RESILIENCE AND LIVABLE CITIES IN A WARMING WORLD

A FESTSCHRIFT IN HONOUR OF

TPL. DR. JOSHUA ADEWUMI ADEBISI FNITP, RTP



EDITED BY

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CHAPTER 01

CLIMATE-RESILIENT HOUSING AND INFORMAL SETTLEMENTS IN LAGOS STATE: PATHWAYS TOWARD ADAPTIVE URBAN GOVERNANCE AND SUSTAINABLE DEVELOPMENT

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Abstract

Climate vulnerability with informal settlements is inextricably linked as unplanned housing frequently increases exposure to climate issues. This study analysed how resilience has been established in Lagos state vulnerable urban centres, Nigeria, with an emphasis on adaptive means for increasing resilience to change in climate of unplanned settlements. Lagos as one of Africa's fastest-growing mega-cities, has nearly 70% of its people living in an unplanned-settlements, most of which are situated in low-lying coastal zones which is referred to as well as flood-prone land. The city is facing re occurring climate hazards such as recurring coastal floods, extreme heat, sea-level rise and severe thunderstorms most of which worsen underlying housing and amenities shortfalls. The study espoused a mixed-methods research methodology combining geographical analysis questionnaires for households and stakeholder interviews (n=45) to assess local housing adaption measure, governance frameworks to resilience. The findings revealed that informal settlements in Lagos suffer excessively from climatic impacts as a result of insufficient drainage systems, subpar construction materials, imperfect access to municipal amenities and encroachment into environmentally fragile areas like wetlands including mangroves. Despite these vulnerabilities, resident have shown remarkable adaptive latent. Policies include incremental home modifications like rising floors and strengthening walls, community-based flood warning systems, and relying on outdated systems of knowledge to contract with climatic pressures. However, significant gaps in urban planning and governance frameworks remain such as lack of pro-poor climate adaptation strategies, poor institutional organization and the under-representation of unplanned settlements in city planning. This study recommended the use of participatory upgrading means, the development of nature-based solutions including wetland restoration, the creation of climate-receptive building norms, as well as comprehensive land tenure reforms. Such approaches are thus critical for integrating informal settlements into larger pliability plans and assuring climate justice for poor urban settlement.

Keywords: Informal Settlements, Climate Resilience, Adaptive Settlement, Urban Vulnerability, Lagos State

1.0 Introduction

The mixture of climate change, rapid development and unplanned settlement happens to be one of the major discussions on issues facing African cities. Lagos State as a Nigeria's economic hub happens to be one of Africa's fastest-growing municipalities, it thus displays this convergence most intensely. With a population of over 15 million and yearly growth rates around 3.2%, Lagos has under-went extraordinary urban expansion, out spacing institutional planning means and

infrastructure development (Adelekan, 2010). Due to the demographic pressure, large number of Lagos State residents inhabit informal settlements, which are known with insufficient housing, limited access to critical services and augmented exposure to environmental dangers (UN Habitat, 2020). The geographical spread of informal communities in Lagos state gave room for considerable exposure to climate change. Large number of Lagos informal housing is situated in environmentally hazardous places with low-lying coastal zones, swamps, floodplains and mangrove habitats (Ajibade and McBean, 2014). Such settlement pattern is not fortuitous; it exhibited complicated land market marginalization, poverty, unsuccessful housing policy and lack of cheap traditional housing (Adelekan & Asiyanbi, 2016).

As climate change deteriorates, these geographical susceptibilities result in unequal weakness to climate-related hazards like coastal flooding, sea-level rise, extreme rainfall, hurricanes and heat islands (Akanmu & Salisu, 2024; Adelekan, 2010). Lagos geographical location in the West African coast makes it vulnerable to climate change effects. The city's low-lying terrain with 40% of the land area below 2 meters above sea level with its proximity to Atlantic Ocean dynamics, makes various climatic risk routes (Nkwunonwo, Whitworth & Baily, 2016).

