

The Political Ecology and Governance of Urban Green Spaces in Nairobi's Informal Settlements

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Valentine Opanga

aus

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Gutachter/Betreuer: Prof. Dr. Detlef Müller-Mahn

Gutachterin: apl. Prof. Dr. Eva Youkhana

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ABSTRACT

This dissertation examines the politics and governance of green spaces in Nairobi's informal settlements, specifically Korogocho and Pumwani-Majengo. The term 'green space' is used in three senses: unbuilt land, community-shaped areas of everyday care, and formally designated ecological reserves. These meanings are explored through three analytical lenses: (i) green space making, (ii) everyday green spaces, and (iii) green space futures. Positioned at the intersection of Urban Political Ecology, Postcolonial Urbanism, and Travelling Models, the thesis treats green spaces as contested terrains where speculative, elite-driven aspirations conflict with local practices of care, survival, and resistance. The dissertation is composed of four connected articles. Article 1 analyses land control dynamics in Korogocho, showing how performative politics and social embeddedness sustain land cartels and exclusionary practices. Article 2 examines Pumwani-Majengo, demonstrating how internal power struggles drive cycles of greening, enclosure, and displacement. Article 3 synthesises both sites, showing how transnational models interact with local power structures and historical injustices, producing uneven urban ecologies. Article 4, drawing on fieldwork in Nairobi and Addis Ababa, develops the concept of 'urban invisibles', highlighting how vulnerabilities and the affective dynamics of research influence knowledge production. The study combines participatory mapping, GIS, transect walks, walking interviews, life histories, 45 semi-structured interviews, six focus groups, archival and policy analysis, and long-term participant observation. A feminist lens runs through the analysis, making visible the gendered, embodied labour that sustains urban nature. Theoretical development is inductive, introducing concepts such as Mtaa (place-based belonging), outlaw greening, and urban invisibles to show how power, ecology, and history are co-produced in processes of exclusion. The dissertation contributes original conceptual tools and empirical evidence that extend debates in Urban Political Ecology and postcolonial urbanism. It argues that governance of urban green space must move beyond technical solutions to engage with power, justice, and local knowledge, offering insights for more inclusive and equitable urban futures.

ZUSAMMENFASSUNG

Diese Dissertation untersucht die Politik und Verwaltung von Grünflächen in den informellen Siedlungen von Nairobi, insbesondere in Korogocho und Pumwani-Majengo. Der Begriff „Grünfläche“ wird in drei Bedeutungen verwendet: unbebautes Land, von der Gemeinschaft gestaltete Bereiche der täglichen Pflege und offiziell ausgewiesene ökologische Schutzgebiete. Diese Bedeutungen werden anhand von drei analytischen Blickwinkeln untersucht: (i) Schaffung von Grünflächen, (ii) alltägliche Grünflächen und (iii) Zukunft von Grünflächen. An der Schnittstelle zwischen urbaner politischer Ökologie, postkolonialem Urbanismus und Reisemodellen betrachtet die Dissertation Grünflächen als umkämpfte Gebiete, in denen spekulative, von Eliten getriebene Bestrebungen mit lokalen Praktiken der Pflege, des Überlebens und des Widerstands in Konflikt stehen. Die Dissertation besteht aus vier miteinander verbundenen Artikeln. Artikel 1 analysiert die Dynamik der Landkontrolle in Korogocho und zeigt, wie performative Politik und soziale Verankerung Landkartelle und ausgrenzende Praktiken aufrechterhalten. Artikel 2 untersucht Pumwani-Majengo und zeigt, wie interne Machtkämpfe Zyklen der Begrünung, Einfriedung und Vertreibung antreiben. Artikel 3 fasst beide Standorte zusammen und zeigt, wie transnationale Modelle mit lokalen Machtstrukturen und historischen Ungerechtigkeiten interagieren und zu ungleichen städtischen Ökosystemen führen. Artikel 4 stützt sich auf Feldforschung in Nairobi und Addis Abeba und entwickelt das Konzept der „urbanen Unsichtbaren“, wobei hervorgehoben wird, wie Vulnerabilitäten und die affektive Dynamik der Forschung die Wissensproduktion beeinflussen. Die Studie kombiniert partizipatives Mapping, GIS, Transektbegehungen, Walking-Interviews, Lebensgeschichten, 45 halbstrukturierte Interviews, sechs Fokusgruppen, Archiv- und Politikanalysen sowie langfristige teilnehmende Beobachtung. Die Analyse wird durch eine feministische Perspektive ergänzt, die die geschlechtsspezifische, verkörperte Arbeit sichtbar macht, die die städtische Natur erhält. Die theoretische Entwicklung ist induktiv und führt Konzepte wie Mtaa (ortsbezogene Zugehörigkeit), Outlaw Greening und urbane Unsichtbare ein, um zu zeigen, wie Macht, Ökologie und Geschichte in Ausgrenzungsprozessen gemeinsam entstehen. Die Dissertation liefert originelle konzeptionelle Werkzeuge und empirische Belege, die die Debatten in der urbanen politischen Ökologie und im postkolonialen Urbanismus erweitern. Sie argumentiert, dass die Verwaltung städtischer Grünflächen über technische Lösungen hinausgehen muss, um sich mit Macht, Gerechtigkeit und lokalem Wissen auseinanderzusetzen, und bietet Einblicke für eine inklusivere und gerechtere städtische Zukunft.

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DEDICATION

To the Almighty God,
Your grace, wisdom, and guidance sustained me throughout this journey.

To Mama — we did it.
Thank you for being my greatest cheerleader,
my constant source of strength,
the quiet heart that carried me here.

