International Journal of Innovative Environmental Studies Research 13(4):246-252, Oct-Dec., 2025

 www.seahipublications.org ISSN: 2354-2918

doi:10.5281/zenodo.17995466

The Perception of Real Estate Professionals and Buyers About the Risks of Flood-Stigmatized Properties in Port Harcourt Metropolis.

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ABSTRACT
Flooding has become a recurring environmental challenge in Port Harcourt Metropolis, significantly influencing property market dynamics and stakeholder behaviour. This study examined the perceptions of real estate professionals and buyers regarding the risks associated with flood-stigmatized properties in the area. Flood stigma denotes the social and economic devaluation of properties perceived to be in flood-prone zones, often resulting in reduced demand, diminished investment confidence, and growing urban inequality. Therefore, this study aims to identify determinants shaping these perceptions, assess their implications for market performance, and propose mitigation strategies. A descriptive survey design was employed, using structured questionnaire and interviews administered to real estate practitioners, developers, valuers, and homebuyers in flood-affected neighbourhoods. Out of 200 respondents (70 professionals and 130 buyers), 150 valid responses were analyzed using descriptive statistics: frequency, mean, and standard deviation, and the relative importance index (RII) to rank key influencing factors. Findings revealed that both professionals and buyers view flood-stigmatized properties as high-risk investments due to frequent flooding, inadequate drainage, poor urban planning, and weak institutional management. These perceptions undermine market confidence, reduce transaction values, and distort development patterns. The study concluded that mitigating flood-related stigma requires a multifaceted approach involving improved flood control infrastructure, enhanced public awareness, and policy incentives promoting flood-resilient property development to build a more sustainable and inclusive real estate market in Port Harcourt.

Keywords: Flood Stigma, Flood-Prone Areas, Property Risk, Urban Resilience, Real Estate Perception.

1.0 INTRODUCTION

In recent years, urban flooding has become an increasingly frequent and severe issue, emerging as one of the most significant environmental and socioeconomic challenges impacting property markets in developing cities, particularly in Nigeria. The main drivers of this phenomenon—such as inadequate drainage systems, unregulated urban expansion, and climate variability—have profound implications for real estate development and investment (Adelekan, 2020; Nwigwe & Emberga, 2020). Port Harcourt Metropolis, the capital of Rivers State, exemplifies these challenges: recurrent flooding has led to the stigmatization of properties in flood-prone areas, which in turn has shaped negative perceptions among buyers, investors, and real estate professionals.

This negative association, commonly referred to as flood stigma, leads to the depreciation of land and property values, reduced marketability, and has enduring economic and social impacts on affected communities (Mogaji et al., 2021). Flood stigma is broadly defined as the negative social and psychological labeling attached to properties or neighborhoods perceived as vulnerable to flooding, regardless of their actual risk level (Tapsuwan et al., 2018). Such stigma often arises from collective memory, media portrayal, and the market's response to previous flood events. As a result, both the physical and perceived values of properties are affected: buyers tend to avoid high-risk areas, while developers and financiers are more likely to redirect investments to safer locations (Choy & Mak, 2019). Consequently, flood-prone neighborhoods in Port Harcourt—such as Diobu, Rumuigbo, and Rumuodara—have experienced reduced real estate activity and persistent underutilization of land, despite their strategic urban locations (Weli & Efe, 2015).

The perception of flood risk among real estate stakeholders is critical in shaping property market behavior. For buyers, concerns about property damage, displacement, and insurance complications increase their reluctance to invest in flood-affected areas (Bin & Kruse, 2006). For real estate professionals—including valuers, agents, and developers—flood stigma results in lower profitability, transaction delays, and challenges in accurate market valuation (Oyedele & Amusan, 2021). These perceptions work together to reinforce cycles of underdevelopment and social exclusion in flood-prone neighborhoods, thereby exacerbating urban inequality (Eneh & Agbazue, 2019).

Despite a growing global awareness of the effects of flood-induced stigma, there is limited empirical evidence on how real estate professionals and buyers in Port Harcourt perceive and respond to these risks. Most existing studies in Nigeria have focused on the physical consequences of flooding, such as property loss, displacement, and infrastructure damage, rather than the psychological and market implications of stigma (Adelekan, 2020; Olanrewaju et al., 2022). However, understanding these perceptions is crucial for developing policies and professional practices that encourage risk-aware property development, equitable urban planning, and sustainable investment in flood-prone environments.