Flooding happens to be an immediate and persistent climate danger endangering Lagos. Annual flooding occurrences exacerbated by insufficient drainage facilities, bad solid waste management, and informal housing that affect natural water channels which often damage low-income communities (Olajuyigbe et al. 2012). The 2011 and 2012 flooding events affected more than 200,000 people and led to substantial property damage, thus demonstrated the extent of susceptibility (Komolafe et al. 2015). Climate models forecast increased rainfall and a greater number of severe downpours, implying that flood risks would rise in the lack of considerable adaptation initiatives (Akinsanola & Zhou, 2019). Apart from flooding, Lagos State has developing climate issues, remarkably rising temperatures which thus caused urban heat island, notably severe in densely packed informal neighborhoods with deficient foliage with ventilation (Akanmu, Salisu, Ogunsesan & Olorunfemi, 2024 & Balogun et al., 2009). Also, extreme heat events offer major health issues, especially to vulnerables like children, the elderly, and those with existing medical issues. Furthermore, coastal erosion caused by increased storm activity and sea-level rise imperils coastline populations and essential infrastructure (Adelekan & Asiyanbi, 2016). Despite increased knowledge of climate hazards in cities of African major gaps remain in managing climate adaptation in informal areas.

Meanwhile, existing research has a top-down approach that lay emphasizes on vulnerability without sufficiently addressing informal settlement members' capacity for adaptation (Dodman et al., 2017). This deficit mindset does not take into cognizance of adaptive models of coping, grassroots adaptation means and outdated systems of knowledge that residents use to take care of climate dangers (Lwasa et al., 2014). Particularly, the connection between housing, governance and resilience to climate change warrant further empirical study. This study fills these gaps by analysing climate-resilient housing designs in Lagos' informal settlements with an integrated lens that recognises social, physical, economic and governance elements. The study's significance stalks from its potential to educate scientific policies and practice across scales. The research provides empirical understandings on informal settlement

susceptibility and adaptation means to the Lagos State government and public authorities and thus help influence pro-poor climate policy. For foreign development agencies and non-governmental groups working on resilience in urban areas, the findings provide acumens into grassroots adaptation and participatory means applicable in African cities.

2.0 Literature Review

Climate-resilient housing in informal settlements of Lagos State is a significant centre of discussion in urban studies as a result of the city's contact to sea-level rise, flooding and increased population growth. Makoko and Ajegunle are very example of Informal settlements and are mostly vulnerable due to their location in low-lying coastal zones with absence of adequate amenities. Scholars argue that such communities have contact with disproportionate risks from climate change, reoccurring flooding, instability in housing and health issues that require urgent intervention through adaptive housing and governance policies (Adelekan, 2010).

Housing provision in Lagos has historically emphasized quantity over pliability neglecting climate adaptation means. Recent studies highpoint that sustainable housing must participate affordable materials, local building procedure and community-driven plan to guarantee resilience in informal settlements. Without such addition, housing policies risk continuing untenable development patterns and deepening social inequities (Otobo, et al., 2024). Despite their exposures, informal settlement inhabitants possess significant indigenous knowledge and social capital that can be connected for resilience. Participatory approaches, such as the African Cities Research Consortium's "From Margins to Models" project in Ajegunle Ikorodu, demonstrate how co-creation with residents can unlock adaptive strategies for housing and governance. These initiatives show that bottom-up governance, where residents actively shape resilience pathways, is more effective than top-down interventions (Lwasa et al., 2014).

Adaptive urban governance in Lagos needs multi-stakeholder partnership between government agencies, academia, NGOs and local communities (Otobo, et al., 2024). It also stresses the integration of resilience into housing policy frameworks; amenities upgrades personalized to informal settlements and legal reforms to bring tenure security. Such means must be in line with the Sustainable Development Goals, particularly SDG 11 (Sustainable Cities and Communities) and SDG 13 (Climate Action), by dipping disaster risk, ensuring social equity and promoting sustainability (Otobo, et al., 2024).

3.0 Materials and Methods

3.1 Study Area

Lagos State covers about 3,577 square kilometers. It includes coastal lowlands, marshes, lagoons and upland natural regions (Adelekan, 2010). Six informal communities were specifically selected to represent geographic variation, hazard exposition and socio-economic features. They are Makoko, Badia East, Ajegunle, Ilaje-Bariga, Agege-Dopemu and Ikorodu informal settlements collectively hiding over 500,000 individuals with diverse housing styles, tenure arrangements and climatical vulnerability (Adelekan, 2010).

