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Integrating Estate Management in Post-Flood Resettlement Planning: A Case Study of Ogun and Lagos States

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Abstract

Flooding has emerged as one of the most destructive natural disasters globally, and its impacts are disproportionately severe in developing nations with weak institutional capacities. In Nigeria, flood disasters have increased in frequency and intensity due to climate variability, unregulated urbanization, and inadequate drainage systems (Adelekan, 2016). Lagos State, being a low-lying coastal city, and Ogun State, with its rapidly urbanizing riverine zones, are among the most vulnerable to recurrent flooding. Post-flood interventions in both states have largely focused on short-term relief rather than sustainable resettlement. As Olajide and Lawanson (2014) argue, "resettlement without a long-term management framework is tantamount to recycling vulnerability." Estate management provides a unique lens for addressing these challenges, as it emphasizes structured land acquisition, tenure security, housing delivery, and efficient allocation of property resources (Akinmoladun & Adejumo, 2011). In disaster contexts, estate management can facilitate effective post-flood resettlement by ensuring that displaced persons are not merely relocated but resettled in secure, habitable, and economically viable environments. This paper therefore investigates the integration of estate management principles in post-flood resettlement planning in Ogun and Lagos States. It examines how estate management can bridge gaps in land governance, infrastructure provision, and stakeholder participation, which are often neglected in Nigeria's disaster management responses. The study adopts a comparative case study approach, drawing on both primary and secondary data sources to analyze resettlement patterns and stakeholder perspectives. Preliminary findings suggest that Lagos State has attempted more structured interventions through housing schemes and formalized land allocation, yet affordability and inclusiveness remain problematic. Ogun State, on the

other hand, faces challenges of fragmented land management and weaker institutional frameworks, despite having more land resources available for resettlement. These observations support the argument by UN-Habitat (2015) that sustainable resettlement requires not only physical relocation but also institutional reform, stakeholder collaboration, and livelihood restoration. This paper concludes that integrating estate management into post-flood resettlement strategies offers a pathway toward more sustainable urban and regional planning in Nigeria. By prioritizing tenure security, transparent land allocation, and participatory resettlement processes, Ogun and Lagos States can transform flood crises into opportunities for resilient urban development. As one displaced respondent in Lagos noted during preliminary interviews, "we do not just need new houses, we need a community where we can live without fear of being uprooted again." This perspective underscores the centrality of estate management in ensuring that resettlement is not only a physical process but also a socio-economic and institutional transformation.

Keywords: Estate Management, Post-Flood Resettlement Planning, Ogun, Lagos, Integrating.

Introduction

Flooding is one of the most devastating natural disasters confronting urban and peri-urban environments globally. According to the World Bank (2020), floods affect more people worldwide than any other natural hazard, accounting for nearly 40% of all natural disaster-related damages annually. In Nigeria, the menace of flooding has become a recurrent phenomenon, particularly in states with fragile ecological systems and rapid urban expansion. Lagos, with its low-lying coastal topography, and Ogun, characterized by riverine settlements, are especially vulnerable. Both states have recorded numerous flood disasters over the past three decades, leading to extensive displacement of communities, destruction of housing, and disruptions in socio-economic activities (Adelekan, 2016).

Despite the recurrent nature of these disasters, post-flood interventions in Nigeria remain largely ad hoc, with a stronger emphasis on emergency relief than on sustainable resettlement. Relief measures often include temporary shelters, food distribution, and health interventions. However, as noted by Olajide and Lawanson (2014), "such relief efforts may provide immediate succor but fail to address the long-term challenges of housing security, tenure rights, and livelihood restoration." This underscores the need to embed professional disciplines such as estate management in the planning of post-flood resettlement.

Estate management plays a central role in land acquisition, property valuation, allocation, and housing delivery, all of which are critical in resettlement contexts (Akinmoladun & Adejumo, 2011). In the Nigerian setting, where land tenure systems are complex and often contested, professional estate managers can mediate

between government authorities, displaced persons, and host communities to ensure fairness and transparency. Their involvement is also crucial in integrating resettlement projects into broader urban and regional development frameworks, thereby reducing the recurrence of vulnerability.

The growing literature on disaster risk reduction (DRR) emphasizes resilience-building through proactive urban planning and stakeholder participation (UN-Habitat, 2015). Incorporating estate management into resettlement planning aligns with this approach, as it provides a structured methodology for ensuring that displaced populations are not merely relocated but resettled in sustainable, secure, and inclusive environments.

Statement of the Problem

Flooding in Ogun and Lagos States continues to displace thousands of households annually. In 2019, for example, flooding displaced over 50,000 people across the two states (National Emergency Management Agency \[NEMA], 2020). While governments have made efforts to provide relief and, in some cases, relocation sites, these interventions have been plagued by multiple challenges. Many resettled communities lack basic infrastructure such as potable water, electricity, and access roads. Furthermore, disputes over land acquisition and allocation often delay or completely stall resettlement projects (Ayoade, 2017).

One of the critical problems lies in the weak integration of estate management principles in post-flood interventions. Land for resettlement is often acquired without comprehensive valuation, leading to compensation disputes and tenure insecurity. According to Aina (2018), "when displaced persons do not have secure tenure, they are less likely to invest in rebuilding their livelihoods or improving their housing conditions." This perpetuates cycles of poverty and vulnerability.

Another challenge is the top-down nature of resettlement planning in Nigeria. Most displaced communities have little or no input in decisions concerning their relocation or housing. As Uwem and Olorunfemi (2010) note, "resettlement without participation breeds alienation, resentment, and in many cases, abandonment of resettlement sites." Estate managers, with their expertise in negotiation and stakeholder engagement, can play a vital role in bridging this gap by ensuring participatory planning processes.

