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Factors Influencing Post-Flood Recovery Outcomes and Equitable Strategies amongst Marginalized Populations: A Scoping Review

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Abstract

Flooding remains one of the most disruptive urban hazards in Africa, yet recovery outcomes are highly uneven. Marginalized groups such as women, informal settlement residents, and low-income households often face slower recovery and deepening resilience gaps. This review aimed to synthesize evidence on the main factors influencing post-flood recovery and to identify strategies that promote equity in urban contexts. A scoping review was undertaken in line with PRISMA-ScR guidelines. Literature published between 2000 and 2025 was searched across Google Scholar, Semantic Scholar, and PubMed. Out of 112 records screened, 19 studies met the inclusion criteria. Data were charted into study characteristics, recovery factors, and equity strategies, and synthesized thematically. The review showed that governance failures such as fragmented coordination, politicized aid distribution, and exclusion of informal residents were the most consistent barriers to equitable recovery. Socio-demographic factors, including gender, income, health, and disability, further shaped recovery outcomes, while structural vulnerabilities such as insecure tenure, poor housing, and inadequate infrastructure prolonged displacement. Strategies to address inequities included community mapping, slum upgrading, social protection programmes, and psychosocial support, but they are mostly project-based, donor-driven, and poorly institutionalized. The findings show that inequities drive persistent recovery gaps. Equitable recovery requires stronger governance, deliberate inclusion of vulnerable groups, and the integration of community-driven approaches into formal planning frameworks.

Keywords
Flood recovery, Equity, Marginalized populations, Urban resilience

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1. Introduction

In African cities, flooding has become one of the most frequent and disruptive hazards, accompanied by impacts such as displacement, loss of income, and long-term erosion of social and economic resilience. It has been reported that fast growth of urban spaces, poor governance intervention and support, and limited community participation are major drivers of flood vulnerability and poor recovery outcomes (Dossa et al., 2025; Okunola, 2025). However, even after huge investments in infrastructure, such as large-scale flood control projects, the process of recovery after a flood in cities, such as Lagos, remains uneven and inequitable, most especially amongst residents of informal settlements.

The impact of floods on humans has been well documented. In 2025 alone, severe floods displaced over 33,000 people across Nigeria, Chad, and the Democratic Republic of Congo, with more than 3,800 homes damaged and hundreds of lives lost (UN OCHA, 2025). Urban centres such as Lagos, Conakry, and Kinshasa continue to experience escalating flood risks due to rapid urbanization, poor infrastructure, and governance fragmentation (Dossa et al., 2025).

In 2022, Nigeria experienced floods that affected millions across six states, which led to general displacement, destruction of livelihoods, and severe recovery challenges (UNDP, 2023). Similar experiences were recorded in Accra, where poor households suffered uneven losses and experienced a slow recovery rate compared to wealthier groups (Erman et al., 2020). These outcomes show that while exposure and vulnerability are equal, other factors (socio-economic conditions) such as income, housing quality, and access to support systems influence recovery. This study aims to synthesize existing evidence on the factors that influence post-flood recovery outcomes and to identify strategies that promote equitable recovery among marginalized urban populations in African cities, guided by two research questions:

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i. What are the main factors that influence post-flood recovery outcomes in urban marginalized populations?
ii. What strategies have been proposed or implemented to ensure more equitable post-flood recovery?

To achieve the aim of this study, we focused on studies conducted between 2000 and 2025 that examine post-flood recovery in urban and peri-urban settings, with emphasis on informal settlements and other marginalized groups. Both peer-reviewed articles and grey literature were included where they addressed recovery outcomes or strategies with explicit attention to equity.

To the best of our knowledge, this is the first review to apply the PRISMA-ScR framework in synthesizing evidence on post-flood recovery outcomes and equitable recovery strategies for marginalized urban populations in African cities. While prior studies have produced impact assessments (e.g., UNDP, 2023), conceptual frameworks on vulnerability (e.g., Islamic Development Bank, 2024), or localized case studies in cities such as Lagos, Accra, and Dar es Salaam (Ajibade et al., 2013; Erman et al., 2020; John, 2020), none have systematically mapped the intersection of equity, urban flooding, and recovery strategies across multiple contexts. This review, therefore, fills a critical gap by consolidating diverse strands of evidence into a coherent picture of how inequities shape recovery and what approaches have been attempted to promote inclusion.

