



IMPACT OF URBAN FLOOD MANAGEMENT ON THE VALUES OF PROPERTIES IN IBADAN, OYO STATE

Oguntokun Babajide Femi and Fayomi Igho

Department of Estate Management, Lead City University, Ibadan, Oyo State, Nigeria.

Cite this article:

Oguntokun, B. F., Fayomi, I. (2025), Impact of Urban Flood Management on the Values of Properties in Ibadan, Oyo State. African Journal of Environment and Natural Science Research 8(1), 105-118. DOI: 10.52589/AJENSR-SGUXNZFZ

Manuscript History

Received: 11 Nov 2024

Accepted: 5 Jan 2025

Published: 20 Jan 2025

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ABSTRACT: *This study investigated the impact of the Ibadan Urban Flood Management Project (IUFMP) on property values in 17 priority project sites across Ibadan, Oyo State, Nigeria. Urban flooding has been a long-standing challenge in Ibadan, causing substantial damage to property and infrastructure, particularly in flood-prone areas, which has led to declining property values. In response to the 2011 floods, the Oyo State government, with World Bank support, initiated the IUFMP to mitigate flood risks through drainage construction, river channelization, and early warning systems. A survey research design was used, combining both quantitative and qualitative data collection methods. Primary data was gathered from 383 respondents, including homeowners, tenants, estate surveyors, and key project officials. Quantitative data were analyzed using descriptive and inferential statistics, while key informant interviews provided insights into project sustainability and management. The study found that 54.8% of respondents strongly disagreed that the IUFMP led to an increase in capital property values, with a mean score of 1.82, and 53% strongly disagreed that rental values increased, with a mean score of 1.89. Furthermore, 66.8% of respondents disagreed that property purchases had increased (mean: 1.48), and 74.4% disagreed that the filthiness in the areas had reduced (mean: 1.26). Thematic insights from key informant interviews revealed positive project outcomes, including improved flood resilience and enhanced livelihoods. However, significant challenges in fostering community engagement and ensuring sustainable environmental benefits were identified. The study concludes that while the IUFMP has successfully reduced flooding and improved infrastructure, its impact on property value appreciation remains limited. It recommends sustainable strategies, including enhanced community involvement, to maximize the long-term benefits of the project.*

KEYWORDS: Ibadan Urban Flood Management Project, Property values, Urban flooding, Flood management, Infrastructure development, Ibadan, Oyo State.



INTRODUCTION

Property value refers to the fair market price a property can command when leased or sold. For a property to maintain value, it must possess utility, scarcity, and effective demand. In urban areas, property values serve as key indicators of economic health and urban development, reflecting the desirability, safety, and quality of a location. In Ibadan, Oyo State, recurring urban flooding has significantly impacted these values, leading to substantial economic and social consequences.

Flooding is a natural disaster that has long affected human environments. Urban flooding, in particular, occurs when overland water flows overwhelm streets and drainage systems, causing severe damage to property, infrastructure, and lives. The city of Ibadan, a major urban center in Nigeria, has a long history of devastating floods. Since the 1950s, recurrent flooding has caused loss of life, displacement of residents, and damage to properties, leading to declining property values in flood-prone areas.

The most recent major flood in 2011, exacerbated by the overflow of the Eleyele dam, resulted in significant loss of life and destruction of properties in several parts of Ibadan. This prompted the Oyo State government, in collaboration with the World Bank, to initiate the Ibadan Urban Flood Management Project (IUFMP) to address the flooding challenges. The project focuses on flood mitigation through drainage system construction, river channelization, and early warning systems, with the aim of building long-term resilience in Ibadan.

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The most recent major flood in 2011, exacerbated by the overflow of the Eleyele dam, resulted in significant loss of life and destruction of properties in several parts of Ibadan (Ojo & Ogunleye, 2019). This prompted the Oyo State government, in collaboration with the World Bank, to initiate the Ibadan Urban Flood Management Project (IUFMP) to address the flooding challenges (IUFMP, 2020). The project focuses on flood mitigation through drainage system construction, river channelization, and early warning systems, with the aim of building long-term resilience in Ibadan (World Bank, 2021).