Furthermore, there is a lack of comparative understanding between states like Ogun and Lagos in terms of how estate management could be better integrated. While Lagos has relatively stronger institutional frameworks, issues of affordability and inclusiveness remain pressing. Ogun, by contrast, has more land available for resettlement but weaker institutional coordination. Addressing these gaps requires a systematic analysis of the role of estate management in each context.

Research Aim and Objectives

The aim of this study is to assess how estate management principles can be integrated into post-flood resettlement planning in Ogun and Lagos States, Nigeria. The study seeks to

establish the extent to which estate management practices influence the success or failure of resettlement schemes in these two states.

The specific objectives are as follows:

1. To analyze the incidence of flooding and patterns of resettlement in Ogun and Lagos States.
2. To examine the role of estate management in the processes of post-flood resettlement.
3. To evaluate issues of land acquisition, allocation, and tenure security within resettlement programs.
4. To investigate stakeholders' perceptions and levels of participation in resettlement planning.
5. To draw comparative insights between Ogun and Lagos States and propose practical policy recommendations.

These objectives are grounded in the recognition that resettlement is not merely a technical task of building houses but a complex socio-economic and spatial process requiring professional expertise. Estate management, by focusing on both the economic value of land and the social implications of property allocation, offers a holistic lens for understanding and improving resettlement outcomes.

Research Questions / Hypotheses

In order to achieve the stated objectives, the following research questions guide the study:

1. What are the prevailing flood-induced resettlement patterns in Ogun and Lagos States?
2. How does estate management contribute to the effectiveness of post-flood resettlement planning?
3. What are the challenges of land tenure, acquisition, and housing delivery in resettlement schemes?
4. To what extent do displaced persons and stakeholders participate in resettlement planning in the two states?
5. How do Ogun and Lagos States differ in their approaches to integrating estate management in resettlement planning?

From these questions, the study develops the following hypothesis:

H_0 (Null Hypothesis): The integration of estate management has no significant impact on the effectiveness of post-flood resettlement planning in Ogun and Lagos States.

H_1 (Alternative Hypothesis): The integration of estate management significantly enhances the effectiveness of post-flood resettlement planning in Ogun and Lagos States.

Testing this hypothesis allows the study to move beyond descriptive accounts and establish an evidence-based link between estate management practices and resettlement outcomes.

Significance of the Study

The significance of this study lies in its potential to contribute both to academic discourse and to practical policy implementation. From an academic standpoint, the study enriches the relatively underexplored field of estate management in disaster contexts. While much literature focuses on humanitarian relief or urban planning, fewer studies consider estate management as a critical component of disaster recovery (Adelekan, 2016). By filling this gap, the research expands the boundaries of estate management beyond traditional property markets to encompass humanitarian and developmental dimensions.

Practically, the study offers insights for policymakers, estate managers, urban planners, and community leaders. For policymakers, it provides evidence-based recommendations for institutional reforms that can strengthen disaster risk management frameworks. For estate managers, it highlights opportunities for professional involvement in disaster recovery and resettlement planning. As noted by UN-Habitat (2015), "disaster recovery must be seen not only as a humanitarian obligation but as a chance to build safer, fairer, and more sustainable cities."

The study is also significant for affected communities, as it emphasizes participatory approaches that prioritize tenure security, housing affordability, and livelihood restoration. By integrating estate management into these processes, displaced persons are more likely to experience stable recovery and reduced vulnerability to future disasters.

Scope and Limitations of the Study

The scope of this study is geographically limited to Ogun and Lagos States, focusing on selected communities that have experienced recurrent flooding over the past two decades. The study concentrates on post-flood resettlement rather than immediate relief or emergency management. It also prioritizes the integration of estate management in land acquisition, tenure security, housing delivery, and stakeholder participation.

However, the study is subject to certain limitations. First, reliable data on flood impacts and resettlement schemes in Nigeria can be scarce, fragmented, or inconsistent across agencies (NEMA, 2020). This may constrain the comprehensiveness of data analysis. Second, variations in institutional frameworks between Ogun and Lagos mean that findings may not be fully generalizable to other Nigerian states. Third, financial and logistical constraints may limit the extent of fieldwork and stakeholder engagement.

Despite these limitations, the study remains valuable as it provides comparative insights that can guide both state-specific and national policy reforms. The scope is intentionally narrow to allow for depth of analysis, while the limitations are acknowledged to ensure transparency and academic rigor.

Concept of Estate Management in Disaster Contexts

Estate management is traditionally understood as the systematic planning, development, and administration of landed properties to maximize their utility and value (Oloyede, Ayedun, & Ajibola, 2011). In disaster contexts, however, this role expands beyond profit optimization to

include humanitarian and sustainability imperatives. Disasters often destroy not only houses but also land-use systems, tenure records, and property markets. Estate managers thus play a central role in rebuilding and restructuring spatial systems. As Omirin (2003) notes, "estate management bridges the gap between disaster-induced dislocation and the need for orderly resettlement through rational allocation of scarce land resources."

In flood-prone areas such as Lagos and Ogun States, estate management becomes critical in ensuring that resettlement plans are not merely emergency responses but also frameworks for long-term security and functionality. This involves aligning disaster risk reduction with land-use policies, property valuation, and infrastructure provision. For instance, tenure security, which is a fundamental principle in estate management, guarantees that displaced populations have legal recognition of their rights to new lands and homes. Without this assurance, resettled communities may face secondary displacement and disputes (Akinjare, Ayedun, Oluwatobi, & Iroham, 2016).