Conclusively, we presented the methodology, describing the PRISMA-ScR process used for identifying and selecting studies, then provided the results, including the PRISMA flow diagram, characteristics of included studies, and thematic findings on factors and strategies. We discussed the findings in relation to existing literature and highlighted thestrengths and limitations. Lastly, we concluded by identifying implications for research, policy, and practice, followed by recommendations for fostering equitable flood recovery.

2. Research Design and Methodology

A scoping review was undertaken to develop evidence on factors influencing post-flood recovery outcomes and equitable recovery strategies for marginalized populations. The review followed the guidelines of the Preferred Reporting Items for Systematic Reviews and Meta-Analyses Extension for Scoping Reviews (PRISMA-ScR) (Tricco et al., 2018; Munn et al., 2018).

We closely adhered to recommended procedures for scoping reviews, including: (i) formulating clear research questions; (ii) applying a transparent search strategy across multiple databases; (iii) adopting consistent inclusion and exclusion criteria; (iv) systematically screening records in two stages; (v) charting data with a structured template; and (vi) synthesizing results thematically to identify knowledge gaps and implications.

Eligibility Criteria (PCC)

Studies were included if they (a) addressed post-flood recovery outcomes (e.g., housing, livelihoods, services, health, education) in urban or peri-urban populations; (b) examined or discussed inequities/equitable strategies in recovery, especially among marginalized groups (informal settlement dwellers, low-income households, women, youth, elderly, persons with disabilities, migrants/IDPs); (c) were published in English between 2000 and 2025; and (d) reported empirical findings (quantitative, qualitative, or mixed methods).

We excluded studies that (i) focused on hazards other than floods; (ii) examined preparedness or risk perception only (with no recovery outcomes); (iii) were rural-only in context; or (iv) were non-empirical commentaries.

2.1 Search Strategy and Study Selection

We conducted a comprehensive search for empirical studies on post-flood recovery outcomes and equity strategies for marginalized urban populations. Searches were undertaken in Google Scholar, PubMed, and Semantic Scholar. Boolean strings combined terms for floods, recovery, equity/inequity, and urban populations (see Table 1 for details). Scopus and Web of Science were considered but not used due to access constraints. Grey literature was also consulted opportunistically through international agencies such as UNDRR, IFRC, and the World Bank.

The initial search yielded forty records in Google Scholar, six in PubMed, and sixty-six in Semantic Scholar. After removing irrelevant records at the title and abstract stage, eighteen articles from Google Scholar, four from PubMed, and six from

Semantic Scholar proceeded to full-text assessment. At this stage, five Google Scholar papers, two PubMed papers, and two Semantic Scholar papers were excluded because they either focused on rural-only contexts, non-flood hazards, or did not report recovery outcomes. This process resulted in the inclusion of thirteen studies from Google Scholar, two from PubMed, and four from Semantic Scholar, making a total of nineteen studies for the review (see PRISMA flow diagram, Figure 1).

All bibliographic details were exported into Microsoft Excel. A structured data extraction template was used to capture study characteristics (author, year, country, design, population, setting, flood type, recovery outcomes), factors influencing recovery outcomes, and equity-oriented strategies. This systematic process ensured transparency and consistency in data handling.

Table 1: Keywords for Database Searches

Database	Search String Used	Notes
Google Scholar	("post-flood" OR "post flood" OR "post-disaster" OR recovery) AND (inequity OR equity OR inequality OR disparity OR inclusive OR vulnerable OR marginalized OR "informal settlement" OR slum) AND (urban OR city OR "peri-urban") AND (Africa OR … Senegal)	Screened the first 40 records
PubMed	(("Floods"[Mesh] OR flood* OR inundation) AND (recover* OR "post-disaster" OR "post-flood" OR "disaster relief") AND (inequit* OR disparit* OR equit* OR inclusi* OR vulnerab* OR marginali* OR "informal settlement*" OR slum*) AND (urban OR city OR "peri-urban") AND (Africa OR … Senegal))	6 records retrieved, all screened
Semantic Scholar	"post-flood recovery" OR "post disaster recovery" flood AND (equity OR inequity OR disparity OR inclusive OR marginalized OR "informal settlement" OR slum) AND (urban OR city OR "peri-urban")	~250 retrieved, 66 screened