3.2 Methodology

This study adopted a mixed-methods research design which combines quantitative and qualitative methodologies to deliver an in-depth understanding of climate resilience of Lagos' informal neighborhoods. Convergent parallel mixed-methods approach was used. Questionnaires were administered tor households and stakeholder interviews carried out (Fetters et al. 2013). A structured questionnaire was distributed to 384 respondents between the period of March and July 2024; the Sample size was chosen using Cochran's method at 95% confidence and 5% error margin. Systematic random sampling was used to select every fifth home following a random start, with a focus on people who make housing results. In addition, 45 semi-structured interviews were conducted with community members, government officials' technical experts and civil society organizations to examine governance, policy difficulties and adaption measures. Interviews took 45–90 minutes and were videotaped and transcribed. Field observations recognized the state of housing, drainage environmental deterioration and neighborhood adaption initiatives accompanied by ethical images. To identify determinants of susceptibility, survey data were analyzed with SPSS 26 using descriptive statistics, chi-square tests, t-tests, ANOVA and multiple regression. ArcGIS was aided spatial analysis by mapping hotspots and overlaying flood zones with population distributions. Qualitative data was thematically analyzed.

4.0 Results and Discussion

4.1 Socio-Economic Characteristics of Selected Residents

The home survey (n=384) in Table 1 revealed that the informal neighbourhood residents have various socio-economic profiles. The median age of respondents is 36 years (range: 18-72), with 58% men and 42% women partaking. The educational attainment varied, 23% does not have no formal schooling, 41% has primary education certificates, 29% completed secondary education with 7% has completed higher education. These educational levels replicate the restricted humanoid capital development possibilities obtainable to informal settlement occupants. Economic profiles recommended a significant level of poverty and informal employment. The median monthly household income in Lagos was ₦45,000 (about $90 USD at 2024 exchange rates) and is much lower than the poverty line of ₦137,430 a month (National Bureau of Statistics, 2020). Primary employment comprised petty trader (32%), artisan (27%), unskilled worker (18%), transportation services (12%) and other informal jobs (11%). Only 8% reported the formal-sector employment with regular pay. This financial precarity directly confines households' adaptability potential. Household sizes averaged 5.2 persons (SD=2.3), this is thus higher than Lagos' overall average of 4.1, indicating larger family outlines and congestion in informal settlements. Tenure arrangements have 47% renters, 31% owner-occupiers, 15% living rent-free with families with 7% using land without approval. Fear of eviction sternly affects residents' desire to spend in housing upgrades. Settlement features revealed significant climatic vulnerability. According to a geographic study, 68% of surveyed homes live in locations konwn as high flood risk areas by Lagos State government. Elevation research found that 73% of those houses are less than 5 meters above the sea level. The Makoko and Ilaje

communities are within the 2-meter elevation zone thus making them susceptible to instant sea-level rise. The average distance to water bodies was 247 meters, with 41% of houses located at 100 meters of canals and sea shorelines.

Table 1: Demographic attributes of respondents

Indicator	Value
Median Age	36 years (range: 18–72)
Gender Distribution	Male: 58% / Female: 42%
Average Household Size	5.2 persons (SD=2.3)
Average Household Size	4.1 persons
Educational Attainment	
Education Level	**Percentage**
No Formal Schooling	23%
Primary Education	41%
Secondary Education	29%
Tertiary Education	7%
Economic Profile	
Indicator	**Value**
Median Monthly Income	₦45,000 (~$90 USD, 2024)
Lagos Poverty Benchmark	₦137,430
Formal Sector Employment	8%
Occupational Distribution	
Occupation Type	**Percentage**
Petty Trading	32%
Artisanal Work	27%
Unskilled Labor	18%
Transportation Services	12%
Other Informal Activities	11%
Housing Tenure Status	
Tenure Type	**Percentage**
Renters	47%
Owner-Occupiers	31%
Living Rent-Free (with relatives)	15%
Unauthorized Occupation	7%

4.2 Housing Quality and Physical Defenselessness

The results of data analysis presented in Table 2 and Table 3 revealed the quality of housing including extensive physical susceptibilities, intensifying climate risk contact in the study area. Specifically, wood boards (34%), concrete blocks (29%), crenelated iron sheets (21%), Mud (9%), and salvaged materials (7%) are used to construct. These ratios varied between settlements with Makoko centered around wood building (78%), while mainland made use of more concrete blocks. Construction material qualities have a direct impact on climate pliability, with wood and iron sheet constructions being particularly vulnerable to high winds, flooding and fires. There exist numerous structural defects. 17% of houses had good foundations which extended below ground level; Large majority of structures were built straight on the ground or raised on wooden stilts in seaside. measures like waterproofing were not installed in 81% of houses exposing them extremely susceptible at flooding and rainfall. The

condition of the Roofing revealed that 62% used corrugated iron sheets with poor clasp, 23% experienced leaking roofs with only 9% had good ceiling lining. These thus contribute to structural flaws which jeopardize habitability at the severe weather occurrence and led to structure decay.