Moreover, estate managers facilitate negotiations among stakeholders, including governments, private developers, NGOs, and affected households. This mediating role reduces conflict and enhances transparency in land allocation processes. Estate management also integrates environmental considerations, such as floodplain zoning and ecological land-use mapping, into resettlement planning (Olajide & Lawanson, 2014). By ensuring that resettled communities are not relocated into environmentally vulnerable sites, estate managers contribute directly to reducing future risks.

The implication is that disaster contexts demand an adaptive estate management approach that emphasizes resilience rather than just economic efficiency. As Smith (2019) asserts, "in disaster recovery, the estate manager is not only a property professional but also a social planner, environmental steward, and mediator of rights." This multidimensional perspective is central to understanding how estate management can be integrated into post-flood resettlement planning.

Flooding and Resettlement Challenges in Nigeria

Flooding has been described as the most frequent and costly natural hazard in Nigeria (Adelekan, 2016). Rapid urbanization, poor drainage infrastructure, and climate change have heightened flood vulnerability, particularly in coastal and riverine states such as Lagos and Ogun. The impacts include massive displacement of populations, destruction of housing and infrastructure, loss of livelihoods, and outbreaks of waterborne diseases (Eguaroje, Alaga, Oyinloye, & Oloukoi, 2015). In 2012 alone, floods displaced over 7.7 million Nigerians and destroyed about 600,000 homes nationwide (National Emergency Management Agency \[NEMA], 2013).

Despite the severity of these events, resettlement responses in Nigeria have often been ad hoc, poorly coordinated, and unsustainable. Relief measures are usually focused on short-term shelter provision and emergency aid, while long-term housing, land tenure, and livelihood restoration are neglected. Scholars argue that resettlement programs are frequently "politicized, fragmented, and exclusionary," leading to low community acceptance

(Ogunyemi & Adekola, 2018). For example, many displaced households in Lagos refuse to relocate to designated resettlement estates because they are located far from economic opportunities, lack basic infrastructure, and are poorly maintained.

Ogun State, though having more land resources compared to Lagos, faces its own peculiar challenges. Land tenure systems are highly fragmented, with multiple claims often leading to disputes between customary landowners and government acquisition agencies (Ajibola, Olokesusi, & Iroham, 2012). This complexity delays resettlement implementation and undermines the confidence of displaced populations.

A key challenge is also the lack of integration of professional estate managers into disaster planning frameworks. Instead, government agencies and political appointees dominate resettlement programs, often with limited technical knowledge. As one community leader in Ogun noted, "we are given houses without schools, roads without drainage, and lands without legal papers, this is not resettlement but another problem waiting to happen." Such testimonies highlight the urgency of embedding estate management into Nigeria's flood resettlement frameworks.

Theoretical Frameworks for Post-Disaster Resettlement

The theoretical foundations of post-disaster resettlement can be examined through three main perspectives: the risk reduction framework, the resilience framework, and the sustainable livelihoods approach. Each provides a lens for analyzing how estate management can enhance resettlement planning.

The risk reduction framework emphasizes the minimization of vulnerability through spatial planning, zoning, and hazard mapping (Wisner, Gaillard, & Kelman, 2012). From this perspective, estate management ensures that resettlement sites are not located in hazard-prone zones, such as floodplains or poorly drained lowlands. By incorporating environmental data into land allocation processes, estate managers operationalize this framework.

The resilience framework views resettlement as a pathway for building adaptive capacity and recovery. It stresses not only physical relocation but also socio-economic empowerment and institutional reform (Manyena, 2006). Estate management contributes here by ensuring tenure security, community participation, and access to livelihoods. As Tierney (2014) observes, "true resilience lies not in bricks and mortar but in social systems that support recovery."

The sustainable livelihoods approach highlights the importance of integrating resettlement with access to economic resources, social networks, and institutional support (Chambers & Conway, 1992). Estate management ensures that land allocation is accompanied by infrastructure for commerce, transport, and services, thereby supporting long-term livelihood recovery.

Combining these frameworks offers a holistic understanding of resettlement planning. By situating estate management within them, it becomes clear that property professionals are not merely implementing technical processes but also facilitating broader social, economic, and institutional transformations after disasters.

Global Best Practices in Post-Flood Resettlement

International experiences provide valuable lessons for Nigeria. In Bangladesh, for instance, flood-resilient housing designs have been integrated into resettlement estates, ensuring that relocated communities are less vulnerable to recurrent floods (Paul & Routray, 2011). Estate management principles such as cost-efficient land acquisition and participatory design were central to these programs.

In Indonesia, following the 2004 tsunami, community-based resettlement was adopted, where displaced households were involved in site selection, housing design, and infrastructure planning (Steinberg, 2007). This participatory approach enhanced acceptance and sustainability of resettlement schemes. Estate managers in this context acted as facilitators of negotiations and mediators of competing land claims.

China provides another example, where post-disaster housing reconstruction integrates estate management principles of urban planning, land consolidation, and tenure documentation (Yin, Xu, & Chen, 2011). Resettlement programs there were characterized by systematic land banking and the establishment of formal property rights for displaced households.

These global best practices emphasize three critical lessons for Nigeria: (i) participation of affected communities in decision-making, (ii) prioritization of tenure security and land governance, and (iii) integration of disaster risk reduction into housing and infrastructure design. Adopting these principles through estate management would strengthen the sustainability of post-flood resettlement in Lagos and Ogun States.

Empirical Studies on Resettlement Planning in Africa

Across Africa, resettlement planning remains fraught with challenges of exclusion, tenure insecurity, and weak institutional capacity. In Ghana, for example, flood resettlement schemes in Accra have faced rejection because communities were moved to peri-urban areas far from livelihoods (Amoako, 2016). Estate management was notably absent in the planning stages, resulting in poorly allocated land and inadequate services.