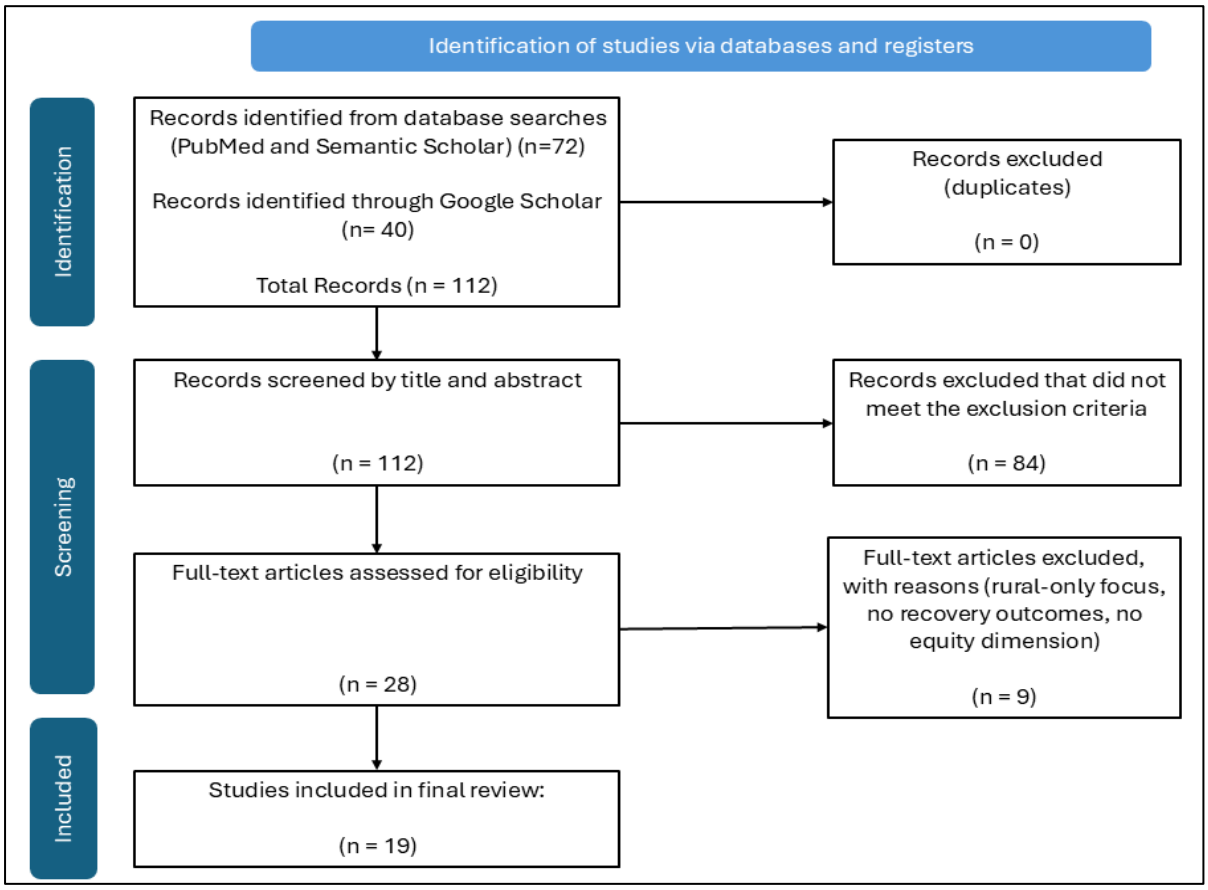

Figure 1: Identification of studies using the Preferred Reporting Items for Systematic Reviews and Meta-Analyses Extension framework (PRISMA)

2.2 Data Charting and Synthesis

All studies that met the inclusion criteria were exported into Microsoft Excel for systematic charting. The charting template was designed to capture three layers of information. First, study characteristics were recorded, including author, year of publication, country or city, study design, population, setting, flood type, and recovery

outcomes examined. Second, details of factors influencing recovery outcomes were captured, noting the broader theme (socio-demographic, structural or infrastructural, governance or institutional), the specific factor under study, and the recovery outcome linked to it. Third, equitable recovery strategies were documented, covering the type of strategy (e.g., participatory/community-led initiatives, social protection programs, or inclusive planning frameworks), the population targeted, the implementing actor, and any reported effectiveness or limitations.