To my late dad — we did it.
Your unwavering support still guides my steps,
and the whisper that has kept me going

ABBREVIATIONS

AFR100	African Forest Landscape Restoration Initiative
CBD	Central Business District
CUPE	Critical Urban Political Ecology
EMCA	Environmental Management and Coordination Act
FGD	Focus Group Discussion
FUPE	Feminist Urban Political Ecology
GIS	Geographic Information System.
GoK	Government of Kenya.
KES	Kenyan Shillings
KISIP	Kenya Informal Settlements Improvement Project
KKV	Kazi Kwa Vijana Initiative
KNBS	Kenya National Bureau of Statistics.
KSUP	Korogocho Slum Upgrading Programme
NEMA	National Environment Management Authority
NGO	Non-Governmental Organisation.
NIUPLAN	Nairobi Integrated Urban Development Master Plan
NRC	Nairobi Rivers Commission
PE	Political Ecology.
SDG	Sustainable Development Goal
SLR	Systematic Literature Review
SUPE	Situated Urban Political Ecology.
UNEP	United Nations Environment Programme.
UN-Habitat	United Nations Human Settlements Programme.
UPE	Urban Political Ecology.

PROLOGUE

Along the banks of the Nairobi River, where its waters are now sluggish under the weight of sewage, plastic, and uncollected waste, a green space emerges through perseverance—a patch of unbuilt land shaped by community care rather than formal planning. My fieldwork took place in two phases: from June 2023 to January 2024, and again from June to August 2024. When I first walked this stretch of riverbank in Korogocho in July 2023, I was accompanied by a local assistant and two young men for safety, an arrangement that later became routine due to my perceived vulnerability as an outsider and also a woman in the male-dominated field of green space governance.

In Korogocho, a place often overlooked in formal environmental plans, children play on land once considered uninhabitable, a former dumpsite that has now been transformed into a vibrant field. It is not the state that planted grass here, but residents, youth groups, and elders, women who sweep and water saplings each morning, not as volunteers, but as stewards. As a woman researcher, I was often aware of my partial alignment and distance. While gender opened conversational doors with women caretakers, they were not always central actors in green space governance. This positional tension, between insider empathy and outsider limitation, framed much of my experience.

Just a few metres away, however, the ground tells a different story: demolished homes, ghostly foundations, and shards of domestic life still embedded in the soil. These were flood-hit households that were forcibly removed during the March–April 2024 demolitions carried out in the name of river rehabilitation. The area is now fenced off for a tree-planting initiative. Here, green space, now formally designated for tree planting, emerges not as restoration but as replacement, its creation intertwined with displacement. The river becomes both object and agent of displacement: a weapon of state-led “greening” and a mirror of urban abandonment.

Pumwani-Majengo embodies these tensions. During a reconnaissance in July 2023, I documented the details of a once-public courtyard where children played under the shade of the trees. By July 2024, the space had been quietly enclosed by walls, privatised, and its social function erased. Remnants of formally planned green areas remain, but alongside them, informal green spaces, i.e., carefully tended by residents, youth groups, and children, persist amid neglect and encroachment. After the floods, the church that once hosted our interviews was demolished, along with a row of homes that had long been considered “too close” to the river. However, amid the rubble, a different type of greening persists; youth groups replant saplings in disputed soil, women tend to tree seedlings outside tin and mud houses, and children

play among the ruins. I saw a boy plant a tree seedling where his kitchen used to stand. These moments, quiet, improvised, and full of resolve, reminded me of the stakes involved.

Across both settlements, green spaces are neither merely political infrastructure nor simply decorative remnants. They serve as sites of local ecological politics, shaped through gendered labour, informal negotiations, and hopeful speculation. However, this thesis also considers what it means to document such spaces without reinforcing the very extractivism that fosters mistrust. The ongoing tension between activism and academic neutrality becomes evident, particularly as I observed the tangible aftermath of displacement in Pumwani and Korogocho. In response, I view this work as a form of documentation and a gesture of solidarity with everyday acts of care.

This thesis begins here: with spaces crafted and dismantled in the tension between erasure and care, between top-down environmental strategies and the everyday acts that reimagine what urban nature can be. It also begins with my negotiations, between observer and participant, outsider and ally, documenter and guest.

1. INTRODUCTION

1.1. Background

Globally, urban greening is promoted as a pathway toward sustainable urban development. Nonetheless, its implementation within the Global South, particularly in informal settlements, remains highly debated. Frameworks such as the New Urban Agenda (NUA) emphasise greening as a means to attain sustainability and equity (Croese et al., 2021). However, many large-scale greening initiatives in Africa, such as the Great Green Wall and the African Forest Landscape Restoration Initiative (AFR100), focus primarily on rural landscapes. As a result, urban residents, particularly those in informal settlements, are often excluded from these programmes, even though they may face significant environmental challenges and could benefit from urban-centred greening initiatives (Lehmann, 2010). Even regional strategies, including the African Union's Green Recovery Action Plan (2021–2027), recognise the importance of urban green spaces but fail to address governance issues that enable commodification¹ and exclusion (Opiyo, 2022). In this context, this thesis argues that green space governance in informal settlements cannot be fully understood solely through state actions or inactions but must also consider the everyday processes of negotiation, improvisation, and resistance.

Urban green spaces within cities of the Global South serve concurrently as ecological infrastructures and political arenas (Swyngedouw & Kaika, 2014). They regulate temperature, mitigate flood risks, enhance air quality, and support mental well-being, while also functioning as spaces of survival, collective identity, and memory for communities residing in informal settlements (Mulwa, 2020; Pauleit et al., 2021). In Nairobi, these spaces are particularly contested, where ecological processes, histories of exclusion, and struggles for legitimacy intersect. Academic scholarship emphasises how colonial planning, fragmented governance, market dynamics, and grassroots initiatives collectively produce complex and uneven outcomes across settlements such as Kibera and Mathare (Kimari, 2017; du Toit et al., 2021; Shackleton et al., 2021).