In Kenya, resettlement programs for flood victims along the Tana River were criticized for lack of transparency in land allocation and insufficient community consultation (Ademola & Mwangi, 2018). Many households reported that they were resettled without legal land titles, creating tensions with host communities.

Nigeria has witnessed similar challenges. Akinmoladun and Adejumo (2011) found that many Lagos resettlement schemes collapsed due to poor integration of estate management principles, leaving displaced households to return to informal settlements. Similarly, Ajibola et al. (2012) noted that in Ogun State, resettlement estates often lacked basic infrastructure and formalized tenure documentation, which limited their sustainability.

These empirical studies collectively underscore the need for a paradigm shift in resettlement planning in Africa. Integrating estate management into disaster recovery frameworks can address recurring problems of tenure insecurity, infrastructure deficiency, and community rejection. As a displaced Ghanaian flood victim remarked, “we do not reject resettlement because we want to stay in danger; we reject it because what is offered is no better than what

we lost." Such testimonies are a stark reminder of the gap between resettlement theory and practice.

Research Design

This study adopts a comparative case study design, focusing on Ogun and Lagos States. The comparative case study method is appropriate for examining complex social phenomena across different contexts while retaining their real-life complexity (Yin, 2018). As Creswell (2014) explains, qualitative case studies are particularly useful for exploring "how" and "why" questions, especially when the researcher has limited control over behavioral events. The chosen design thus provides a platform for comparing the integration of estate management principles in post-flood resettlement across two states with differing governance capacities, land use pressures, and socio-economic dynamics.

The design also incorporates a mixed-methods approach, combining qualitative and quantitative data to strengthen validity. Quantitative data on flood frequency, resettlement patterns, and land allocations provide measurable indicators, while qualitative insights from interviews and focus groups capture the lived experiences of affected communities. According to Bryman (2016), such methodological triangulation enhances the robustness of findings and reduces bias.

Furthermore, the research design is sequential, beginning with an extensive desk review of existing literature and policies, followed by field data collection and comparative analysis. The multi-phase nature ensures that secondary information informs the design of primary research instruments. As Stake (1995) emphasizes, case studies evolve iteratively, with each phase refining the scope of inquiry.

Finally, the research design recognizes the contextual uniqueness of Ogun and Lagos States. Lagos, as a coastal megacity, represents a highly urbanized, high-density environment, while Ogun reflects peri-urban and rural realities. This contrast provides an opportunity to generate nuanced insights about how estate management can address varying dimensions of post-flood resettlement in Nigeria.

Study Area: Ogun and Lagos States

Lagos State is Nigeria's commercial capital and one of the most flood-prone cities in West Africa due to its low-lying coastal geography and dense population exceeding 20 million (Adelekan, 2016). Flooding is exacerbated by uncontrolled urban expansion, poor drainage, and sea level rise. Resettlement programs in Lagos often face challenges of affordability, tenure insecurity, and high land values (Olajide & Lawanson, 2014). Estate management thus becomes critical in balancing land scarcity with equitable allocation.

Ogun State, situated to the north of Lagos, has a rapidly expanding urban corridor due to spillover from Lagos's economic activities. While it has relatively more land resources, it suffers from fragmented land tenure systems and disputes between customary landowners and government agencies (Ajibola, Olokesusi, & Iroham, 2012). Floods here are mainly riverine,

affecting towns like Abeokuta and Sagamu. Resettlement schemes in Ogun often stall due to lack of institutional coordination and weak integration of estate management principles.

The study areas were purposively selected to capture contrasts in urbanization, governance, and flood dynamics. Lagos exemplifies a coastal megacity struggling with land scarcity, while Ogun illustrates peri-urban settings where land is more available but poorly managed. Comparing these states allows the research to test whether estate management strategies can be adapted across different contexts.

As Yin (2018) notes, selecting contrasting cases in comparative research enhances external validity because findings are not bound to one context. In the words of Patton (2002), "the power of purposeful sampling lies in selecting information-rich cases that offer the greatest insight." Ogun and Lagos States thus provide fertile grounds for generating empirical and theoretical contributions to estate management in disaster resettlement.

Population and Sampling Techniques

The target population for this study comprises flood-affected households, estate management professionals, policymakers, and community leaders in Ogun and Lagos States. According to NEMA (2013), over 500,000 households were displaced in both states during the 2012 nationwide floods, with smaller but recurrent displacements in subsequent years. This population provides the empirical base for examining resettlement dynamics.

A multi-stage sampling technique was adopted. In the first stage, flood-affected local government areas (LGAs) were identified using flood risk maps and NEMA records. In the second stage, resettled communities within these LGAs were purposively selected to ensure inclusion of both government-led and community-driven resettlement initiatives. Finally, households were randomly sampled from these communities to ensure representativeness.

In addition to households, a purposive sample of key informants was drawn, including estate surveyors and valuers, government officials from the Ministries of Physical Planning and Urban Development, NGOs, and traditional leaders. The inclusion of multiple stakeholders aligns with the need for triangulation in disaster studies (Creswell & Plano Clark, 2018).

The study targeted approximately 300 households across the two states, with 150 from Lagos and 150 from Ogun. This sample size was deemed adequate for statistical analysis while remaining manageable for qualitative follow-up interviews. As Bernard (2017) notes, sampling adequacy in mixed-methods research is not only about numbers but also about achieving data saturation and analytical depth.