Table 2: Housing Construction Characteristics

Housing Construction Materials		
Material Type	Overall Percentage	Makoko (Waterfront)
Wood Planks	34%	78%
Concrete Blocks	29%	Lower prevalence
Corrugated Iron Sheets	21%	-
Mud Bricks	9%	-
Salvaged Materials	7%	-

Table 3: Nature of Housing Tenure

Tenure Type	**Percentage**
Renters	47%
Owner-Occupiers	31%
Living Rent-Free (with relatives)	15%
Unauthorized Occupation	7%
Climate Vulnerability Indicators	
Indicators	**Value**
Households in High Flood-Risk Zones	68%
Dwellings Below 5m Above Sea Level	73%
Makoko & Ilaje Elevation	Entirely within 2m elevation band
Average Distance to Water Bodies	247 meters
Households Within 100m of Water	41%

Meanwhile, flood contact was practically universal as shown in Table 4. Almost 89% of households have in the last five years experienced floods, 67% experienced flood every year and 34% experienced several flood measures yearly. Flood nadirs ranged between 28% of incidents to almost waist-deep or more than that (41% of events), and end from hours to few days. Coastal neighbourhoods suffered the flooding at high tides and pluvial flooding afterward heavy rains and end in compound hazard situations. Flood effects had numerous extents. Impacted families that are up to 78% report property damage, such as structural damage that are up to 43%, loss of household product up to (61%) and total house collapse (8%). Losses that are economical averaged ₦127,000 per family occurrence, which is equal to three months of normal household income.

Also, losses that are eroded savings and drove households further into poverty. Flooding result to waterborne diseases in 56% of pretentious households, respiratory infections in 34%, skin illnesses in 29%, and wounds in 12%. Children and elderly were excessively affected. Healthcare bills and lost workdays exacerbated economic effects. During severe floods, 44% of families were evacuated, with most staying with families (62% of evacuees), in worship centres or churches which is served as shelters (23%),

or asleep outside (15%). The average displacement period was 11 days, but some households claimed displacement above 1 month. Qualitative interviews shown psychosocial significances. Residents reported chronic worry, fear about future floods, difficulty sleeping throughout rainy seasons, and trauma, especially among youngsters who experienced hazardous flood episodes. Adaptation investments were significantly associated with security of tenure (χ^2=23.7, p<0.001), with owner-occupiers

Table 4: Structural Deficiencies

Structural Feature	**Percentage**
Proper Foundations (below ground)	17%
No Waterproofing Measures	81%
Corrugated Iron Roofs (inadequate fastening)	62%
Leaking Roofs	23%
Proper Ceiling Insulation	9%
Foundation Type	***Percentage***
Proper Below-Ground Foundations	17%
Resting on Ground Surface	Majority
Elevated on Wooden Stilts (waterfront)	Common in waterfront areas
Being more likely than renters to invest in adaptations. Income level predicts adaptation investments (r=0.42, p<0.001), indicating that economic restrictions limit adaptation, despite willingness.	

4.3 Flooding Patterns and Consequences

Table 5 presents a detailed picture of the flooding pattern and the consequences experienced by residents, revealing a high level of vulnerability within the study area. The data show that 89% of households experienced flooding in the past five years, indicating that flooding is not an isolated event but a recurring environmental challenge. More significantly, 67% of respondents reported annual flooding, while 34% experienced multiple flood occurrences within a single year. This frequency suggests an increasing intensity and unpredictability of flood events, which may be associated with poor drainage systems, rapid urbanization, and changing climatic conditions. The recurrent nature of flooding demonstrates that many residents live under constant threat, making adaptation and preparedness a necessity rather than an option. This aligns with the disaster vulnerability framework, which emphasizes that repeated exposure heightens social and economic risks over time. The implication is that flood risk in the community has become normalized, potentially reducing the urgency of preventive action while increasing cumulative damage.

The characteristics of flooding further underscore its severity and potential for destruction as the results show that 41% of flood events reached waist-deep levels or higher, while 28% were ankle-deep and 31% represented intermediate depths. The predominance of deeper floodwaters, which conforms with the findings of Akanmu, Salisu & Sanni (2023) and, Akanmu, Gbadamosi & Omole (2022) signifies a serious hazard to human safety, mobility, accessibility, property and overall city livability and competitiveness of the study area. Waist-deep flooding often disrupts transportation, damages household infrastructure, and increases the risk of drowning, particularly

among vulnerable populations such as children and the elderly. Even ankle-deep flooding, though less severe, can still affect movement and contaminate living environments. The variation in flood depth also reflects the uneven spatial distribution of flood impacts, likely influenced by topography, housing conditions, and drainage efficiency. Consequently, the flood characteristics reveal that the problem extends beyond mere water accumulation to a broader issue of hazard intensity and exposure.

