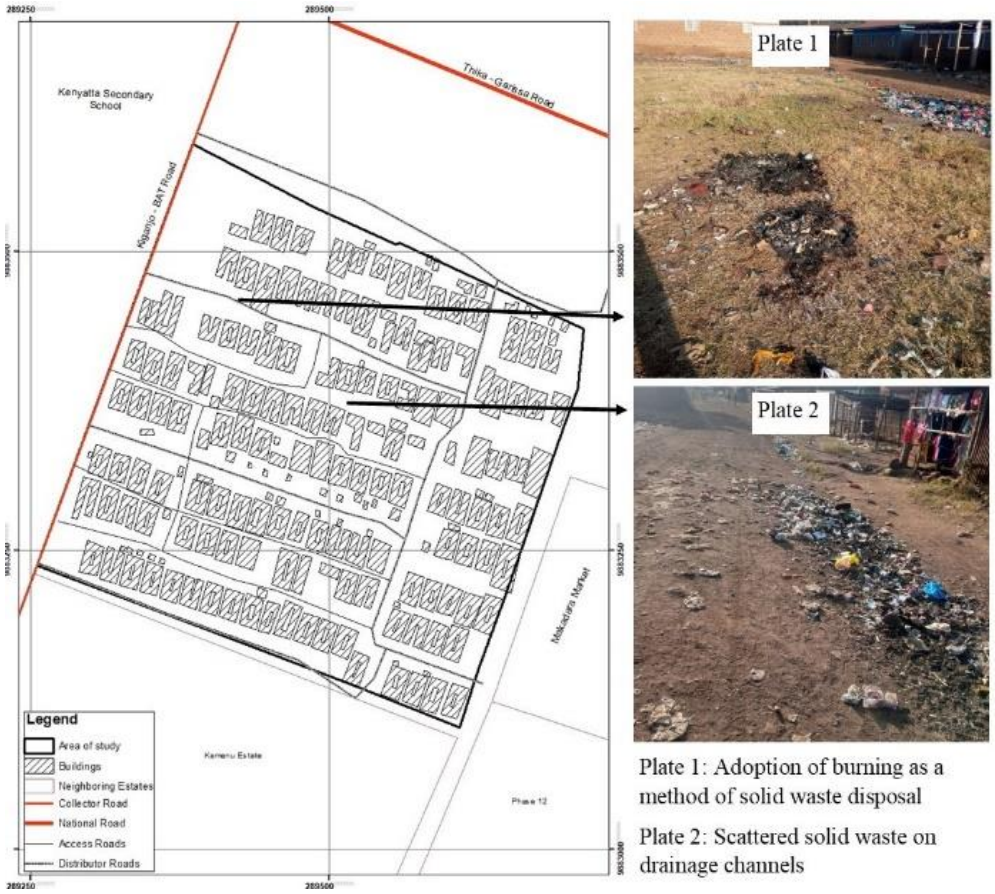
The researcher's perspective on the manifestation of urban decay was measured through the number of visible indicators of urban decay which were observed in the area of study. The researcher identified sub-optimal use of land, loss of neighbourhood layout and identity, overcrowding, unplanned developments and informal activities as indicators of urban decay in Makongeni Phase 5. Poor solid waste management is demonstrated in Figure 3.

**Figure 3: Manifestation of Urban Decay**




**Implications of Urban Decay in Makongeni Phase 5**

From the primary data collected, the impacts, implications and effects of urban decay were identified as shown in Table 2.

**Table 2: Implications and Effects of Urban Decay**

| Impact | Implication | Effect |
|---|---|---|
| Increase in abandoned buildings and vacant lots | Loss of income to plot owners and revenue to the government | Neglect by government |
| Informal businesses | Loss of attraction for formal businesses | Stunted economic growth |
| Environmental degradation | Weak resilience<br>Loss of attraction | Enhanced vulnerability |
| Dilapidated buildings | Declining property values | Marginalization |
| Poor infrastructure | Underutilization of infrastructure | Marginalization |
| Increase in social problems | Loss of population | Marginalization |
| Loss of property values | Loss of attraction for investment | Marginalization |

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**Significance of the Effects of Urban Decay in Makongeni Phase 5**

The study identified four interrelated effects of urban decay in the area of study. To identify the significance of the effects, the responses of the interviewed residents were weighted on a five-point Likert Scale. Table 3 presents the results from the respondents.