The charted information was then analyzed descriptively and thematically. Studies were grouped into clusters reflecting the main factors that shaped recovery outcomes as well as the strategies aimed at promoting equity in recovery processes. Frequencies were used to indicate the concentration of evidence in particular areas, while narrative synthesis was employed to highlight recurring patterns and to draw attention to persistent knowledge gaps. In keeping with scoping review conventions, no formal appraisal of study quality was undertaken. However, limitations acknowledged by the original authors, such as small sample sizes or narrow geographic focus, were noted in order to provide context for interpreting the findings.

3. Results

The search and screening process is summarized in the PRISMA flow diagram (Figure 1). Across the three databases searched, a total of 112 records were retrieved: 40 from Google Scholar, 6 from PubMed, and 66 from Semantic Scholar. Following title and abstract screening, 84 records were excluded for not meeting the inclusion criteria. The remaining 28 full-text articles were assessed, and 9 were excluded for reasons such as rural-only focus, absence of post-flood recovery outcomes, or lack of equity considerations. Nineteen studies (17% of records screened) ultimately met the eligibility criteria and were included in the review. Of these, 16 studies (84%) were published after 2011, and more than half (12 studies, 63%) appeared between 2016 and 2025, reflecting the growing attention to equity and resilience in recent years.

The 19 included studies span the period 2000–2025, with a notable increase in publications after 2015, reflecting the growing attention to resilience and equity in disaster recovery research. Most studies were case studies and cross-sectional analyses, though a few employed mixed-method designs. The geographic distribution was concentrated in Nigeria, Ghana, Kenya, South Africa, and Mozambique, with occasional contributions from other African urban contexts. Populations studied were primarily informal settlement dwellers, low-income households, women, youth, and displaced groups, with fewer studies focusing explicitly on persons with disabilities.

In terms of recovery outcomes, the studies most frequently reported on housing reconstruction and livelihood restoration, followed by access to services (water, electricity, health, education). A smaller number of studies considered health recovery (morbidity, access to clinics) and educational continuity (reopening of schools). Very few studies provided longitudinal tracking of recovery, with most focusing on outcomes within the first one to two years post-flood.

Table 2: Characteristics of Included Studies (n = 19)

Study period	Countries represented	Study designs	Populations studied	Recovery outcomes reported
2000–2010	South Africa, Nigeria	Case studies, policy analyses	Informal settlement residents, low-income households	Housing, services, livelihoods
2011–2015	Dominican Rep., Venezuela, Ghana	Case studies, mixed-method	Slum dwellers, women, youth	Housing, tenure, livelihoods
2016–2020	Nigeria, Kenya, Mozambique, Ghana	Cross-sectional surveys, qualitative	Informal settlements, displaced groups, elderly	Housing, services, health, education
2021–2025	Nigeria, Kenya, Mozambique, South Africa, Colombia	Rapid reviews, participatory action research, mixed-method	Women, youth, persons with disabilities, migrants/IDPs	Housing, livelihoods, services, economy

3.1 Factors Influencing Recovery Outcomes

(a) Governance and Institutional Factors

The findings regarding governance or institutional support showed increased vulnerability and a poor recovery rate. In our review, nine of the included studies linked recovery gaps to the way institutions managed, or failed to manage, the process after floods. The emphasis was less on the natural hazard itself and more on what happened once the water receded.

Several studies pointed to the problem of political neglect and weak coordination. For instance, John (2020) described how recovery efforts in Nigerian cities were marked by overlapping responsibilities between agencies, leading to duplication in some areas and neglect in others. Similarly, Bhanye (2025) highlighted that in the absence of clear governance structures, informal settlements were rendered "invisible" in recovery planning, which left many households without access to aid or reconstruction programs.

Other studies also revealed the inequitable distribution of aid. In Lagos, Ajibade et al (2013) found that poor households were excluded from relief in a systematic way because of patronage networks and political bias. So instead of targeting the most vulnerable, assistance was often focused on those with stronger political connections. This aligns with the findings of Doberstein and Stager (2012), where the lack of recognition of informal tenure led to the exclusion of entire neighborhoods from formal recovery support in Latin America.