The impact of flooding on property and livelihoods is substantial, as shown by the high rates of material loss and structural damage with close to 61% of households reported losing household goods, making it the most common consequence. This reflects the immediate economic burden placed on families, especially low-income households that may lack savings or insurance to replace damaged items. Furthermore, 43% experienced structural damage to their buildings, indicating compromised housing safety and increased repair costs. Of greater concern is the 8% of households that reported complete house collapse, representing extreme vulnerability and total asset loss. These findings in conformity with Salisu, Akanmu & Ogunsesan (2026), established the multidimensional economic effects of flooding, extending from temporary inconvenience to catastrophic destruction.

The health consequences of flooding are equally severe and point to major public health concerns in the affected communities. Waterborne diseases were the most prevalent, affecting 56% of households, which indicates widespread contamination of water sources during flood events. This is consistent with the known relationship between floods and diseases such as cholera, typhoid, and diarrhea. Respiratory infections affected 34% of households, likely due to prolonged exposure to damp conditions and overcrowded temporary shelters. Skin conditions, reported by 29%, may result from direct contact with polluted floodwaters, while injuries (12%) highlight the physical dangers associated with navigating flooded environments.

Also, displacement patterns further reveal the social disruption caused by severe flooding. The table indicates that 44% of households were evacuated during major flood events, emphasizing the extent to which flooding can render homes temporarily uninhabitable. The average displacement duration of 11 days suggests that many families endure prolonged instability before returning home, while some households experienced displacement for over one month, indicating severe and lingering impacts. Such prolonged displacements can disrupt education, employment, and social networks, thereby compounding the stress associated with flood events. The choice of evacuation locations also reflects coping mechanisms and limitations in formal emergency response systems. A majority (62%) sought refuge with relatives, showing reliance on informal social support networks. Meanwhile, 23% used public spaces such as schools and churches, while 15% were forced to sleep outdoors, denoting critical gaps in shelter provision and disaster preparedness.

Table 5: Flooding Pattern and Residents' Experienced Consequences

Flood Exposure and Frequency	
Flood Indicator	**Percentage/Value**
Households Experiencing Flooding (past 5 years)	89%
Annual Flooding	67%
Multiple Flood Events Per Year	34%
Flood Characteristics	
Flood Depth	Percentage of Events
Ankle-Deep	28%
Waist-Deep or Higher	41%
Other Depths	31%
Flood Impacts/Property Damage	
Damage Type	Percentage
Loss of Household Goods	61%
Structural Damage	43%
Complete House Collapse	8%
Health Consequences (% of affected households)	
Health Impact	Percentage
Waterborne Diseases	56%
Respiratory Infections	34%
Skin Conditions	29%
Injuries	12%
Displacement Indicator	Percentage/Value
Displacement During Severe Floods	
Households Evacuated	44%
Average Displacement Duration	11 days
Extended Displacement (>1 month)	Some households
Evacuation Locations (% of evacuees)	
Location	Percentage
With Relatives	62%
Schools/Churches (shelters)	23%
Sleeping Outdoors	15%

4.4 Tenure Insecurity

The survey results presented in Table 6 shown a significant adverse correlation ($r=-0.39$, $p<0.001$) between tenure variability and housing developments. Residents that illegally occupy land remained threatened with ejection and have little money for investment in long-term accommodation. An occupier narrated, " a landlord can eject me any moment in time so why should I spend money to renovate this house'' It's better to put away money for when I need to pack in. the long-term residents who have lived in informal areas for donkey years encountered tenure uncertainty due to legal issues. Residents are susceptible in the absence of official titles, registration procedures and aware of customary claims. Previous ejections show that even established settlements are prone to rapid evacuation.

Table 6: Apprehensive land tenure limits adaptation

Factor	Statistical Relationship
Tenure Security	χ^2=23.7, p<0.001 (owner-occupiers more likely to invest)
Income Level	r=0.42, p<0.001 (positive correlation)

Also, the summary of tenure insecurity observed in the study area is presented in Table 7.