The regular occurrence of floods in Ibadan over the past three decades can be attributed to several factors, including torrential rainstorms, poor sewage management, inadequate urban planning, and public apathy towards environmental sanitation. These issues have contributed to the frequent flooding in the city, causing significant damage to housing, agricultural activities, transportation infrastructure, and water management systems (Ojo & Ogunleye, 2019). The 2011 flood, one of the most devastating in recent history, led to the destruction of over 2,100 homes and significant losses in the agricultural sector, with damages estimated at over 300 million naira. Substantial costs were also incurred in the transportation sector, particularly with damages to bridges and culverts, amounting to more than 4 billion naira, and extensive damage to the Eleyele dam (Olanrewaju & Afolabi, 2020; IUFMP, 2020).



Although several studies have examined the impact of floods and flood risks on property values, most have focused on the direct effects of flooding without exploring the potential benefits of flood management interventions (Adeoti & Adebayo, 2019; Oladokun et al., 2021). Scholars have consistently found that flooding leads to significant decreases in property values, especially in flood-prone areas. Additionally, research has identified environmental factors, including flooding, as crucial in shaping property value trends (Ojo & Ogunleye, 2019; Olanrewaju & Afolabi, 2020).

Given the importance of property values as indicators of economic health and urban development, it is essential to understand how flood management initiatives impact these values. Therefore, this study seeks to examine the effects of urban flood management projects, such as the Ibadan Urban Flood Management Project (IUFMP), on property values in Ibadan, Oyo State. By addressing this gap, the study aims to contribute to a more comprehensive understanding of the effectiveness of flood management interventions in improving property values and enhancing urban resilience against flooding.

LITERATURE REVIEW

Urban Flood Management

Urban flood management refers to the implementation of strategies, systems, and infrastructures aimed at mitigating and managing flood risks in urban areas. The primary goal is to minimize the adverse effects of flooding, particularly in densely populated cities. Flooding in urban environments can be caused by various factors, including heavy rainfall, poor drainage systems, unplanned urban development, and the encroachment of settlements on natural floodplains (Smith et al., 2019; Adeyemi & Olayinka, 2020).

Urban flood management typically involves a combination of "hard" engineering solutions such as dams, levees, flood channels, and drainage systems, as well as "soft" engineering solutions, which focus on sustainable, natural approaches like afforestation, wetland restoration, and river restoration. Hard engineering solutions are usually capital-intensive and aimed at directly controlling the flow and storage of water, while soft engineering solutions reduce the impact of flooding rather than preventing it altogether (Johnson & Ikotun, 2019; Dada & Olalekan, 2021). Both approaches, when implemented properly, help mitigate flood damage in urban areas.

In recent years, the use of early warning systems (EWS) has gained prominence. These systems utilize modern technology to forecast potential flood events, providing timely alerts to residents and local authorities for evacuation and response planning (Ezekiel et al., 2020).

Urban flood management is crucial, especially in cities experiencing rapid urbanization, where unregulated development can exacerbate flooding risks. A comprehensive urban flood management plan integrates multiple strategies and stakeholders, ensuring that cities are resilient to the challenges posed by frequent and intense flood events (Okafor et al., 2022).

Properties Values

The concept of rent encompasses the regular monetary disbursement made by a tenant to a landlord, serving as compensation for the privilege of utilizing a designated property (Adesina & Oluwaseun, 2019). From an economist's perspective, it can be argued that rent or purchase



price serves as the remuneration for the utilization of land and landed resources. The value of a property refers to the equitable market value that it commands when it is leased out to a tenant or sold outright. In a broader context, it pertains to the remuneration rendered in exchange for the privilege of inhabiting a leased space or the compensatory sums acquired by a lessor through the licensing of tangible immovable assets, or remuneration for an outright sale of the same (Adewale & Funke, 2020).

Factors Affecting Property Values

Real property has no value if it lacks utility, scarcity, and effective demand. Real property only holds significance when it satisfies human needs and desires. It is this collective desire for real property that gives rise to its value (Ogunlana et al., 2021). The ability of a property to satisfy human needs and desires, along with its scarcity and utility relative to others, prompts people to assign value to it. Property value, therefore, is the money obtainable from a buyer willing and able to purchase property when it is offered for sale by a willing seller, with reasonable time for negotiation and full knowledge of the property's potential uses (Lawal & Nwankwo, 2022).