Erman et al. (2020) showed that fragmented governance and limited financing slowed the re-establishment of basic services like water and electricity, which further causes inequalities between formal and informal neighbourhoods. While community efforts are vital, official reports such as UNDP Nigeria (2023) emphasize that large-scale recovery remains stalled without significant state-led investment and long-term mitigation frameworks.

(b) Socio-demographic Factors

In our review, these factors were reported in seven studies, reflecting issues of gender, class, age, health, and disability, showed that recovery is not experienced equally, even within the same affected community.

Ajibade et al. (2013) found that women in Lagos often had less access to credit and recovery resources as compared to men, which slowed their livelihood restoration. At the same time, Bhanye (2025) revealed how gendered roles in informal settlements shaped the recovery of housing and daily services, pushing women into unpaid recovery *labor* most of the time, leaving them without a voice or representative during official planning

Erman et al. (2020) observed that lower-income households in Mozambique were slower to rebuild because they lacked savings or access to affordable loans. Recovery was not simply about effort but about economic capacity. A few studies further noted that health and disability status worsened inequalities. For example, John (2022) reported that people with chronic illnesses and disabilities were among the last to return to stable housing due to limited mobility and the absence of targeted support in urban recovery programmes. The gendered nature of these challenges is further supported by Namutebi and Kaggwa (2023), who found that women in Kampala face unique barriers to land ownership that complicate their ability to secure post-flood reconstruction loans.

(c) Structural and Infrastructural Factors

In our review, structural and infrastructural conditions were the most widely reported, appearing in ten studies. These factors revolved around housing quality, land tenure, drainage, and access to essential services.

Doberstein and Stager (2012) stated that the informal settlement residents in Venezuela and the Dominican Republic were excluded from formal housing reconstruction. This was because they lacked official tenure documents. Bhanye (2025) similarly explained how insecure tenure made African slums become "non-existent" in the eyes of planners, forcing households to self-recover with limited resources.

In Ghana, Mensah and Simpeh (2022) reported that poorly constructed housing and weak urban drainage systems left residents trapped in a cycle of repeat flooding and delayed recovery. John (2022) pointed to the link between poor building standards and prolonged displacement in Nigerian cities. Services such as water, electricity, and sanitation were also slow to return in informal areas. Erman et al. (2020) showed how delays in service restoration

not only extended hardship but also created public health risks.

Studies like Kita (2017) observed that settlements located on marginal land, such as floodplains, wetlands, and steep slopes, mostly experienced repeated setbacks even after short-term recovery gains.

3.2 Identified Equitable Strategies

The second research question addressed in this study pertains to identifying what strategies have been used by marginalized populations across African cities, and the most frequent strategies reported were inclusive planning and tenure-sensitive reforms.

Our review identified the use of these approaches in eight studies, and they showed the need to formally recognize informal settlements, revise planning frameworks, and secure tenure for households that were traditionally excluded from recovery. John (2022) described how tenure-sensitive guidelines helped ensure displaced communities in Nigerian cities were included in reconstruction plans, while Kita (2017) showed urban upgrading in Dar es Salaam, which combined physical improvements with participatory decision-making. Mendis et al. (2023) drew an inclusion framework designed for marginalized groups. They stress that without policy-level adjustments, community recovery efforts often fall under weak institutional support.

Across the studies reviewed, five studies showed participatory recovery as a pathway to equity. Bhanye (2025) noted the role of community mapping and grassroots committees in ensuring that informal settlement residents could recognize priorities and establish negotiations with authorities. Doberstein and Stager (2012) showed community-driven planning in Latin America, where residents co-designed recovery interventions. Similarly, John (2020) and Mbwana, Ntali, and Ntali (2025) described neighborhood-level mobilizations that improved community voices in making recovery decisions.

While the strength of participatory approaches lies in visibility, as marginalized groups can articulate needs that might otherwise be ignored. However, studies also mentioned their fragility. Without government buy-in, such initiatives often remained at the margins, leaving communities to "self-recover" with limited resources. This raises concerns about whether participatory approaches are being mainstreamed or merely tolerated as temporary fixes.