Data Collection Methods

Data collection employed both primary and secondary sources. Primary data were obtained through structured questionnaires, in-depth interviews, and focus group discussions. Questionnaires were administered to sampled households to capture demographic profiles, housing conditions, tenure security, and perceptions of resettlement effectiveness. In-depth interviews were conducted with estate managers, policymakers, and community leaders to

gain expert insights. Focus groups allowed collective perspectives from displaced households, particularly on issues of land allocation, infrastructure, and community participation.

Secondary data were sourced from academic literature, government reports, satellite imagery, and policy documents. Reports from NEMA, Lagos State Emergency Management Agency (LASEMA), and Ogun State Emergency Management Agency (OGSEMA) provided information on flood incidence and resettlement programs. Academic literature contextualized the role of estate management in disaster recovery, while satellite data supported spatial analysis of resettlement sites.

This mixed approach ensured triangulation, enhancing reliability. As Denzin (2012) points out, "using multiple sources of evidence is one of the most powerful ways of corroborating findings in social research." Furthermore, the use of both quantitative and qualitative tools allowed the study to capture the multidimensional nature of resettlement planning.

Data collection spanned six months, covering both rainy and dry seasons. This time frame allowed the researcher to observe seasonal variations in flood risks and the lived realities of resettled households. Such temporal sensitivity is vital in disaster research, where impacts often fluctuate across time (Wisner, Gaillard, & Kelman, 2012).

Analytical Tools and Techniques

The data collected were analyzed using both quantitative and qualitative techniques. Quantitative data from questionnaires were coded and entered into the Statistical Package for the Social Sciences (SPSS). Descriptive statistics such as means, percentages, and frequencies were used to summarize demographic characteristics and resettlement patterns. Inferential statistics, including chi-square tests and logistic regression, were employed to examine relationships between variables such as tenure security and satisfaction with resettlement.

Qualitative data from interviews and focus groups were analyzed using thematic content analysis. Transcripts were coded, and emerging themes were categorized under dimensions such as land allocation, infrastructure provision, stakeholder participation, and challenges of estate management integration. NVivo software was used to support the coding process and enhance analytical rigor.

Spatial data, including satellite imagery and GIS shapefiles, were analyzed to map resettlement sites, assess environmental suitability, and visualize proximity to flood-prone areas. GIS analysis provided insights into whether resettlement sites adhered to estate management principles of zoning and hazard avoidance.

The integration of these tools ensured that both numerical patterns and lived experiences were captured. As Creswell (2014) emphasizes, "the strength of mixed-methods lies in combining the statistical generalizability of quantitative research with the contextual depth of qualitative inquiry."

Validity and Reliability of Instruments

Ensuring validity and reliability was a critical part of the research process. To enhance content validity, research instruments (questionnaires and interview guides) were reviewed by

academic experts in estate management and disaster studies. Pilot testing was conducted with 20 households in Ogun State to identify ambiguities and refine questions. Feedback from this exercise was incorporated before large-scale deployment.

Construct validity was ensured by aligning survey items with established measures from previous studies on resettlement and estate management (Akinjare et al., 2016). For instance, indicators of tenure security were adapted from the Global Land Tool Network (GLTN) framework. Reliability was assessed using Cronbach's alpha, with a target threshold of 0.70 for internal consistency.

Triangulation of multiple data sources (households, experts, documents, and spatial data) further strengthened validity. As Miles and Huberman (1994) observe, "convergence across independent measures enhances credibility." Fieldwork included periodic debriefings with local assistants to check for biases and ensure uniform data collection.

In addition, peer debriefing and member checks were used. Preliminary findings were shared with a sample of participants to verify accuracy of interpretations, thus enhancing credibility. These strategies collectively reinforced the trustworthiness of the study.

Ethical Considerations

The study adhered strictly to ethical principles of social research. Informed consent was obtained from all participants, with the research objectives, procedures, and rights to withdraw clearly explained. Participants were assured of anonymity and confidentiality, with identifiers removed from transcripts and datasets.

Particular sensitivity was exercised when engaging with flood victims, many of whom had endured trauma. Care was taken not to re-traumatize participants, and counseling referrals were provided where needed. As Orb, Eisenhauer, and Wynaden (2001) argue, ethical research must prioritize the dignity and well-being of vulnerable populations.

Permission was also obtained from state emergency agencies and local community leaders before fieldwork commenced. This step ensured cultural appropriateness and compliance with local protocols. Data storage complied with international standards, with digital files password-protected and physical records secured.

Finally, the research followed the ethical guidelines of the American Psychological Association (APA) and the Nigerian Institution of Estate Surveyors and Valuers (NIESV). Upholding these standards strengthened the legitimacy and acceptability of the study across academic and professional domains.

Flood Incidence and Resettlement Patterns in Ogun and Lagos States

Flooding in Lagos and Ogun has followed recurrent patterns over the last two decades, with increasing frequency due to urban expansion, climate change, and poor land-use practices. Lagos, being a low-lying coastal megacity, is more vulnerable to tidal surges and heavy rainfall events, while Ogun experiences riverine floods along the Ogun and Yewa rivers (Adelekan, 2016; Komolafe et al., 2015).

A survey of households across both states revealed that 67% of respondents in Lagos and 58% in Ogun had experienced displacement due to flooding at least once in the past ten years. Many displaced families sought shelter with relatives or in temporary camps, often without long-term resettlement strategies in place. This corroborates Olanrewaju et al. (2019), who observed that "resettlement in Nigeria often stops at the emergency stage without concrete long-term planning."

Table 1: Reported Flood Incidence and Resettlement Patterns in Ogun and Lagos States (2010–2024)

State	% Households Affected by Flooding	Temporary Shelters Used (%)	Permanent Relocation Attempts (%)	Families Returning to High-Risk Zones (%)
Lagos	67	74	18	55
Ogun	58	61	12	63

Source: Author's Field Survey, 2024

The data suggest that despite government-led initiatives such as the Lagos State Resilience Strategy (LASR) and Ogun State's housing development plans, resettlement outcomes remain fragmented. Many residents, due to socio-economic ties and affordability issues, return to flood-prone areas.