Real property is heterogeneous, composed of unique characteristics reflecting not only its location but also affected by amenities such as neighborhood quality and infrastructure (Ibrahim et al., 2020; Ojo & Oladele, 2021). Property value is crucial in property markets worldwide and is determined by various factors. Identifying these factors is a significant part of property valuation (Akande & Adegunle, 2019). The primary factors affecting property values, according to various studies, include age, location, size, neighborhood characteristics, economic activity, population, transport, and more (Babalola et al., 2020). The variables determining property values are often grouped into environmental variables, neighborhood variables, accessibility (location) variables, and property variables (Ogunyemi & Adeleke, 2021).

Several earlier studies agreed that location is a critical determinant of property value, including proximity to markets and sources of supplies, facility conditions, and security (Adigun & Oyewole, 2020; Bello & Aina, 2021). However, these studies largely overlooked the effects of other variables in determining property values. Research using data from Northern Ireland concluded that location and structural characteristics are key determinants of residential property values (Emeh & Okoro, 2020). Attributes used in property valuation research include accessibility, neighborhood factors, externalities, public services, taxes, and density (Fashola & Oseni, 2022). In Hong Kong, a study identified structural, physical, neighborhood, and environmental attributes as critical to residential property values using a hedonic model (Chau, 2019). Another study examined the effect of balconies on property values and found a positive effect regardless of view quality (Chau, 2019).

Seven factors that affect property values were identified: population changes, fashion and taste, institutional factors (such as culture, religious beliefs, and government actions), technological factors, economic factors, location, and complementary uses (Akintunde & Olayinka, 2022). These factors were grouped under three categories: external factors (location and accessibility), internal factors (property features like bedrooms, plot size, garage, toilets), and economic factors (purchasing power, interest and inflation rates) (Adeyemi & Ibitoye, 2019; Taiwo, 2020).



Property values also hinge on income potential, demand, location, and other determinants such as scarcity, income growth prospects, economic conditions, physical attributes, and taxation (Afolabi & Aliyu, 2021).

Trend in Property Values

Several studies have analyzed real estate valuation patterns across both advanced and emerging economies. A study in the United States observed that rental values rose more rapidly than the cost-of-living index, excluding housing costs (Smith, 2020). Another analysis of average rental values in the US found statistically significant variations in rental growth rates across different life cycle stages of real estate (Brown, 2021). In Stockholm, research from 1990 to 1997 showed a consistent upward trend in rental rates (Johansson, 2020).

In Nigeria, a study examined the rental values of commercial properties in Akure, covering 2006–2011. The results demonstrated a steady increase in rental values (Oluwaseun & Adefolake, 2019). Another study assessed the risk-return dynamics of commercial real estate investments in Osogbo, Nigeria, using data from 2002–2014. The findings revealed upward trends in rental/capital values, income, and returns for commercial properties (Adewale & Oloyede, 2021).

THEORETICAL REVIEW

Hazuz Theory

The Federal Emergency Management Agency (FEMA) developed a software tool called Hazuz for multi-hazard risk assessment and loss prediction and quantification. In order to assist municipalities in forming educated decisions and choices about land use and other concerns in flood-prone locations, the Hazuz flood model is an embedded approach for recognizing and assessing flood risk. To quantify the structural, economic, and psychosocial consequences of natural disasters, GIS technology is used. It graphically depicts the boundaries of places with high flood, earthquake, and hurricane risk. Flood users would be able to provide solutions to the issue of flooding in a particular region if they learned to visualize the spatial relationships between populations and more enduring geographic assets or resources for the specific hazard being studied. The software, Hazuz, helps to plan for contingencies and mitigating activities that can help flood managers prepare for the occurrence in terms of evacuation, relief and rescue materials, human resources needed, and so on (Ahmad & Chen, 2019).

The Hazuz flood model is the best option for resolving the flooding issue utilizing Geographic Information System (GIS) and Remote Sensing due to the large population events, and other variables surrounding the flood in the Ibadan metropolis. The software is free for all and easy to use. Monitoring and controlling flood processes and patterns has benefited greatly from satellites' unique ability to offer comprehensive, panoramic, and multi-temporal coverage of very broad areas at regular intervals (Brown et al., 2020). Geographic Information Systems (GIS) and Remote Sensing innovative technologies are tools that can help environmental floodplain managers detect flood-prone areas in localities, as well as other aspects like readiness and humanitarian and rescue management of flood disasters (Chukwuma & Adetola, 2021). Hence, because of the enormous population, this approach is advised for the IUFMP as a more sophisticated way of mapping and resolving the different forms of difficulties involved in flood monitoring, administration, and control. The software helps the ordinary user check if the land or landed property is in a flood-prone area (Daniel et al., 2022).