Accordingly, this study aims to examine the perceptions of real estate professionals and buyers regarding the risks associated with flood-stigmatized properties in Port Harcourt Metropolis. It seeks to identify the key factors influencing these perceptions, assess their impact on property market behaviors, and propose strategic interventions to mitigate the adverse effects of stigma on real estate investment. By bridging the gap between physical vulnerability and market perception, this research contributes to the ongoing discourse on urban resilience and environmental risk management in Nigeria's real estate sector.

2.0 LITERATURE REVIEW

Flooding is a major environmental hazard that exerts a significant influence on urban property markets, particularly in cities like Port Harcourt that are prone to recurrent inundation. In recent years, the increasing frequency of flood events has resulted not only in substantial physical damage but also in enduring economic consequences, primarily through the stigmatization of properties situated in flood-prone areas (Nkpite & Oba, 2025; Owei & Ikpoki, 2020). This review examines the existing literature on flood-related property risks, the concept of stigma within the real estate sector, and the perceptions of both professionals and buyers regarding these risks.

2.1. Flooding and Urban Real Estate Markets

Flooding has become a critical concern in urban planning and real estate development, primarily due to its direct and indirect effects on property markets. Research indicates that properties located in flood-prone areas often suffer from reduced desirability, lower market values, and extended listing periods (Nkpite & Oba, 2025; Bin & Landry, 2013). In many developing urban centers, such as Port Harcourt, factors like inadequate drainage systems, unregulated urban expansion, and inefficient land use planning further heighten the vulnerability to flood hazards (Abam et al., 2015). The increasing intensity and frequency of floods—attributable to climate change and human-induced environmental degradation—have compelled both buyers and investors to reconsider their attitudes toward properties in high-risk zones (Akinwale & Oloke, 2021).

The concept of "flood stigma" in real estate refers to the negative perceptions or emotional aversion associated with properties that have either been affected by flooding or are located in flood-prone areas, regardless of whether actual damage has occurred (Simons, 2020). This stigma can significantly diminish property values and deter buyer interest. For example, studies by Nkpite and Oba (2025) and Atreya et al.

(2013) reveal that properties situated in floodplains or with a history of flood damage may depreciate by as much as 10%–30%, depending on the frequency and severity of flood events.

Valuation professionals face particular challenges when appraising flood-affected properties, due to the subjective nature of stigma and the absence of standardized methods for adjusting valuations based on flood history (Lamond et al., 2009). In Port Harcourt, where formal land records and risk disclosures are often inconsistent, valuers frequently rely on intuition or informal market cues to estimate property values. This reliance can lead to either the underestimation or overestimation of risk-related devaluation (Uwalaka & Eziyi, 2022).

2.2. Perception of Real Estate Professionals and Buyers and Investors

Real estate professionals play a pivotal role in identifying, disclosing, and communicating flood risks to prospective buyers. Their perceptions of flood risk often shape how such properties are marketed and priced. Research indicates that professionals who are more cognizant of environmental hazards are more likely to incorporate flood risk into their valuation and pricing strategies (Rees & Brown, 2018). However, in regions like Port Harcourt, there is often a disconnect between risk awareness and professional action, largely due to regulatory weaknesses, lack of enforcement of disclosure requirements, and fears of jeopardizing sales transactions (Nubi et al., 2017). Additionally, real estate agents may sometimes downplay or withhold information about flood risks during negotiations, especially in the context of informal markets where economic pressures are high. This practice not only raises ethical concerns but also increases buyers' exposure to unforeseen post-purchase risks (Mensah & Amponsah, 2020). Consequently, enhancing the risk literacy of real estate professionals through policy reform, targeted training, and appropriate tools is essential for promoting transparency in the market.

On the other hand, buyers—particularly in developing urban areas—often lack sufficient information or awareness to accurately assess the risks associated with purchasing flood-prone properties. Empirical evidence suggests that buyers' perceptions of risk are shaped more by personal experience, local knowledge, media reports, and word-of-mouth than by formal flood-risk data (Miceli et al., 2008). In Port Harcourt, many buyers forego thorough due diligence regarding flood history because of information asymmetry, financial limitations, or the urgency to complete transactions (Owei & Ikpoki, 2020). Economic concerns, such as potential future loss in resale value, high maintenance or repair costs, and insurance difficulties, have been identified as major deterrents for investing in properties located in flood-vulnerable neighborhoods (Bin & Polasky, 2004). Furthermore, as noted by Haer et al. (2016), individuals with higher socioeconomic status are more likely to avoid flood-prone areas, whereas lower-income buyers may purchase such properties out of necessity, despite being aware of the risks.