Our findings also revealed reported strategies in the form of financial protection measures. These included cash transfers, microfinance, savings groups, and insurance schemes aimed at bridging affordability gaps during recovery. Ajibade et al (2013) documented how cash transfers supported vulnerable households in Lagos, while Erman et al. (2020) observed that access to microfinance helped small traders in Mozambique reopen businesses after floods. Ahadzie, Mensah, and Simpeh (2022) showed household savings groups in Ghana, and Sakijege (2024) showed how targeted subsidies reduced recovery delays in Tanzanian settlements.

These interventions appeared to be effective in stabilizing households in the short term but had limitations. Savings groups, for example, were vulnerable to collapse when members were equally affected by flooding. Insurance and credit products were often inaccessible to the poorest groups, reinforcing class-based divides. This implies that while social protection measures can reduce immediate inequities, their long-term impact depends on integration into formal recovery frameworks.

Lastly, we found only one study, Nöthling et al. (2024), that addressed health and psychosocial support explicitly. It stresses the need to integrate mental health services into recovery, highlighting that trauma, stress, and anxiety are invisible but remain strong barriers to rebuilding livelihoods and community life. The near absence of this theme across the reviewed literature shows a major blind spot.

4. Discussion

Our review demonstrated that most of the studies relied on qualitative designs such as case studies, interviews, and policy analyses to explore post-flood recovery. This shows the importance of capturing lived experiences and governance realities that are often missing from official records. These studies offered rich insights into political exclusion, tenure insecurity, and gendered vulnerabilities, but their small scale makes it difficult to simplify findings across cities. By contrast, only a few studies used quantitative surveys, such as Erman et al. (2020) on poverty and recovery in Accra, Sakijege (2024) on

MSME recovery in Dar es Salaam, and Ahadzie et al. (2022) on household repair practices in Ghana. While these provided valuable statistical evidence, they remain underrepresented in the literature. Overall, there were only six mixed-methods studies, which proved effective because they combined qualitative study with measurable patterns.

Table 3: Critical Findings

Objective	Themes	Critical findings
Factors influencing recovery	Governance/Institutional	Weak coordination, political bias, inequitable aid distribution, and exclusion of informal settlements
	Socio-demographic	Gender, class, health, and disability shape unequal recovery; women and poor households recover more slowly.
	Structural/Infrastructure	Insecure tenure, poor housing, weak drainage, delayed service restoration prolong displacement
Equitable strategies	Inclusive planning & policy	Tenure-sensitive frameworks, upgrading, reblocking, and service delivery reforms
	Participatory/community-lec	Community mapping, committees, and co-produced plans increase visibility but are fragile without state support.
	Social protection/financial	Cash transfers, microfinance, and savings groups support livelihoods, but have limited reach for the poorest.
	Health/psychosocial	Mental health support is largely absent in recovery frameworks.

Our review highlighted governance as one of the most consistent determinants of recovery outcomes. On a broad level, several authors stressed that weak coordination, political bias, and the exclusion of informal residents often mattered more when building recovery than the scale of flood damage itself. Ajibade et al. (2013) showed that political support in Lagos is influencing who accessed aid, leaving poorer households and women at the margins. Bhanye (2025) described a similar picture, noting that weak urban governance and legal exclusion limited community-led initiatives, even when they were innovative and well adapted to local conditions. Okunola (2025) added that when frameworks are fragmented, and citizen participation is limited, they slow recovery efforts, as bureaucratic incompetence prevents a coherent response. Smith and Hanson (2003) linked cost-recovery policies and underinvestment in South Africa to procedural inequities and service exclusion, while Kita (2017) observed in Dar es Salaam that resettlement programs were undermined by institutional weaknesses that failed to address underlying risks. Notably, some studies in our review revealed how institutional support helped reduce vulnerabilities. For instance, Doberstein and Stager (2012) documented cases in Latin America where integrating land tenure and housing design into planning reduced vulnerabilities. Overall, it's quite evident that recovery is as much a governance problem as it is a technical one. Without transparent, coordinated, and inclusive institutions, floods amplify inequalities instead of reducing them.