The origins of these inequalities lie in colonial urban planning, which prioritised infrastructure, services, and recreational spaces for European settlers while confining African populations to peripheral, and informal settlements. This historical spatial segregation has had enduring

¹ The process by which land and green spaces are transformed into marketable assets, subject to buying, selling, or speculative control, often enabling elite or private interests to profit while restricting access for low-income or marginalised communities (see Article 1).

effects, shaping access to housing, sanitation, and green spaces in modern cities. The 1948 Nairobi Master Plan formalised this segregation by designating green spaces for European districts such as Westlands, while African areas faced significant under-provisioning (ArchDaily, 2023; Hake, 1977; Myers, 2015). These exclusions carried both symbolic and practical consequences. Maps often depicted areas like Mathare as “green” but reserved these spaces for the elite, despite their subsequent dense settlement (Kimari, 2017; Sverdlik et al., 2025). Naming conventions and local toponyms embedded this history of dispossession into Nairobi’s cultural and political fabric, shaping both perceptions and governance of green spaces.

Consequently, informal settlements currently encounter a dual challenge: insufficient service provision and a legal–administrative framework that favours elite land claims (du Toit et al., 2021). Colonial-era segregation and resource allocation practices continue to influence present governance, enabling elites to seize or privatise communal spaces (Kimari, 2017; Opanga & Guma, forthcoming). The confluence of power and ecology in Nairobi underscores that urban greening initiatives should be regarded not solely as environmental measures but also as matters of spatial and social justice.



Figure 1: A before-and-after picture of a dumpsite in Korogocho²

Source: Fieldwork 2024

² The cleanup was organised by youth from Korogocho, many of whom were reformed criminals reintegrating into society. Their collective efforts, which began earnestly after the COVID-19 pandemic, demonstrate how local initiatives can transform damaged spaces and view urban greening as both an environmental renewal and a means of social reintegration.

In Nairobi’s informal settlements, competing urban planning cultures converge, state-led ecological restoration projects and donor-driven sustainability agendas often clash with grassroots, vernacular practices of survival and care. In Korogocho and Pumwani-Majengo, this tension is evident, as government-driven eviction campaigns and formal greening initiatives collide with community-led mapping, storytelling, and everyday greening practices (Sanyal, 2005; Knieling & Othengrafen, 2009; ARL, 2023).



Figure 2: A Board listing organisations involved in cleaning and greening the Nairobi River³

Source: Fieldwork, July 2023

The lived experiences of residents in Nairobi’s informal settlements highlight the challenges of daily governance. Routine interactions and grassroots initiatives turn abstract policy discussions into real, practical actions. Residents participate in urban farming, tree planting, and river restoration not only for their own survival but also as forms of local resistance and environmental stewardship (Kamjou et al., 2024). Informal networks, such as community-based organisations, religious groups, and ‘land cartels’ play a crucial role in securing access to green spaces.

³ The board features actors such as the national government and the Irish Embassy, symbolising the multiple institutions involved in greening the Nairobi River. Alongside these key actors, NGOs, community- and faith-based organisations, and informal community groups also participate, offering a variety of initiatives, from recycled-plastic paths to benches and trees. However, despite the formation of the Nairobi River Rehabilitation Commission, these efforts remain uncoordinated, reflecting a pattern of “too many organisations, too little space, too little change”.

These micro-politics of everyday life underscore that sustainable urban environments are built on the cumulative actions of individuals and communities striving for greater equity. In this thesis, such actors, i.e. religious leaders, youth groups, community elders, and cartels, emerge as de facto environmental regulators. They control land through fencing, restricting access, and asserting moral or spiritual authority. These performative and non-legislated modes of control illustrate how illegality can function as governance, blurring the line between state and non-state authority and destabilising dominant legal binaries.

Nairobi's rapid urbanisation further complicates green space governance. Between 2000 and 2020, cities in the Global South expanded at a rate up to 3.7 times faster than they densified, resulting in urban sprawl and reduced access to public green spaces (United Nations, 2024). Unlike their counterparts in the Global North, where green infrastructure has become a staple of urban policy, Nairobi's green projects often generate unintended consequences, such as green gentrification, the displacement of low-income residents due to rising property values linked to greening initiatives (Anguelovski, 2023).

Coupled with the fact that over 89% of the sub-Saharan workforce is employed informally (WIEGO, 2019), these dynamics underscore the precariousness of livelihoods in informal settlements and the broader socio-economic vulnerabilities resulting from exclusionary urban planning. While informal employment is prevalent across the region, residents of informal settlements face particular vulnerabilities due to their marginal location, insecure tenure, and limited access to stable employment and essential infrastructure. Their distance from formal employment hubs, combined with poor transportation links and recurrent evictions, intensifies the risks associated with already precarious informal work. These exclusionary effects show how greening, when linked to speculative development, can act as a driver of socio-spatial displacement rather than inclusion.

In this context, speculative development refers to state and private actors viewing riparian and green spaces as future profit sites through real estate projects, infrastructural expansion, or commercial greening schemes. These interventions often prioritise elite and commercial interests, expecting rising land values while displacing low-income residents who cannot legally or financially stake claims to the land. The politics of greening must therefore be understood through its impact on daily livelihoods, not just ecological metrics. Furthermore, the politics of urban greening in Nairobi are characterised by performative strategies, where government rhetoric on sustainability often conceals actions that benefit political and economic elites. Beneath the guise of environmental stewardship, state-led initiatives frequently enable

land grabbing and exclusion, perpetuating legal and structural contradictions that disadvantage residents of informal settlements (Opiyo, 2022).

Contradictory legal frameworks concerning riparian governance and green space conservation further enable speculative development at the expense of marginalised communities. These conflicting legal frameworks, where different laws, regulations, or policies governing urban green spaces clash, often allow speculative development to the detriment of marginalised groups. For example, the Environmental Management and Coordination Act (2006), the Urban Areas and Cities Act (2011), and the Physical and Land Use Planning Act (2019) prescribe buffer zones ranging from 6 to 100 metres, each using different measurement approaches; these inconsistencies create loopholes that enable land grabbing and uneven enforcement, allowing private developers and political elites to appropriate riparian and green spaces at the expense of residents in informal settlements (Odote, 2019; Mensah, 2015; Mwathane, 2020; Muhoza & Zhou, 2024).