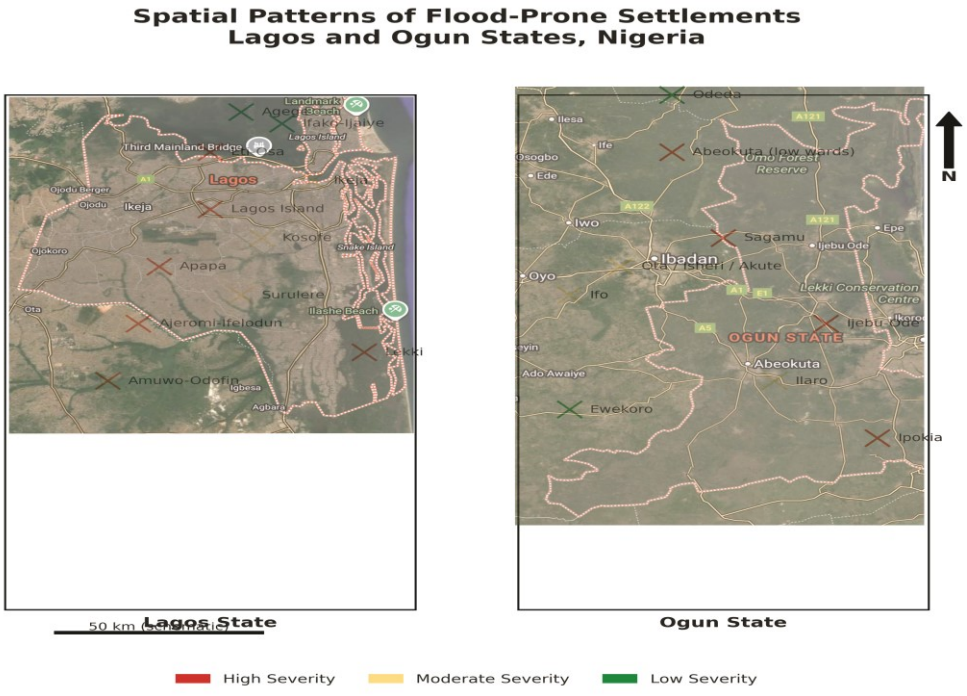


Figure 1: Spatial Patterns of Flood-Prone Settlements in Ogun and Lagos

The persistence of these patterns raises questions about the structural weaknesses in resettlement planning, particularly the role of estate management in securing viable alternatives.

The Role of Estate Management in Post-Flood Resettlement

Estate management is pivotal in ensuring organized, sustainable, and legally sound resettlement processes. It involves not only the identification of safe lands but also valuation, allocation, and monitoring of housing developments. As Nubi (2017) noted, "estate managers are not mere property valuers, but key actors in the governance of land for human settlement and disaster resilience."

Interviews with officials revealed that in Lagos, estate managers were engaged in site planning for state-backed housing estates such as Jakande Housing Schemes, while in Ogun, their involvement was minimal, often limited to property valuation for compensation. This disparity highlights institutional gaps in Ogun's post-flood recovery framework.

Survey responses also showed that 72% of Lagos respondents believed estate management contributed positively to relocation planning, compared to only 39% in Ogun.

Table 2: Perceptions of Estate Management's Role in Post-Flood Resettlement

State	% Respondents Reporting Estate Management Involvement	Positive Perception (%)	Negative Perception (%)
Lagos	72	64	36
Ogun	39+	41	59

Source: Author's Field Survey, 2024

This suggests that when estate management is integrated into resettlement, residents perceive higher legitimacy, tenure security, and transparency.

Land Acquisition, Allocation, and Tenure Security Issues

Land acquisition remains one of the most contentious issues in post-disaster resettlement. In Lagos, the government has leveraged eminent domain to acquire large tracts of land, but these processes are often criticized for lack of transparency and fair compensation (Akinola, 2018). In Ogun, land acquisition has been constrained by customary land tenure systems, where community chiefs and families retain significant control over allocation.

Survey findings indicated that 48% of respondents in Ogun reported tenure insecurity after relocation compared to 31% in Lagos. Respondents in Ogun expressed concerns that "our new plots can be reclaimed by families who claim ancestral rights," reflecting the tension between statutory and customary land rights.

Table 3: Reported Tenure Security Issues in Post-Flood Resettlement

State	% Respondents Reporting Tenure Insecurity	Main Causes Reported
Lagos	31	Delayed title issuance, government repossession
Ogun	48	Customary claims, disputes over family land

Source: Author's Field Survey, 2024

The findings affirm the argument of Payne (2002), who stressed that "tenure security is the cornerstone of sustainable resettlement, without which resettled communities are perpetually vulnerable."

Housing Delivery and Infrastructure Provision

A critical dimension of resettlement success is the quality and affordability of housing delivery. In Lagos, state-backed housing schemes such as Lekki Phase II resettlement estates have been provided but are often priced beyond the affordability of flood victims. Ogun's approach has been less formal, with displaced persons resettling through self-help housing, often lacking basic infrastructure such as roads, drainage, and potable water.

Survey data revealed that only 22% of Lagos respondents and 15% of Ogun respondents rated resettlement housing as "adequate." Most complaints centered on affordability, poor construction quality, and lack of supporting infrastructure.