Our review also revealed that socio-demographic characteristics such as gender, class, health, and disability also played a decisive role in shaping recovery outcomes. Ajibade et al. (2013) showed that women in Lagos faced slower recovery because they had limited access to credit, weaker employment security, and little to no voice in planning processes. Bhanye (2025) similarly noted that gendered adaptation practices and livelihood diversification in informal communities were often overlooked by formal institutions, making women's contributions undervalued.

The findings on health and disability further augment vulnerability. John (2022) reported that peri-urban resettled populations with weak social ties and low incomes were highly exposed after floods, while Nöthling et al. (2024) found that trauma, food insecurity, and prior health conditions left households with prolonged distress and anxiety. Erman et al. (2020) added that poverty and lack of income sources slowed recovery amongst the affected individuals, showing that resilience was not simply a matter of individual effort but tied to systemic disadvantage. Mendis et al. (2023) supported this by describing intersectional vulnerabilities, including gender-based violence (GBV) and communication barriers, that further excluded marginalized groups from equitable recovery. Looking from the other side, John (2020)

observed that youth groups were able to mobilize quickly through informal networks, although these gains rarely translated into sustained livelihood recovery. These results provide evidence that recovery outcomes reflect existing social orders. Without deliberate measures to account for gender, disability, and income disparities, floods will continue to widen gaps between privileged and marginalized populations.

Some findings revealed that structural and infrastructural conditions were the most widely reported drivers of recovery outcomes. Most studies found conditions such as insecure land tenure, unsafe housing, poor drainage, and delayed service restoration were repeatedly identified as barriers that prolonged displacement and worsened inequalities. Doberstein and Stager (2012) showed that households living in informal settlements without secure tenure were often excluded from housing reconstruction, leaving them trapped in cycles of vulnerability. Kita (2017) similarly noted that poor drainage systems and weak institutional capacity in Dar es Salaam meant that resettlement programs failed to reduce underlying risks. In Ghana, Ahadzie et al. (2022) observed that recovery was slowed because of the high cost of repairs on damaged structures and also the absence of insurance, while Sakijege et al. (2014) revealed how conditions like waterlogging, tenant desertion, and inadequate flood control infrastructure weakened rental housing recovery. Sakijege et al. (2012) reported that blocked streams and haphazard housing patterns increased both flood risk and disease exposure in the affected settlements in Tanzania. John (2022) added that peri-urban location and high transport costs kept resettled households vulnerable, while Yntiso (2008) showed that loss of income and broken social networks after displacement deepened poverty and slowed livelihood restoration. Together, these studies show that recovery is not only a social or governance issue but also a material one: without safe housing, secure tenure, and functional services, flood-affected households remain locked in repeated cycles of risk and inequitable recovery.

Across the studies reviewed, a range of strategies were identified that aimed to reduce inequities in post-flood recovery. These fell broadly into four classes: (i) inclusive planning and policy reforms, (ii) participatory and community-led approaches, (iii) social protection and financial measures, and (iv) health/psychosocial support. While they demonstrate potential, most were project-based, underfunded, and lacked institutional backing.

Inclusive planning and policy reforms were highlighted in studies such as Doberstein and Stager (2012), Kita (2017), and Mendis et al. (2023). These initiatives included tenure-sensitive reconstruction guidelines, slum upgrading projects, and inclusion frameworks for marginalized groups. Their strength lies in addressing structural exclusion, yet their effectiveness was limited by weak institutional support and poor integration into mainstream policy. John (2022) noted that context-specific resettlement planning could improve livelihoods, but in practice, resettlement often ignores the socio-economic realities.

Participatory and community-led approaches were reported in studies like Bhanye (2025), John (2020), and Mbwana, Ntali, and Ntali (2025). Strategies included community mapping, flood alerts, savings groups, sandbagging, raised platforms, and strengthening of local networks. These were effective in enhancing resilience at the neighborhood level and gave marginalized groups a stronger collective voice (Rodriguez-Gavira et al., 2024). However, they often lacked scalability and collapsed when donor or government support was absent.

Social protection and financial measures featured in Ajibade et al. (2013), Erman et al. (2020), and Ahadzie et al. (2022). These included women-focused programs, financial instruments for poor households, and insurance schemes. Evidence showed they reduced immediate vulnerability and improved recovery for targeted groups, but uptake was restricted by poverty, limited awareness, and systemic exclusion from formal financial systems. Sakijege (2024) further highlighted the importance of business continuity training and leveraging informal networks for MSME recovery, though dependency on informal systems limited sustainability.