These structural inequalities persist in contemporary governance of green spaces. Sub-national greening initiatives often reference concepts such as resilience and sustainability; however, these projects are frequently employed as instruments for land commodification and enhancement of city branding (Opiyo, 2022; Rademacher, 2020). In practice, state resources are disproportionately allocated to wealthier districts, while informal settlements encounter neglect or displacement under the pretext of ecological restoration (Cairns et al., 2022). In scenarios of insecure tenure, communal green spaces are particularly susceptible to commercial conversion, with access managed by intermediaries such as ‘land cartels’ (Opanga & Müller-Mahn, forthcoming; Jimmy, 2024), brokers, or property owners, who exert coercive, patronage-based, or service-based authority (Naibei, 2018; Mulligan et al., 2019).

These shape-shifting, non-state actors operate within hybrid governance frameworks, complicating the distinction between ‘formal’ and ‘informal’ arrangements and demonstrating how authority flows through multiple, occasionally competing, institutions (Opanga & Müller-Mahn, 2025; Jimmy, 2024). Theories of planning cultures offer valuable insights into this hybridity. Planning is not a universal technical procedure but is embedded within specific institutional traditions, cultural norms, and historical legacies (Sanyal, 2005; Knieling & Othengrafen, 2009). In Nairobi, the planning culture amalgamates colonial paradigms of control, order, and racialised exclusion with postcolonial systems of patronage and cartelized land management, resulting in overlapping and contradictory modes of green space governance.

Governance contradictions further complicate the situation. Community-driven greening initiatives often oppose or divert from state-led models. Experiments in co-management, such as community–municipal partnerships for green-blue-grey infrastructure in Kibera, illustrate the potential for more collaborative approaches but are limited by insecure tenure, limited funding, and weak institutional mandates (Mulligan et al., 2019; Shikangalah & Mapani, 2021). Consequently, green spaces become political battlegrounds where legitimacy, scale, and inclusion are continually renegotiated (Naibei, 2018; Cobbinah & Nyame, 2021).

Contradictory legal frameworks serve to intensify this uncertainty. For example, overlapping statutes that regulate riparian reserves and buffer zones- with regulations varying from 6 to 100 metres depending on the jurisdiction- create loopholes that enable private developers and political elites to encroach upon green land at the detriment of residents (Odote, 2019; Mensah, 2015; Mwathane, 2020; Muhoza & Zhou, 2024). These inconsistencies show that environmental greening is often linked to speculative development, where riversides and vacant lands are treated as profit opportunities, frequently displacing low-income communities under the guise of ecological restoration.

Beyond formal projects, the greening activities undertaken by residents constitute a vital yet frequently neglected aspect of urban environmental governance. Women, youth, and elderly individuals participate in planting and maintaining trees, cultivating vegetables, reclaiming dumpsites, and establishing pocket parks- activities that provide food, shade, livelihoods, and psychological reassurance within densely populated communities (Mbatia, 2016; Oja Da Silva, 2023; Opanga, 2025). These activities exemplify vernacular green governance: forms of ecological stewardship rooted in gendered, embodied, and often unseen labour. They operate outside formal state recognition but are essential for sustaining both human and ecological systems. Their exclusion from planning discourse is not merely a matter of omission but an act of epistemic violence⁴, legitimising interventions that displace the very groups whose efforts underpin urban ecosystems (Low et al., 2005).

Community initiatives, such as the Changing Faces Competition, exemplify how neighbourhoods organise to reclaim neglected land and advocate for citizens' rights. Nonetheless, such endeavours also reveal the vulnerability of governance frameworks when

⁴ This occurs when researchers interpret data about “the Other” in ways that portray them as inferior or problematic, despite alternative valid interpretations. In his framework, the researcher is the subject, the marginalised groups are the object, and the act of interpretation becomes scientific knowledge. Because these interpretations are seen as objective, they can misrepresent, distort, or harm the Other by legitimising deficits, exclusion, or discrimination (Teo, 2010).

they rely on transient resources and informal authority (Tehlova, 2020; Naibei, 2018). These activities occur within highly unequal power dynamics. Although residents propose alternative models of stewardship, wealthier neighbourhoods and elite interests often benefit the most from greening initiatives, thereby perpetuating cycles of exclusion (Cairns et al., 2022; Wangui, 2018).

At the same time, the presence of actors such as elders, religious leaders, and youth groups further complicates the governance landscape, demonstrating how illegality can act as a form of environmental regulation. By fencing land, invoking spiritual authority, or applying access restrictions, these actors perform governance roles that blur the line between state and non-state authority (Naibei, 2018). Such dynamics emphasise that urban greening is never just a neutral ecological intervention but is always linked to struggles for power, recognition, and belonging.

These governance and social conflicts continue to shape the city, even amid rapid urbanisation and contested land use. From 2000 to 2020, cities in the Global South grew faster than they densified, causing sprawl and limiting public access to open spaces (United Nations, 2024). Although global and regional frameworks such as the New Urban Agenda, the Great Green Wall, AFR100, and the AU's Green Recovery Action Plan (2021–2027) emphasise greening initiatives, their implementation often prioritises rural landscapes and fails to adequately address the governance challenges faced by informal settlements (Lehmann, 2010; Croese et al., 2021; Opiyo, 2022).

In this policy void, speculative greening associated with real estate development frequently causes displacement, thereby intensifying green gentrification already observable in Nairobi (Anguelovski, 2023). The literature, therefore, indicates that Nairobi's green spaces are often arenas where sustainability goals clash with social equity. Although greening initiatives may bring ecological benefits, they also risk reinforcing environmental injustice, increasing heat vulnerability, and causing displacement (Kabisch & Haase, 2014; Cairns et al., 2022; Anguelovski, 2023).