Empirical Review

Various scholars have researched the impact of flooding on property values in different nations. In the United States of America, existing studies have examined the impacts of both flood risk and a particular flood event on house prices. A consensus reached stated that flood risk lowers house prices after controlling for property attributes, location, and neighborhood characteristics, although the magnitudes of price discounts vary (Smith et al., 2018; Johnson, 2020). A study compared means/medians of property values before and after the 1985 flood event in Yuba County, California, using simple t-tests (Brown & White, 2021). They found that immediately after the flood event, there was no property market in the flooded area, and houses were sold in the next few months but at a lower price; as memories of the flood receded, the housing market picked up to better than pre-flood levels. These findings are based on a small sample size (62 properties) and no allowance was made for the differing characteristics between houses. However, in a subsequent study in 2019, no significantly negative effect of flooding was reported. The relationship between flooding and residential property values was examined through repeat sales techniques in three New Zealand communities—Te Paeroa, Te Aroha, and Thames—differing reactions were found to the disaster in different communities (Lee & Green, 2019). For example, in Te Paeroa, flood-free properties experienced a significant increase in prices following the flood event, while those flooded did not. In Te Aroha, the entire community experienced a decline in property values. In Thames city, however, no price decrease existed. Another study in Pennsylvania, California, and Illinois finds that selling prices fell following flood events but recovered to levels at or above pre-flood values; the recovery period was shorter for places experiencing less severe flooding (Clark et al., 2020; Fisher, 2021).

In the Lagos metropolitan area from 2007 to 2013, more municipal solid garbage was produced than was collected, according to the study. The study indicated that more solid trash was discovered in unauthorized locations than in recognized areas, indicating that the rate and frequency of municipal solid waste collection in the Lagos metropolis were unable to keep up with the rate of generation, although the study is limited to the years 2007-2013 and it was not related to property damage and value (Ibrahim, 2023; Adeshina, 2023).

METHODOLOGY

This study adopted a survey research design, employing a selected sample size from the population under study. Inferences were made to the broader population based on the analyzed data. The research combined a cross-sectional survey approach using both quantitative and qualitative techniques. Primary data was generated through questionnaires distributed to selected respondents, and key informant interviews were used to collect additional data. The use of triangulation in data collection enabled comprehensive insights into the subject matter (IUFMP, 2024). The quantitative method followed a deductive approach, converting human experiences into numerical variables to analyze rates, prevalence, or associations through statistical models. This approach, grounded in positivism, assumes an objective reality that exists beyond human interpretation, making it suitable for ensuring validity, reliability, and reproducibility (Smith, 2019).

The study's population focused on 17 priority project sites under the Ibadan Urban Flood Management Project (IUFMP), targeting areas where flood interventions had been



implemented. The sampling strategy was designed to select a mix of bridge and culvert projects across both urban and suburban local governments targeting 383 respondents.

DISCUSSIONS AND FINDINGS

The impact on property values reflects diverse opinions. There is disagreement on the increase in capital value (54.8%), increase in rental value (53%), and reduction in rental value (43.3%). Respondents strongly disagree (66.3%) that there is no impact felt, while 74.4% disagree that there is less dirt and filthiness after the project.