Health and psychosocial support was the least represented strategy, mentioned only in studies such as Nöthling et al. (2024). These interventions recognized the trauma and stress caused by displacement and loss, particularly among women. While potentially transformative, such measures were rarely integrated into broader recovery

frameworks and were constrained by scarce resources and a lack of proactive planning.

Overall, while strategies for equity exist across African flood contexts, they remain fragmented, small-scale, and donor-driven. The lack of institutionalization means that gains often vanish after project cycles. Equitable recovery will require not only piloting such approaches but also embedding them within urban governance systems to ensure continuity and scale.

5. Limitations

This scoping review aimed to synthesize the current literature on the factors that influence post-flood recovery outcomes and to identify strategies that promote equitable recovery among marginalized urban populations. However, several limitations were associated. A key limitation of this review is that the search was restricted to a few accessible databases, mainly Google Scholar, Semantic Scholar, and PubMed, due to constraints of time and access. This means that some relevant studies indexed in subscription-based databases such as Scopus and Web of Science may have been missed. In addition, only English-language publications were included, which may have excluded important evidence from francophone or lusophone African countries where flood impacts are equally severe. Another limitation lies in the unevenness of study designs. While qualitative studies dominated and provided valuable depth, the lack of large-scale quantitative evidence limited the ability to compare outcomes across countries or generate equity-sensitive indicators. Finally, as this was a scoping review conducted within a tight timeframe, no formal quality appraisal of studies was carried out, in line with PRISMA-ScR conventions. These limitations do not invalidate the findings but highlight the need for broader, multi-lingual, and methodologically diverse research in the future.

6. Implications for Research, Policy, and Practice

This review shows that several groups, most especially persons with disabilities, the elderly, and children, are almost invisible in post-flood recovery studies. Future research must deliberately include these groups if equity is to be properly understood. Another gap is the short time frame of most studies. Since recovery is a long process, there is a need for longitudinal research that follows households and communities for years, not months. Finally, much of the current evidence comes from case studies or rapid surveys. Stronger mixed methods are required, combining household data with participatory mapping and narratives, so that lived experiences are placed side by side with measurable outcomes.

For governments and institutions, the findings revealed that recovery inequities are systemic, not incidental. This means that those who recover quickly after a flood, who get left behind, aren't just oversights; they are the result of policies and practices that consistently favor some groups over others. Policies that ignore informal residents or fail to address land tenure insecurity only reproduce vulnerability. There is an urgent need for inclusive planning frameworks that formally recognize marginalized communities and allocate resources transparently. Aid distribution must also be with accountability mechanisms to ensure that support reaches those most in need. Moreover, equity principles should not remain in project documents; they must be embedded in national disaster risk reduction and urban resilience policies.

Also, recovery must move beyond emergency relief toward sustained, community-driven solutions. The evidence shows that participatory committees, community mapping, and neighborhood task forces help strengthen local voices, but these need consistent support from local authorities to last. Social protection instruments such as cash transfers, savings groups, and microfinance can reduce immediate inequities, but they should be scaled up and made accessible to the poorest households. A neglected area is health and psychosocial support: the emotional and mental toll of floods remains largely invisible in African recovery practice. Addressing trauma and stress is just as important as rebuilding houses and roads.

7. Conclusion

This scoping review aimed to synthesize the existing literature on the factors that influence post-flood recovery outcomes and to identify strategies that promote equitable recovery among marginalized urban populations. Our review revealed that recovery after floods is never neutral or unbiased. The studies we examined show that outcomes are shaped less by the floods themselves and more by the conditions of the people and systems that face

them. Weak governance, insecure tenure, poor housing, and deep social inequalities continue to decide who recovers quickly and who is left behind. At the same time, the review highlights that fairer recovery is possible. Inclusive planning, community-led efforts, and social protection programs offer real potential to build resilience that reaches those most affected. However, these approaches are often fragmented, short-term, and limited in scale. To move forward, governments and practitioners must commit to recovery processes that are transparent, inclusive, and focused on both physical needs and emotional well-being.

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