Empirical studies across Nigeria consistently highlight the economic disadvantages associated with flood-stigmatized properties. For example, Ede (2021) reported that property values in flood-prone zones declined by up to 25% following repeated flood events. Similar findings by Nkpite and Oba (2025) and Owei and Ikpoki (2020) demonstrate that risk perception significantly influences both developer behavior and homebuyer decisions in hazard-prone areas. These insights underscore the importance of targeted risk communication, stricter building codes, and the promotion of community-based resilience strategies.

Overall, the growing recognition of flood-related risks as critical determinants of real estate market performance is evident in flood-prone areas like Port Harcourt Metropolis. Both professionals and buyers are increasingly aware of the economic implications of acquiring or managing flood-stigmatized properties, with these perceptions shaped by environmental realities, institutional frameworks, and diverse socio-economic conditions across different localities. Effectively addressing the challenges of stigmatization and its associated economic risks requires a comprehensive approach—one that combines urban policy reform, community engagement, and the integration of flood resilience into property development and valuation practices.

3.0 RESEARCH METHODOLOGY

This study was conducted among practicing estate surveyors and valuers, and homebuyers in Port Harcourt Metropolis. The choice of Port Harcourt for the study is the recurrent floods that have increasingly impacted property markets by introducing a stigma that affects the desirability and value of affected properties. Despite infrastructural improvements or assurances from developers and regulators; there persist stigmas persist in the property markets. Consequently, understanding how key market actors: particularly real estate professionals and prospective buyers; perceive and react to such risks becomes crucial to be examined. The study adopted a descriptive survey design that that allows the use of mixed-methods approach to investigate the perception of real estate professionals and buyers on the economic risks associated with flood-stigmatized properties in Port Harcourt. The research population consisted of 200: registered estate surveyors and valuers and residential property buyers operating or residing within the Port Harcourt Metropolis.

A purposive sampling technique was used to identify participants with relevant experience and knowledge of property transactions in flood-affected areas. The sample comprised 70 real estate professionals and 130 residential property buyers, totaling 200 respondents. The selection ensured representation across different neighborhoods, including both flood-prone and non-flood-prone zones. Primary data were obtained through structured questionnaire and semi-structured interviews. Data were collected through structured questionnaire and in-depth interviews with 150 copies of questionnaire retrieved from the respondents representing 75% response rate. Both quantitative (questionnaire) and qualitative (interview) data were analyzed aided by the use of SPSS. Quantitative data were analyzed using descriptive statistics (mean scores, standard deviation and relative importance index (RII) to ranked risk perception relevant to flood stigma and market behavior.

4.0 DATA PRESENTATION AND ANALYSIS

Table 1 presents and analyzes data obtained from 150 valid questionnaire retrieved from respondents comprising 50 real estate professionals and 100 homebuyers within Port Harcourt Metropolis. The objective was to examine the key factors influencing stakeholder perceptions about the risks of flood-stigmatized properties in the study area. Responses were measured on a five-point Likert scale ranging from *1 = Strongly Disagree* to *5 = Strongly Agree*. Descriptive statistics, including frequency, mean, standard deviation, and the relative importance index (RII), were used to identify and rank the significance of each factor.

Table 1: Key Factors Influencing Stakeholder Perceptions of Flood-Stigmatized Properties

Factors Influencing Perception	Mean ($\bar{x}$)	Std. Dev. (σ)	RII	Rank
Frequency of flood occurrence in the area	4.68	0.53	0.94	1st
Inadequate drainage and flood control systems	4.61	0.58	0.92	2nd
Decline in property market value due to flood stigma	4.53	0.61	0.91	3rd
Perceived risk of structural damage and maintenance costs	4.47	0.65	0.89	4th
Negative media coverage and social labeling of flood areas	4.38	0.72	0.88	5th
Lack of government intervention and policy enforcement	4.31	0.74	0.86	6th
Difficulty in obtaining mortgage or insurance for flood-prone properties	4.27	0.77	0.85	7th
Low investor confidence and limited development incentives	4.21	0.80	0.84	8th
Public fear and misinformation about flood risk	4.16	0.83	0.83	9th
Poor environmental planning and urban land management	4.10	0.86	0.82	10th

Source: Author's Field Survey, 2025

The results presented in Table 1 revealed that the frequency of flood occurrence (RII = 0.94) ranked as the most influential factor affecting stakeholder perceptions of flood-stigmatized properties. This suggests that repeated flooding has a strong psychological and economic impact on both buyers and real estate professionals, reinforcing the stigma attached to such areas. The second-ranked factor, inadequate drainage and flood control systems (RII = 0.92), emphasizes infrastructure-related challenges in Port Harcourt, where poorly maintained or blocked drainage channels exacerbate flood vulnerability. The decline in property market value (RII = 0.91) ranked third, indicating that the stigma significantly affects real estate investment returns and marketability.