As a researcher working at the intersection of urban political ecology and postcolonial urbanism, I approach these debates from both an academic and an embedded perspective. My fieldwork experiences in Korogocho and Pumwani-Majengo required negotiating the boundaries between observer and participant, insider and outsider, which influenced not only the data I was able to gather but also how I interpret urban greening politics. This positionality highlights that the knowledge presented here is not neutral but situated, developing through ongoing encounters with communities, institutions, and contested green spaces.

1.2. Problem

Urban green spaces are vital for the health and functionality of cities. They help regulate temperature, enhance biodiversity, support livelihoods, provide spaces for recreation and social interaction, and boost mental and physical health (Fevre & Hassel, 2021; K'akumu & Oyugi, 2016). However, access to quality green spaces in the Global South remains highly unequal. Due to rapid urbanisation, poor governance, and persistent underfunding, the provision, quality, and accessibility of green infrastructure⁵ vary widely across the city (Rossi & Wang, 2020; Myers, 2016). These disparities are not accidental but are deeply rooted in historical contexts. Colonial planning practices assigned well-serviced areas for European settlers, while Africans were confined to peripheral zones with few amenities.

Post-independence urban development and planning have frequently sustained these patterns rather than transforming them. Affluent neighbourhoods continue to enjoy the benefits of well-maintained parks and extensive tree coverage, whereas informal settlements are often characterised by overcrowding and environmental stagnation (Obudho & Aduwo, 1992; Njonjo, 2013; Achola, 2002). This historical legacy has significantly influenced the distribution of land, resources, and ecological assets throughout the city. Contemporary urban greening initiatives frequently perpetuate these inequalities instead of mitigating them. Many such initiatives are driven by neoliberal and neo-colonial objectives focused on city branding and attracting investment. Major parks, waterfront redevelopment, and beautification projects tend to favour elites, investors, and middle-class residents rather than prioritise redistributive, community-driven strategies (Amutabi, 2012; Van Noorloos & Kloosterboer, 2018; Rademacher, 2020).

Behind the rhetoric of sustainability, greening is often entangled with performative politics⁶ that conceal exclusionary land control and elite capture (Rossi & Wang, 2020). In this case, informal green spaces such as street verges, riparian land, vacant plots, railway embankments, or small cultivated patches are frequently overlooked yet vital. Despite uncertain tenure and ambiguous regulation, they provide essential ecosystem services, social spaces, and survival resources (Del Tredici, 2010; Rupprecht & Byrne, 2014). In settlements along rivers, these areas are intensely contested: on one side, they are targets for commodification, eviction, or speculative redevelopment; on the other, they are reclaimed and maintained by residents

⁵ urban natural and semi-natural spaces that provide ecological, social, and recreational benefits while shaping urban life and governance (Rossi & Wang, 2020)

⁶ Symbolic acts, such as demolitions, tree-planting ceremonies, or public anti-corruption displays, project legitimacy while perpetuating informal power structures and uneven governance (Butler, 2010; Rai, 2015)

through gardening, cultivation, and stewardship practices (Tzaninis et al., 2020; Kimari, 2018). These everyday activities show that informal greening is not marginal but central to urban life, although scholarship has often rendered these spaces invisible.

Research on urban green spaces in Nairobi and similar cities has often focused on either state-led initiatives or grassroots resistance, but this body of work faces several limitations. First, although the colonial roots of spatial inequality are well-documented, little research has examined how early greening initiatives explicitly shaped land governance and settlement ecologies, or how these legacies continue to influence access today (Hendriks, 2018; Njeru, 2019). Second, while existing work recognises grassroots environmental practices, the specific ways residents enact, sustain, and contest green spaces through daily life remain under-theorised (Kamau & Njambi, 2021). The analytical focus has frequently been on formal projects or overt resistance movements, overlooking subtle, embodied practices of care and negotiation that form everyday environmental politics.

Third, although urban political ecology emphasises the role of power in shaping cities, the specific mechanisms by which political, economic, and social actors, including land cartels, NGOs, private developers, and municipal authorities, mediate access to green spaces in informal settlements remain poorly understood. Fourth, while the literature notes neoliberal and neo-colonial dynamics in contemporary greening initiatives, the direct connections between colonial-era exclusions and current policies are underexplored, particularly in Nairobi. Lastly, although critiques of exclusionary greening are widespread, fewer studies identify or theorise community-driven, equitable governance models that could serve as practical alternatives to elite-controlled projects.

This dissertation addresses these gaps by highlighting informal green spaces as crucial sites where historical legacies, political dynamics, and everyday practices intersect. It adopts an urban political ecology perspective to show how ecological processes are fundamentally connected to power and inequality, while also engaging with scholarship on informality, feminist, and decolonial perspectives to highlight embodied practices, claims to belonging, and epistemic struggles over visibility. This dissertation combines these viewpoints to demonstrate that urban greening involves more than just top-down initiatives or local resistance. Instead, it reveals how both often intersect in complex and sometimes conflicting ways.

The research focuses on Korogocho and Pumwani-Majengo, two long-established informal settlements in Nairobi. Both feature a range of informal green spaces that are ecologically and socially essential yet fragile. Through case studies, this dissertation examines how colonial

legacies, current governance frameworks, and daily practices collectively influence the development and challenges within urban green spaces in Nairobi's informal settlements. Furthermore, it explores how alternative governance models can facilitate more equitable approaches to urban greening. To investigate these issues, the study considers the following guiding question: How do colonial legacies, everyday practices, and contemporary power relations shape the making, use, and future trajectories of urban green spaces in Nairobi's informal settlements, and what processes of inclusion, exclusion, and community-based governance emerge in this context?

This dissertation makes both theoretical and practical contributions. It combines urban political ecology, informality, and decolonial approaches to show how power, history, and ecology intersect in everyday urban life. Practically, it highlights alternative models of urban greening that avoid recreating past inequalities and instead promote more inclusive and community-driven solutions. In doing so, the study redefines informal green spaces as essential to understanding the politics of urban sustainability in Nairobi and beyond.