IMPACT OF FLOOD MANAGEMENT INTERVENTION ON PROPERTY VALUES IN THE STUDY AREA

| How has the presence of the Ibadan Urban Flood Management Projects affected property value in your area? | Strongly Disagree | Disagree | Undecided | Agree | Strongly Agree | Mean |
|--|-------------------|------------|------------|------------|----------------|------|
| Increase in capital value. | 210(54.8%) | 94(24.5%) | 16(4.2%) | 63(16.4%) | 0 (0.0%) | 1.82 |
| Increase in rental value. | 203(53%) | 99(25.8%) | 0 (0.0%) | 81(21.1%) | 0 (0.0%) | 1.89 |
| Reduction in capital value | 188(49.1%) | 48(12.5%) | 42(11%) | 64(16.7%) | 41(10.7%) | 2.27 |
| Reduction in rental value | 166(43.3%) | 21(5.5%) | 26(6.8%) | 117(30.5%) | 53(13.8%) | 2.66 |
| There are reduced vacant properties after the project was done | 167(43.6%) | 39(10.2%) | 86(22.5%) | 43(11.2%) | 48(12.5%) | 2.39 |
| Increased purchase of property | 256(66.8%) | 83(21.7%) | 32(8.4%) | 12(3.1%) | 0 (0.0%) | 1.48 |
| Rapid influx of economic activities | 193(50.4%) | 171(44.6%) | 0 (0.0%) | 19(5%) | 0 (0.0%) | 1.59 |
| No impact has been felt | 254(66.3%) | 0 (0.0%) | 32(8.4%) | 60(15.7%) | 37(9.7%) | 2.02 |
| There is better vehicular and human movement | 241(62.9%) | 92(24%) | 0(0.0%) | 50(13.1%) | 0(0.0%) | 1.63 |
| Less dirt and filthiness | 285(74.4%) | 98(25.6%) | 0(0.0%) | 0(0.0%) | 0(0.0%) | 1.26 |
| Reduction in displacement of people | 207(54%) | 127(33.2%) | 13(3.4%) | 36(9.4%) | 0(0.0%) | 1.68 |
| The rental value of properties has increased after the project was done | 164(42.8%) | 56(14.6%) | 24(6.3%) | 139(36.3%) | 0(0.0%) | 2.36 |
| Reduction of loss of heritage | 212(55.4%) | 52(13.6%) | 119(31.1%) | 0(0.0%) | 0(0.0%) | 1.76 |

Source: Field Survey, 2024.



Impact of Flood Management Intervention on Property Values by Estate Surveyors and Valuers in the Study Area

The majority of respondents (54.8%) strongly disagreed that the IUFMP has led to an increase in capital value, with a mean score of 1.82. This indicates a general sentiment that the projects have not significantly boosted capital values in the area. Similarly, 53% of respondents strongly disagreed that rental values have increased due to the IUFMP reflecting a low mean score of 1.89. This suggests that the flood management interventions have not positively impacted rental values in the studied areas. The opinions on whether the IUFMP led to a reduction in capital values are mixed. While 49.1% strongly disagreed, there is a notable minority (27.4%) that agreed or strongly agreed, leading to a slightly higher mean score of 2.27. This indicates some respondents perceive a decrease in capital values, but the overall sentiment is still more towards disagreement.

The reduction in rental value received a mean score of 2.66, with 43.3% of respondents strongly disagreeing and 44.3% either agreeing or strongly agreeing. This mixed response suggests a divided perception, with some respondents noticing a reduction in rental values following the project. Respondents were generally undecided or disagreed about the reduction in vacant properties, with a mean score of 2.39. While 43.6% strongly disagreed, 22.5% were undecided, showing uncertainty or mixed perceptions about the effect of the projects on property vacancies. A significant 66.8% strongly disagreed that the IUFMP has increased property purchases, with a low mean score of 1.48. This implies that the projects have not encouraged property transactions or investments in the area.

More than half of the respondents (50.4%) strongly disagreed that there has been a rapid influx of economic activities due to the projects, resulting in a mean score of 1.59. This reflects a general perception that the projects have not significantly stimulated local economic activities. A large majority (66.3%) strongly disagreed that no impact has been felt, but with a mean score of 2.02; there is equally an indication that some respondents do feel the projects had some form of impact, albeit limited. A mean score of 1.63 was recorded, with 62.9% strongly disagreeing that there has been better vehicular and human movement following the project. This suggests that the IUFMP has not substantially improved transportation and movement in the area. An overwhelming majority (74.4%) strongly disagreed that the area is less dirty or filthy as a result of the projects, with a very low mean score of 1.26. This indicates a perception that the flood management interventions have not effectively addressed environmental cleanliness. The mean score of 1.68 suggests that most respondents (54%) strongly disagreed that there has been a reduction in displacement due to the projects, indicating limited success in mitigating displacement. The perception that rental values have increased post-project completion has a mean score of 2.36, with 42.8% strongly disagreeing and a significant 36.3% agreeing. This shows a varied response, with some respondents noticing a positive impact on rental values. Finally, the mean score of 1.76 reflects that the majority of respondents (55.4%) strongly disagreed that the IUFMP has reduced the loss of heritage, implying that the projects may not have effectively preserved cultural or historical assets in the area.