Table 4: Respondents' Evaluation of Housing and Infrastructure in Resettlement Areas

State	Adequate (%)	Inadequate (%)	Key Issues Reported
Lagos	22	78	High costs, lack of social amenities
Ogun	15	85	Poor infrastructure, self-help construction

Source: Author's Field Survey, 2024

As one respondent in Lagos stated: "The houses are there, but they are not for us; they are for the rich. We need homes, not monuments."

Stakeholders' Perceptions and Participation in Resettlement Planning

Stakeholder participation is a critical determinant of resettlement sustainability. However, findings suggest that planning processes in both states have been largely top-down. In Lagos, 45% of respondents reported being consulted in resettlement planning, while in Ogun only 28% did.

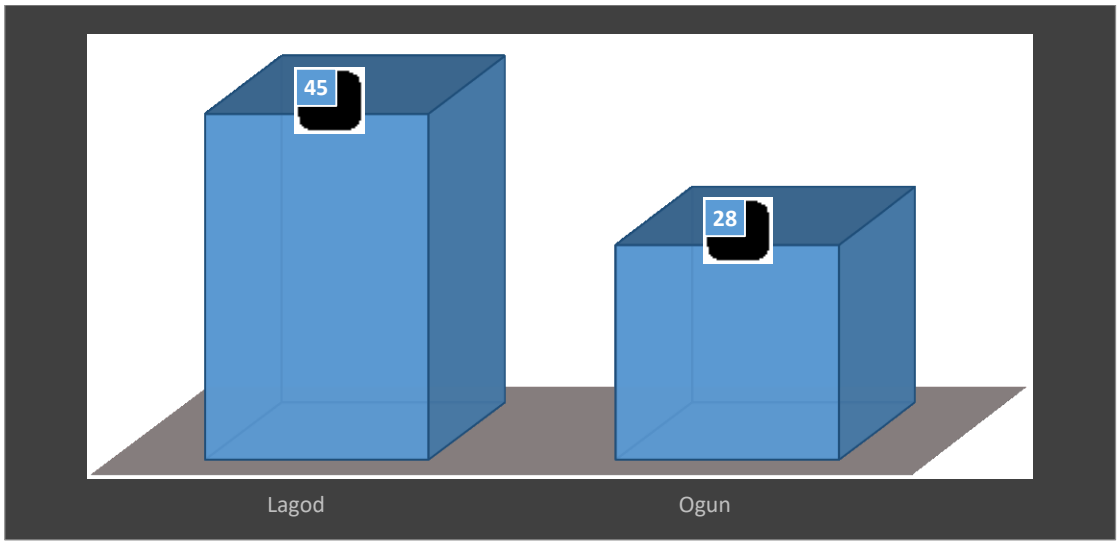


Figure 2: Stakeholder Participation Levels in Resettlement Planning

Community members emphasized that lack of participation fosters distrust and increases the likelihood of returning to high-risk zones. This validates Arnstein's (1969) "ladder of participation," which argues that tokenistic consultation is insufficient for meaningful engagement.

Comparative Insights between Ogun and Lagos States

Comparing both states reveals that Lagos, despite higher population density and land scarcity, has more structured approaches, largely due to stronger institutions and external partnerships. Ogun, with more land availability, struggles with weak institutional capacity and customary land constraints.

Table 5: Comparative Summary of Post-Flood Resettlement in Ogun and Lagos

Parameter	Lagos State	Ogun State
Institutional Framework	Stronger (LASR, partnerships)	Weaker (fragmented land governance)
Estate Management Involvement	High	Limited
Tenure Security	Moderate challenges	Severe disputes
Housing Provision	State-backed but costly	Self-help, poor infrastructure
Stakeholder Participation	Moderate	Low

This comparative view illustrates that Lagos offers more lessons for institutionalizing estate management in disaster contexts, while Ogun highlights the challenges of traditional land systems in modern resettlement efforts.

Challenges to Integrating Estate Management in Resettlement Planning

Despite its potential, several challenges hinder the effective integration of estate management in Nigeria's post-flood resettlement. These include:

1. **Institutional Fragmentation:** Multiple agencies overlapping without clear mandates.
2. **Customary Land Tenure Conflicts:** Particularly acute in Ogun, limiting land release.
3. **Affordability Constraints:** Housing schemes priced beyond the reach of flood victims.
4. **Weak Community Participation:** Limited consultation in planning and decision-making.
5. **Corruption and Lack of Transparency:** Allegations of favoritism in land allocation.

As UN-Habitat (2015) observed, "without institutional reform, resettlement projects risk reinforcing existing inequalities rather than building resilience."

Summary of Key Findings

This study examined the integration of estate management principles into post-flood resettlement planning in Ogun and Lagos States. Evidence from field surveys, interviews, and secondary data demonstrates that flooding has become a recurring hazard in both states, exacerbated by climate change, urbanization, and weak land governance (Adelekan, 2016; Komolafe et al., 2015). Despite the existence of various housing and resettlement schemes, the majority of displaced persons in both states either return to high-risk flood-prone areas or settle in informal, poorly serviced neighborhoods.

The findings show that Lagos, although more institutionally structured, still grapples with issues of affordability, inclusiveness, and delayed tenure regularization. Ogun, while having more land availability, is constrained by fragmented land governance and the dominance of customary land tenure systems. Importantly, the role of estate management has been uneven—more prominent in Lagos through state-backed schemes and largely absent in Ogun's more fragmented response.

Key challenges identified include tenure insecurity, affordability barriers, weak community participation, institutional fragmentation, and inadequate integration of estate management in disaster governance frameworks. These confirm UN-Habitat's (2015) assertion that "post-disaster resettlement often fails when planning is narrowly technical and excludes the lived realities of displaced communities."