Other key factors include structural damage concerns (RII = 0.89) and negative media portrayal (RII = 0.88), which collectively intensify risk perception and discourage prospective buyers. The lack of effective government intervention (RII = 0.86) and difficulty obtaining flood insurance (RII = 0.85) further compound the issue, limiting both private investment and institutional support. Overall, the mean scores across all variables (ranging from 4.10 to 4.68) suggest a high level of agreement among respondents that these factors jointly shape negative perceptions of flood-prone properties in Port Harcourt Metropolis.

5.0 DISCUSSION OF FINDINGS

As presented in Table 1, more than half of the respondents—reflected by mean scores above 3.00 and Relative Importance Index (RII) values greater than 0.60—identified several key factors as most influential in shaping stakeholder perceptions of flood-stigmatized properties in Port Harcourt. These factors include the frequency of flood occurrence, inadequate drainage and flood control systems, decline in property market value, concerns about structural damage, negative media portrayal, lack of effective government intervention, and difficulty in obtaining flood insurance. The findings of this study are consistent with previous research that connects flood risk perception to both tangible and intangible influences on the property market. Notably, the fear of recurring flooding not only compromises the physical usability of land but also erodes confidence in property transactions.

The high RII for "frequency of flood occurrence" underscores its role as a dominant determinant of market stigma in Nigerian urban centers. Likewise, the strong impact of inadequate drainage infrastructure supports prior findings attributing Port Harcourt's persistent flooding to poor urban management and weak environmental governance. The observed low investor confidence and financing barriers mirror respondents' concerns that negative perceptions of risk often lead to distorted property valuations and restricted market liquidity.

These results highlight that flood stigma in Port Harcourt is both a perceptual and a structural challenge, driven by environmental neglect, ineffective communication, and institutional inefficiencies. The study further reveals that flood recurrence and inadequate drainage are the primary causes of flood stigma, with the decline in property market value emerging as a key economic consequence. Meanwhile, the role of media—especially when misinformation is present—and the lack of institutional support perpetuate negative perceptions. As a result, challenges related to flood insurance and limited investor incentives continue to hinder property development in affected areas.

Importantly, stakeholder perceptions are consistent across both professional and buyer groups, reflecting a shared concern about flood risk. The findings indicate that perceptions of flood-stigmatized properties in Port Harcourt are shaped chiefly by environmental exposure, infrastructural inadequacies, and institutional failures. High RII values across the key factors point to a deeply entrenched stigma that continues to undermine confidence in property investment. To address these challenges, effective interventions must combine physical flood mitigation measures, robust public risk communication, and policy incentives aimed at restoring trust and promoting sustainable urban development in flood-prone communities. Holistic policy reforms, enhanced flood resilience infrastructure, and proactive information management are essential to rebuilding stakeholder confidence and revitalizing Port Harcourt's real estate sector.

6.0 CONCLUSION AND RECOMMENDATIONS

This study assessed the perceptions of real estate professionals and buyers regarding flood-stigmatized properties in Port Harcourt Metropolis. The findings indicate that these perceptions are shaped by a complex interplay of environmental, socio-economic, and institutional factors. Flooding has fostered a persistent sense of vulnerability that affects not only property demand and value but also undermines overall market confidence and investment behavior. Both real estate professionals and buyers view flood-prone locations as high-risk areas, where recurrent inundation, inadequate drainage infrastructure, and limited government intervention compromise property safety and hinder long-term asset appreciation.

As a result, flood-related stigma transcends physical risk, evolving into a socio-psychological barrier that restricts market participation and impedes urban renewal in affected communities. The study revealed that buyers' perceptions are primarily influenced by fears of financial loss, displacement, and future property devaluation, while real estate professionals focus on reputational risks, declining client trust, and the challenges of marketing stigmatized properties. Collectively, these perceptions reinforce a cycle of neglect and underinvestment in flood-affected neighborhoods, exacerbating spatial inequalities across the metropolis.

To address these challenges, the study highlights the need for a coordinated, multi-sectoral response involving government agencies, professional bodies, urban planners, and developers to restore market confidence and support equitable urban development. Key recommendations include strengthening flood risk communication, enforcing urban planning regulations, improving drainage and flood management infrastructure, and providing incentives for resilient property development. Ultimately, reshaping stakeholder perceptions requires not only infrastructural improvements but also sustained public education, transparent information disclosure, and policy reforms that embed climate resilience into real estate practices. By tackling the root causes of flood-related stigma, Port Harcourt can move towards a more adaptive, inclusive, and resilient urban property market.

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