This study is therefore vital because it fills three important gaps in current research. First, it reveals the colonial and postcolonial legacies of urban greening in Nairobi, showing how historical exclusions still influence modern governance. Second, it emphasises daily practices of care, repair, and survival, particularly those performed by women, youth, and marginalised groups, which remain under-theorised within urban political ecology. Third, it develops emerging conceptual tools- vernacular governance, outlaw greening, and urban invisibles- that help scholars and policymakers better understand the hybrid, informal, and contested processes shaping green space governance in African cities today.

1.3. Objectives and Research Questions

This dissertation explores the politics and governance of green spaces within Nairobi's informal settlements of Korogocho and Pumwani-Majengo, using three analytical perspectives: (i) green space creation, (ii) everyday green spaces, and (iii) green space futures. These perspectives aim to capture the full range of temporal, spatial, and social dynamics of green spaces in Nairobi's informal settlements. Each angle examines a different aspect of urban greening while together highlighting the interaction of power, history, and community agency. The dissertation presents green spaces as active sites of urban green-making, where residents claim land, memory, and belonging. It analyses how colonial legacies, daily practices, and modern power relations influence the creation, use, and future directions of urban green spaces in Nairobi's informal

settlements, with a focus on processes of inclusion, exclusion, and community-led governance (see Table 1). Specifically, the thesis investigates the following questions:

i. Green space making

This theme focuses on the historical and structural production of green spaces. It seeks to answer the questions:

- How did colonial planning and early municipal and private greening initiatives produce the spatial inequities that structure current green-space access in Korogocho and Pumwani-Majengo?
- How have market intermediaries, brokers, cartels, landlords, developers, and state actors historically shaped the material and legal forms of green-space enclosure and commodification?

These questions investigate the relationship between greening initiatives and land commodification, displacement, and urban inequality. They establish the groundwork for the dissertation by demonstrating that green spaces are frequently utilised to reorganise urban space in a manner that benefits elite and speculative interests. The development of green spaces, especially in Pumwani-Majengo and Korogocho, exemplifies how both governmental and non-governmental entities strategically employ environmental rhetoric to legitimise exclusionary land policies.

ii. Everyday Green spaces

This perspective focuses on residents' daily practices and informal governance. It seeks to answer the following questions:

- How do residents enact, sustain and contest green spaces through everyday practices, cultivation, repair, ritual, youth action, and how are these practices gendered and generationally differentiated?
- What roles do hybrid governance arrangements and informal intermediaries play in mediating access, maintenance and conflict over green spaces today?

These questions analyse how marginalised actors challenge or redefine urban nature through embodied practices, cultural traditions, and informal institutions. They emphasise vernacular green governance, as well as the informal, gendered, and often relational labour that sustains green spaces under precarious conditions. Throughout the articles, this inquiry illustrates that environmental stewardship is practised not solely via organised activism but also through daily acts of care and survival, which are frequently rendered invisible within policy discourse.

iii. *Green Space Futures*

This perspective examines the contemporary and aspirational aspects of urban greening. It aims to address the following questions:

- How do contemporary policy and donor-driven greening projects translate on the ground, and what mechanisms produce inclusion versus displacement?
- What aspirational ecologies and governance models do residents imagine, and how might feminist/decolonial frameworks reconfigure futures toward pro-poor, anti-displacement outcomes?

These questions examine how urban nature imaginaries, policy translation across scales, and environmental justice struggles intersect in green space creation, use, and future in Nairobi’s informal settlements. They analyse the evolution of green space governance, influenced by historical and current power structures. The study also considers how informal authorities like land cartels, religious groups, and elites affect land and resource access, reflecting or challenging state policies. Additionally, it explores aspirational ecologies: future visions rooted in faith, culture, and resistance. Overall, these questions frame green futures as political imaginaries, advocating for equitable, co-produced governance based on feminist urban political ecology.

Table 1: Summary of Research Questions and Conceptual Linkages

Research Question	Core Themes	Key Theoretical Links	Empirical Case Studies	Thematic Area
1. How did colonial planning and early municipal and private greening initiatives produce the spatial inequities that structure current green-space access in Korogocho and Pumwani-Majengo?	Colonial planning, segregation, land commodification, elite-driven greening	Postcolonial Urbanism, Land Governance, Urban Political Ecology	Nairobi Master Plan (1948), Korogocho (land cartels), Pumwani–Majengo (Socioeconomic enclaves)	Green Space Making (Past & Ongoing Production)
2. How do residents enact, sustain and contest green spaces through everyday practices, cultivation, repair, ritual, youth action, and how are these practices gendered and	Informal governance, grassroots resistance, community stewardship	Feminist Urban Political Ecology, Environmental and Social Justice	Urban farming, riparian gardening, river restoration, vernacular green practices	Everyday Green Spaces (Present Practices)

generationally differentiated?				
3. How do contemporary policy and donor-driven greening projects translate on the ground, and what mechanisms produce inclusion versus displacement?	Power, governance, informal land markets, green gentrification	Urban Political Ecology, Performative Politics	Elite-led flagship parks, municipal interventions, informal governance networks	Green Space Futures (Policy & Politics)
4. How do historical and colonial legacies continue to influence contemporary green-space access and governance?	Colonial continuities, segregationist governance, legal pluralism	Postcolonial Urbanism, Legal Pluralism	Conflicting riparian laws, historical green-space plans, contested mapping practices	Green Space Futures (Historical Continuities)
5. What aspirational ecologies and governance models do residents imagine, and how might feminist/decolonial frameworks reconfigure futures toward pro-poor, anti-displacement outcomes?	Co-governance, participatory approaches, feminist perspectives	Co-Production, Inclusive Sustainability, Feminist Urban Political Ecology	Community co-management, urban agriculture initiatives, alternative land-use policies	Green Space Futures (Imaginations & Alternatives)

Source: Author, 2025

2. CONCEPTUAL FRAMEWORK

2.1. Developing the Conceptual Framework

This section outlines the development of a conceptual framework to analyse Nairobi's green space politics, tracing its construction from thematic focus and literature review through theoretical grounding and broader debates. To construct a framework for analysing green space politics in Nairobi's informal settlements (see Fig. 3; Table 2), I began by identifying the central focus: understanding how green spaces are produced, how they are negotiated and used in everyday life, and how they are imagined for the future. From this, three thematic strands were defined: green space making, everyday green spaces, and green space futures.