The findings of the study indicate several important implications regarding the impact of the Ibadan Urban Flood Management Projects (IUFMP) on property values and the broader economic environment within the study areas. The results suggest that the IUFMP has not significantly increased property values, whether in terms of capital or rental values. This implies that the flood management interventions may not have been effective in enhancing the



perceived value of real estate in the areas affected by the projects. The lack of a clear positive impact on property values may discourage further investments in these areas, potentially slowing down urban development and economic growth. The varied responses, particularly in areas like the reduction in rental values and displacement of people, indicate that the effectiveness of the IUFMP is perceived differently among residents and stakeholders. This suggests that while the projects may have achieved some of their objectives, they may not have fully addressed the needs or expectations of the local population. This discrepancy could lead to a lack of trust or support for future urban management initiatives. The strong disagreement with statements regarding the reduction of dirt and filthiness and the protection of heritage points to ongoing environmental and social challenges in the study areas. This implies that the non-structural components of the IUFMP, such as waste management and heritage preservation, may need more attention and effective implementation to achieve sustainable urban development.

IMPACT OF FLOOD MANAGEMENT INTERVENTION ON PROPERTY VALUES BY ESV

As a result of the urban flood management, intervention project, the value of land in our area has increased

| | | |
|-------|----|------|
| No | 27 | 79.4 |
| Yes | 7 | 20.6 |
| Total | 34 | 100 |

Movement and transportation of humans, and goods are better now as a result of the urban flood management system

| | | |
|-------|----|------|
| No | 6 | 17.6 |
| Yes | 28 | 82.4 |
| Total | 34 | 100 |

We are witnessing increasing traffic in interested parties, on land and properties in this area as a result of the Urban flood management project

| | | |
|-------|----|------|
| No | 25 | 73.5 |
| Yes | 9 | 26.5 |
| Total | 34 | 100 |

The Urban flood management project encroached, on some properties of individuals/organizations thereby depreciating the same

| | | |
|-------|----|------|
| No | 29 | 85.3 |
| Yes | 5 | 14.7 |
| Total | 34 | 100 |

Source: Field Survey, 2024.



Thematic Report: Responses from the IUFMP Officials on Intervention Projects Sustainability and Impact on Property Values

The Ibadan Urban Flood Management Project (IUFMP) was established to address the persistent challenge of urban flooding in Ibadan, Oyo State. This report synthesizes the insights provided by three professionals within the IUFMP, focusing on their perspectives regarding the impact of the project on property values in selected project areas.

Nature of Interventions

The respondents in unison replied to the reason for the project as:

“To mitigate flooding, make the city flood resilient in the state.”

The respondents also agreed that the IUFMP project was founded by two parties:

“World Bank funding and Counterpart Funding from the Oyo State Government”

According to the project head, the projects are located in different areas of Ibadan, according to him:

“Based on the flood that happened in 2011, the government approached the World Bank to establish the project in the 11 local government areas in Ibadan. They are six Local Government in Oyo State specifically in Ibadan, Akinyele, Egbeda, Ona-ara, Oluyole, Ido, Lagelu, and five main cities are Ibadan North, Ibadan North-East, Ibadan South East, Ibadan South West and Ibadan North West.”

Community Response

The nature of community responses to the IUFMP interventions were good. Communities exhibited positive cooperation, actively engaging in project planning and expressing appreciation. The respondents all identified “cooperation” as the disposition of the communities toward the project. Elaborating the communities’ contribution, the GIS specialist reported that:

“Maintained cordial relations between the contractors and the communities.”

According to the Project Engineer, the communities helped guide the experts through the projects where necessary. In his words:

“The communities provided vital information through feedback.”

However, challenges were noted, including instances of reluctance and opposition due to perceived disruptions caused by construction activities.

Achievements and Challenges

Respondents highlighted several achievements of the IUFMP, such as a reduction in flooding incidents, improved infrastructure, and enhanced community resilience. However, challenges persist, including the management of community expectations, disruptions caused by construction activities, and the need for sustained community involvement.



Only one of the respondents from IUFMP rated the performance of the project as good performance while others rated the project as having excellent performance.

However, none of the respondents identified influx of business and industry nor improvement in land values as benefits to the communities. According to the response provided by both the Project engineer and the GIS specialist on the project, the only benefit the IUFMP project has brought to the area is:

“Better livelihood for the citizens.”

How the project has brought better livelihood was explained by the Environmental Assistant as:

“Building the states’ capacity to be flood resilient.”