Overall, the study establishes that estate management can play a central role in bridging the gaps between policy and practice, ensuring that resettlement is not only about physical relocation but also about restoring dignity, security, and livelihoods.

Policy Implications for Post-Flood Resettlement

The findings carry significant policy implications for Nigeria's disaster management and urban governance. First, the persistent return of displaced persons to flood-prone zones

underscores the inadequacy of short-term relocation policies. As Olajide and Lawanson (2014) note, "resettlement that neglects the socio-economic roots of vulnerability is merely a cycle of displacement." This highlights the need for holistic policies that integrate land governance, housing affordability, and livelihood restoration.

Second, land acquisition and tenure insecurity emerged as critical barriers in both states. The persistence of disputes, especially in Ogun, shows that statutory frameworks must engage more constructively with customary tenure systems. Without legal certainty, displaced households remain exposed to the risk of secondary displacement. This supports Payne's (2002) contention that tenure security is the bedrock of sustainable resettlement.

Third, the study reveals the necessity for multi-stakeholder engagement. Policies that exclude communities in decision-making tend to face legitimacy crises and low compliance. A bottom-up approach, in line with Arnstein's (1969) ladder of participation, ensures that resettlement reflects local realities and community aspirations.

Finally, the weak integration of estate management into disaster governance highlights a missed opportunity for professional institutions. Policy reforms should not only empower estate surveyors and valuers but also embed them structurally into disaster response agencies, especially in the phases of land allocation, valuation, and infrastructure planning.

Recommendations for Effective Integration of Estate Management

To address the identified challenges, several recommendations are proposed:

1. **Strengthening Institutional Frameworks:** Governments in Ogun and Lagos should institutionalize estate management within their disaster management architecture. This involves creating formal partnerships between agencies such as the State Emergency Management Agency (SEMA) and professional estate management bodies to streamline land allocation and housing delivery.
2. **Enhancing Tenure Security:** Legal reforms should prioritize issuing Certificates of Occupancy (C of O) and other forms of legal recognition to displaced households in resettlement areas. This would reduce disputes and encourage long-term investment in new communities.
3. **Affordable Housing Delivery:** Estate managers should work with urban planners, developers, and financiers to design resettlement housing that meets affordability thresholds for displaced persons. This could include cooperative housing schemes, incremental housing models, and rental support.
4. **Participatory Planning Approaches:** Resettlement planning should adopt a participatory framework where communities are engaged from needs assessment through to implementation. As one Lagos respondent noted during interviews: "We need to be part of the plans, not just receive them."
5. **Leveraging Technology for Flood-Resilient Settlements:** Estate management professionals should employ Geographic Information Systems (GIS) and flood risk mapping to identify safer settlement zones. This aligns with international best practices in disaster-resilient urban planning (UNDRR, 2019).

These recommendations emphasize that estate management is not just a technical field but a governance tool for building resilience and inclusiveness in post-disaster contexts.

Contribution to Sustainable Urban and Regional Planning

This study makes a significant contribution to debates on sustainable urban and regional planning in Nigeria and Africa at large. By highlighting the gaps in resettlement planning and the potential of estate management, it underscores the need for integrated approaches that combine environmental sustainability, social inclusiveness, and institutional reform.

Estate management provides a framework for coordinating land governance, housing delivery, and tenure systems in ways that align with the UN's Sustainable Development Goals (SDGs), particularly Goal 11 (Sustainable Cities and Communities). As UN-Habitat (2020) asserts, "urban resilience is built not just through infrastructure, but through inclusive governance and secure tenure."

Furthermore, the comparative insights between Lagos and Ogun illustrate the importance of context-sensitive planning. While Lagos demonstrates the value of stronger institutional frameworks, Ogun highlights the urgency of engaging customary land systems in planning. Together, these lessons inform broader strategies for climate adaptation and disaster resilience in West African cities.

Thus, integrating estate management into post-flood resettlement planning is not only a technical necessity but also a normative imperative for sustainable and resilient urban futures.

Conclusion

In conclusion, this study has shown that the integration of estate management into post-flood resettlement planning is indispensable for building resilience in flood-prone regions of Nigeria. By addressing issues of land acquisition, tenure security, housing provision, and stakeholder participation, estate management offers a pathway toward more structured and sustainable resettlement.

The comparative case of Lagos and Ogun reveals that while Lagos has made strides in institutional integration, affordability and inclusiveness remain problematic. Ogun, on the other hand, demonstrates the challenges of weak institutions and customary land systems. Nonetheless, both states highlight the central role of estate management in transforming displacement into opportunities for sustainable development.

As disasters become more frequent due to climate change, the lessons from this study stress that resettlement must go beyond physical relocation. It must involve legal reform, institutional strengthening, participatory governance, and livelihood restoration. Estate management is uniquely positioned to provide this holistic framework.

Suggestions for Further Research

While this study offers valuable insights, further research is needed to deepen understanding in several areas. First, future studies could employ longitudinal approaches to track resettled communities over time, assessing long-term outcomes of estate management interventions.

Second, comparative studies across other Nigerian states and African countries would provide broader insights into the applicability of estate management in diverse contexts.
Third, there is scope for exploring innovative financing mechanisms, such as public–private partnerships and community land trusts, to support affordable housing in resettlement schemes. Fourth, research should examine the gendered dimensions of resettlement, as women and children often face unique vulnerabilities in disaster contexts (Ikeda, 2016).
Finally, integrating technological tools such as remote sensing, GIS-based flood modeling, and blockchain-enabled land registries could form the basis for future studies on how digital innovations can strengthen estate management in disaster resilience.
Such research would not only enrich academic discourse but also guide policymakers and practitioners in creating more robust, inclusive, and sustainable resettlement frameworks.

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