The literature review positioned the research within broader academic discussions on urban ecology, governance, and postcolonial urbanism. It revealed colonial legacies in spatial inequalities, emphasised the role of community practices, and considered global planning influences, while also identifying gaps, particularly the limited attention to gender and future-oriented perspectives.

Starting from this foundation, theoretical frameworks were carefully chosen to guide the investigation. It employs Urban Political Ecology and its variants, i.e., Feminist, Situated, and Critical UPE; Postcolonial Urbanism; and Travelling Models to examine power, history, gender, and global influences. Together, these frameworks offer a multidimensional perspective: UPE for governance and power; Postcolonial Urbanism for colonial legacies; Feminist UPE for gendered experiences; and Travelling Models for the transfer and adaptation of global planning ideas. The analysis is grounded in a detailed review of the provided literature, ensuring a thorough exploration of the development process.

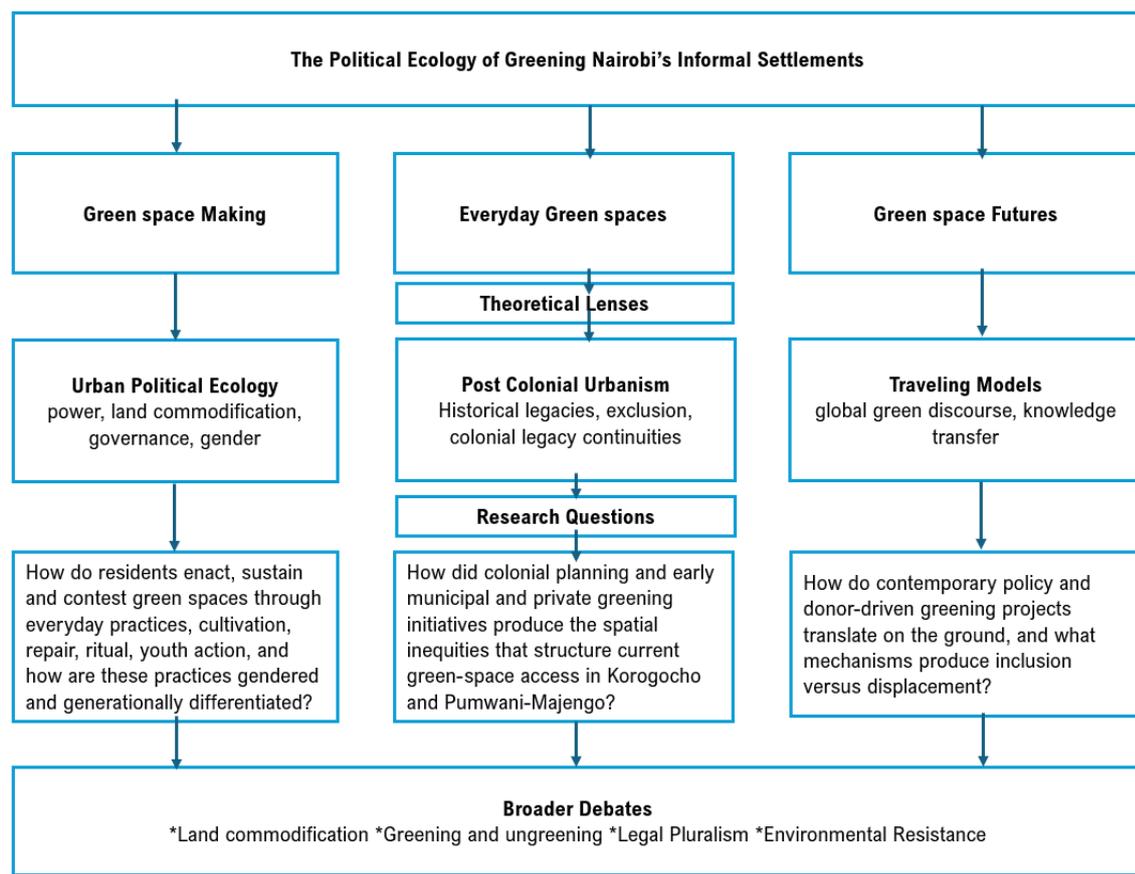


Figure 3: Researching Green Spaces in Nairobi's Informal Settlements

Source: Author, 2025

The next step involved defining key concepts and thematic strands to ensure alignment with the theoretical frameworks. Each strand represented a dimension of urban green space politics: creation and management, everyday practices and interactions, and projections and challenges for the future. Based on this structure, research questions were developed to explore historical, political, social, and global aspects. Five guiding questions were crafted; each explicitly linked to both a thematic strand and a theoretical framework. To promote coherence, relationships between concepts were mapped, illustrating how strands and theories interconnect. This mapping highlighted how colonial histories, power dynamics, gender inequalities, and global influences converge in shaping Nairobi's green spaces.

Finally, the framework was embedded within broader global debates on land commodification, legal pluralism, and environmental resistance,⁷ linking Nairobi's case to larger issues in urban political ecology and urbanism in the global South. It was then refined and validated through

⁷ Actions and practices through which residents, communities, or groups challenge, negotiate, or undermine environmental policies, interventions, or land governance structures that threaten their access to resources, livelihoods, or spaces, often seeking to assert claims to land, rights, and ecological justice..

feedback from supervisors and peers, with modifications made for clarity, coherence, and practicality. The design remained adaptable, allowing for detailed focus within individual papers while maintaining an overarching structure. As a result, the framework became highly contextualised, grounded in theory, and methodologically flexible, enabling it to address the contested politics of Nairobi’s urban green spaces.