Table 7: interpreting the relationship between insecure land tenure and adaptation investment

Dimension	Evidence/Finding	Impact	Implications
Statistical Correlation	Strong negative association (r=-0.39, p<0.001) between tenure insecurity and housing improvements	Housing improvements decrease significantly as tenure insecurity increases	Statistically significant relationship confirms tenure as a critical barrier to investment
Authorization Status	Residents occupy land without authorization or under constant eviction threat	Minimal incentive for long-term housing investment	Unauthorized occupation creates rational disincentive for improvement spending
Economic Rationality	Renters/occupants prioritize savings over improvements due to eviction risk	Resources diverted from housing adaptation to relocation reserves	Investment decisions driven by risk assessment rather than need
Legal Framework	Legal ambiguities surrounding informal settlements persist	Tenure uncertainty even for long-term residents (decades of occupation)	Lack of clear legal status perpetuates vulnerability regardless of occupation duration
Documentation Gap	Absence of formal titles, registration systems, or recognition of customary claims	Residents remain legally vulnerable despite physical presence	Informal occupation provides no legal protection or investment security
Historical Precedent	Previous evictions of long-standing settlements	Even established communities face sudden clearance risk	Past evictions reinforce present insecurity and discourage investment
Temporal Paradox	Long-term physical occupation (decades) coexists with persistent legal insecurity	Duration of residence does not translate to tenure security	Time-based claims not recognized without formal documentation
Adaptation Constraint	Tenure insecurity fundamentally constrains adaptation investment	Climate adaptation measures remain underfunded/unimplemented	Vulnerability to climate impacts compounded by inability to invest in protective measures

5.0 Conclusion and Recommendations

The spatial analysis revealed a glaring cleared picture: informal settlement residents of Lagos faced entrenched socio-economic issues, worsened by recurring flood issue. Low earnings, large household sizes, insufficient education and largely informal settlements make households economically susceptible, lowering ability to plan for absorb and retrieve back from flooding tremors. Physical exposure high at

most homes are situated in low-elevation, flood-risk high zones and many are found in close proximity to canals and lagoons. This explained that flooding is frequent and often merged hazard that led to large health issues, uninsured losses destruction, and psychological harm. Notably, tenure imbalance comes up as a structural obstacle that discourages creation of investments in resilient homes; conversely, those with longer period of tenancy and high incomes are more likely to undertake adaptation. Summarily, the interconnectedness of poverty, unstable tenure, dangerous places and inadequate social protection lock residents in vicious cycle of repeated losses that worsen deprivation and diminish long-term pliability.

Addressing this as a multifaceted issue need programmed and coordinated initiatives that merged short-term alleviation and long-term structural improvements. Secure tenure and the acknowledgment of long-standing entitlements should be highlighted with rapid land regularization, temporary certification and comprehensive mediation means thus giving locals a real reason to participate in resilient rehabilitation. Thus, enabling complete formal titling is politically or governmentally impractical, scalable intermediate tenure means such as (leaseholds, residency certificates and land trusts) should be adopted with alongside legal defenses against arbitrary removal. The aftermath of flooding must be addressed with a combination of natural and artificial interventions aimed at the most disposed settlements. Prioritize public-led drainage reconstruction, canal/lagoon desilting, green infrastructure (mangrove rehabilitation, bioswales), and selective hard defenses that are both cost-effective and politically acceptable. Combine settlement-level elevation or waterproofing instructions (raised flooring, plinths, removable barriers) with technical instruction and small grants or low-interest microloans to help people afford realistic retrofits. For areas where recurring severe flooding makes in-place resilience impossible, plan and fund voluntary, dignified removal options that include stable housing and livelihood assistance at the destination. Increase social safety and financial resilience through the introduction of targeted payments, urgent assistance funds, and subsidised microinsurance products for informal workers.

Also, improving public health and disaster readiness by providing immediate access to clean water, clean water, and fundamental healthcare during and after floods; increasing health care outreach to avoid waterborne and respiratory infections; and storing medical supplies. Create nearby early warning systems and evacuation plans in collaboration with residents, and find safe, accessible shelters that cater to cultural requirements. Implement involvement and cross-sector coordination. To inform investment and minimize arbitrary evictions, city and state authorities should use a single unified database on informal settlements, dangers, and tenure status. Engage community associations, non-governmental organizations (NGOs), and private players in shared planning, training, and monitoring. Policy and interventions must be gender-sensitive, focusing on youngsters, the elderly, and other high-risk groups determined by the study. Combining secure tenure, targeted risk mitigation, social protection, and participatory government, Lagos may turn chronic vulnerability into a route to safer, more resilient neighborhoods.

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