**Table 3: Significance of the Impacts of Urban Decay**

| Effect | Score |
|---|---|
| Neglect by the government | 3.3607 |
| Marginalization | 3.5488 |
| Enhanced vulnerability | 2.8049 |
| Poor economic performance | 2.7561 |

From the results, marginalization (28.45%) is the most significant effect of urban decay in the area. Marginalization is associated with declining property values, underutilization of infrastructure, lack of attraction to investment and loss of population.

Neglect by the government was the second most significant effect at 26.95%. As the neighbourhood continues to experience decay, the government tends to provide services in the upcoming and competing neighbourhoods. The existing utilities and services continue to deteriorate negatively affecting their performance.

Vulnerability to disasters and risks, diseases and impacts of climate change was rated at 22.49% significance. The failed drainage system, informal developments, poor waste management and ineffective sewerage and water supply system expose the residents to water-related challenges and compromise the government's response to disasters.

Poor economic performance was the least significant effect of urban decay at 22.1%, but still a critical contributor to overall urban decay. The unemployment and underemployment rates, as well as the informal businesses, are the main causes of poor economic performance.

## DISCUSSION

The study has established the existence of stalled developments. Additionally, there was no development project which had been initiated over the past five years as reported by the residents interviewed. While Phase 5 has continued to decline in value, new estates have come up which demonstrates the potential for growth in the larger Makongeni Estate.

The literature reviewed during the study established social factors, policy failure, infrastructure decline, rapid urbanization and housing dynamics with related attributes as the causes of urban decay. All the attributes were positively identified through observation or household interviews. The loss of property value was the best-presented attribute where housing units in the neighbouring estates were generating three times the income in house rent to property owners. The land administration factor also came out as an issue of interest to the researcher where only 8.5% of the respondents were property owners. Additionally, 58.5% of the respondents had stayed in the estate for ten years and below.

The study identified environmental degradation, deterioration of infrastructure, declining property values, abandoned buildings and loss of attraction for investment and population loss as the impacts of urban decay in Makongeni Phase 5. This aligned with Ndlebe, (2017) and Vigdor, (2007) who identified the impacts of urban decay to cut across the social, political, and economic aspects of neighbourhoods and thereby reducing the quality of urban life.

Population loss had been identified by Donnelly, (2008) as an impact of urban decay where decaying urban areas experience negative population growth

 

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as they become inhabitable. Ndhlovu and Matai (2019) and Vigdor (2007) identified failure to attract new business and relocation of businesses from decaying urban areas to more prosperous areas where infrastructure and services are adequate and development opportunities exist. The study identified loss of attraction for investment and lack of job opportunities as a major impact of urban decay in Makongeni Phase 5.

The study also agreed with the findings of Govender & Reddy (2020) and Alade, Ogunkan, & Alade (2021) who had identified the development of untidy and degraded spaces and scarcity and poor-quality resources as impacts of urban decay. However, the study did not identify air pollution, vulnerability to poor health and increased traffic challenges in Makongeni Phase 5 which had been identified by Govender & Reddy (2020) and Alade, Ogunkan, & Alade (2021).

A review of government development plans for the Thika Municipality at both the Municipal and County levels further demonstrated neglect of the estate since there was no project proposed within the estate during the five-year period. The weak community structure as evidenced by the absence of community-based organizations further presented a weak local-level capacity to organize, mobilize and lobby for development projects necessary for the regeneration of the estate.

## CONCLUSION

Makongeni Phase 5 is located in an area that has all the requisite factors for growth. However, the estate has faced neglect from the government and property owners which has led to a decline manifested in the form of low property values, declining population, lack of private and public investment and loss of attraction.

The decay in housing, infrastructure and environment has made the neighbourhood unattractive to the middle-income population which has perpetuated marginalization and further decay. There is a need for immediate policy intervention by the government through renewal projects and the provision of incentives for private projects to reverse urban decay in Makongeni Phase 5.

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