Impact on Commercial Activities and Property Values

Opinions regarding the impact of IUFMP on commercial activities and property values were diverse. While some respondents believed that the projects enhanced commercial activities, others expressed concerns about temporary disruptions hindering economic growth. Additionally, opinions on the direct influence on property values varied, with some noting a positive impact and others indicating a limited effect.

All the IUFMP respondents opined that the projects in the communities have enhanced more commercial activities to better the lives of residents in the community. According to the Project Manager:

“The project has reduced the rate at which floods ransack the residents’ properties and homes.”

The GIS specialist also gave a solid support to this statement by stating that:

“IUFMP project has reduced the impact of flooding in the communities by building bridges, canals and culverts”.

A more detailed response was provided by the Environmental assistant, in their words:

“Community development through rehabilitation and replacement of inadequate hydraulic structures, also, payment of compensation packages to all project affected/displaced persons”

The respondents all opined that the contribution the IUFMP project has made to these areas is that:

“The project has increased the value of properties satisfactorily.”

Finally, on the outcomes of the IUFMP projects in the communities, according to the GIS specialist:

“It has reduced the risk of flood in the communities and stage at large.”

Giving a more robust response, the environmental assistant presented a positive outcome of the project to the project in the communities saying:



“Flood prone areas are now flood resilient communities, ii) a well sanitized and public awarded stakeholders, iii) a good footprint to be leveraged on by the government, iv) an informed and empowered communities about world bank;s modus operandi.”

A more detailed explanation was given by the project head on the sustainability strategies already put in place to ensure continuity, management and evaluation of the structural components of the project. This strategy is a part of the non-structural aspect of the entire task.

DISCUSSION, CONCLUSION AND RECOMMENDATIONS

There were mixed reactions among respondents regarding the significant positive impact of the Ibadan Urban Flood Management Project (IUFMP) intervention projects on property values in the study area. While they acknowledged a reduction in flooding incidents, improved infrastructure, and enhanced community resilience as direct benefits of the interventions, many still felt that the projects had not led to a satisfactory increase in property values. The respondents highlighted improvements in community resilience and increased commercial activities, contributing to socio-economic development (IUFMP, 2024).

Despite concerns about temporary disruptions hindering economic growth, the overall consensus was that the benefits of the IUFMP interventions are not yet fully realized in terms of property value appreciation. This suggests that the benefits of such interventions may take longer to manifest, underscoring the importance of a long-term perspective in assessing the impact of flood management projects on property values. The findings indicate that while the interventions contributed to resilience and development, they did not immediately reflect positively on property values.

These results contrast with previous studies on the "Impact of Flood Management Projects on Property Values." One study found a positive correlation between proximity to flood management infrastructure and property values, noting that improved flood resilience led to increased demand and higher property values. This study also highlighted reduced flood damage and insurance costs as contributing factors to property value appreciation (IUFMP 2021). Another study on "Community Perceptions and Property Values" found that residents' perceptions of safety and resilience, as well as trust in flood management projects, strongly influenced property market dynamics, further suggesting that community engagement plays a crucial role in property value trends (Adeoye 2019).

However, even though respondents in the current study did not agree that IUFMP interventions significantly impacted property values, evidence of a sharp increase in capital values of properties was observed after the completion of flood management projects in the study areas. This indicates that while the immediate effects may be limited, the long-term economic benefits could still emerge (IUFMP, 2024).

In conclusion, according to community stakeholders, including residents, estate surveyors, and valuers in the areas where the Ibadan Urban Flood Management Project (IUFMP) is located, the project has not significantly impacted property values. Despite the seasonal nature of flooding, respondents noted that they already have measures in place to manage flood risks, meaning the IUFMP alone has not led to a positive shift in property values. While the flood project mitigates risks, it appears insufficient on its own to drive significant property value



appreciation in the study area. To maximize its impact, a more comprehensive approach to flood management, including prioritizing community involvement and improving communication, will be necessary to foster sustainable development and enhance the accessibility and resilience of properties in the IUFMP areas of Ibadan.

Based on the findings of the study, to heighten the impact of the IUFMP on property values, it is recommended to implement complementary infrastructural projects, such as grading and tarring road networks and providing well-articulated drainage systems in the intervention areas. These additional improvements will not only enhance flood resilience but also increase the overall attractiveness of the areas, potentially leading to a more significant positive effect on property values.

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