Table 2: Steps in developing the conceptual framework for Governance of green space in Nairobi’s informal settlements

Step	Description	Key Output
1. Identifying Research Focus	Defined the problem: green space politics in Nairobi, including creation, use, and future prospects	Three thematic strands: green space making, everyday green spaces, green space futures
2. Conducting Literature Review	Reviewed studies on urban ecology, governance, colonial legacies, everyday practices, and planning models	Key themes and identification of gaps (e.g., gender, future-oriented research)
3. Selecting Theoretical Frameworks	Chose frameworks to capture different dimensions of green space politics	UPE, Postcolonial Urbanism, FUPE, Travelling Models
4. Defining Key Concepts & Themes	Linked concepts to structure research	Three thematic strands aligned with theories
5. Formulating Research Questions	Developed specific questions tied to strands and theories	Five guiding research questions
6. Mapping Out Relationships	Showed interconnections between strands, frameworks, and questions	Coherent structure linking theories and themes
7. Situating Within Broader Debates	Connected Nairobi’s case to global discussions	Debates on land commodification, legal pluralism, environmental resistance
8. Refining & Validating	Shared with peers/supervisors, revised for clarity and coherence	Finalised, flexible conceptual framework

Source: Author, 2025

Taken together, these strands form a common thread that runs through the dissertation: from the historical creation of inequality (green space making), through the everyday practices of care and governance (everyday green spaces), to future visions that are both aspirational and contested (green space futures). This connection is vital for ensuring that each chapter not only stands alone but also contributes to a clear, cumulative argument about the politics of urban greening in Nairobi’s informal settlements.

2.2. The Conceptual Model

As Figure 4 illustrates, the conceptual framework for this dissertation is organised around interlinked concepts that ground the analysis of green space politics in Nairobi’s informal settlements. At its centre is *Mtaa*, the Swahili term for ‘neighbourhood’, which residents of Korogocho and Pumwani–Majengo use to name and claim space in defiance of externally imposed labels such as ‘slum’ or ‘informal settlement’. Whereas these categories connote illegality, disorder, and absence, *Mtaa* emphasises community, care, and continuity (Chulek, 2020; Thieme, 2024). Naming space in this way is itself a political act; an everyday refusal of erasure and an assertion of belonging.

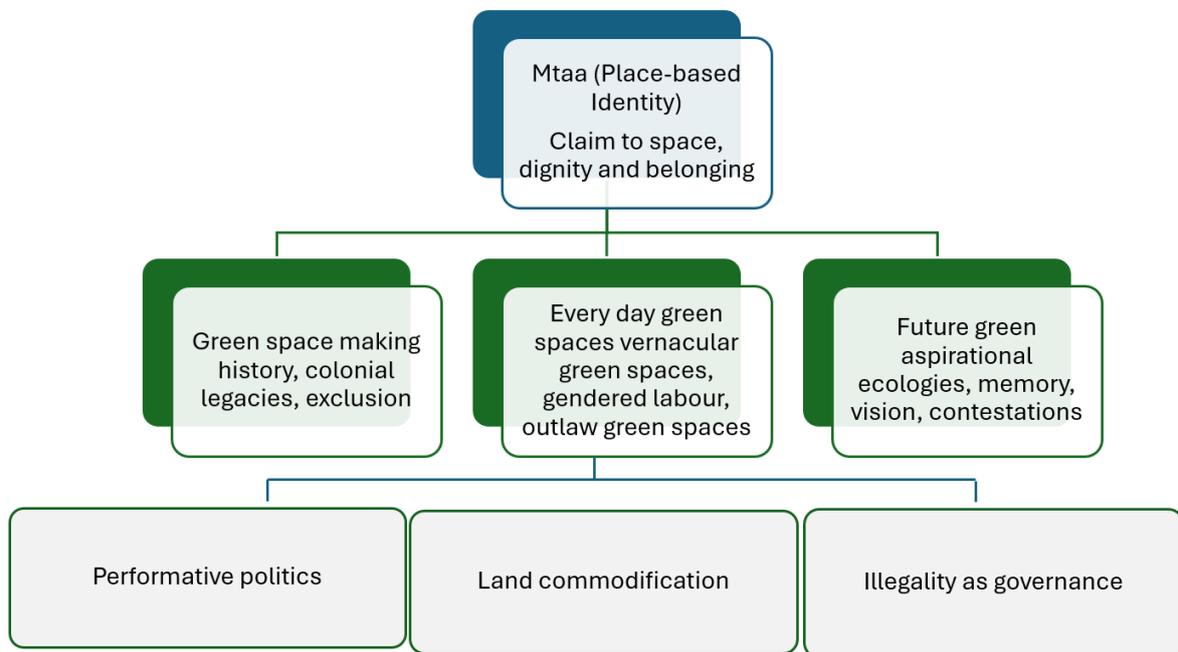


Figure 4: Concepts for Urban Greening in Nairobi’s Informal Settlements

Source: Author, 2025

From this anchor, the thesis develops the concept of *infrastructures of belonging*, encompassing the social, spatial, and affective arrangements through which residents sustain life, provide care, and claim urban membership. These infrastructures are both material, e.g., water tanks, compost sites, alley gardens, and relational e.g., mutual aid, spiritual support, informal leadership. Green spaces, often precarious or outlawed, form integral parts of these infrastructures as sites of memory, refuge, and politics.

Article 1 traces how *Mtaa* and *infrastructures of belonging* underpin everyday greening practices, while Article 2 conceptualises *vernacular governance*: locally embedded, community-driven regulation of green space. Following Simone’s (2004) idea of *people as*

infrastructure, vernacular governance highlights the ways residents create systems of care and order where formal institutions are absent, often through the everyday labour of women and elders (Nightingale, 2011). Building on Kimari's (2022) work, Article 3 develops the idea of *outlaw green spaces*, sites criminalised by planning regimes yet vital to residents' ecological survival and futures. These outlaw spaces exemplify Nairobi's paradoxical governance: illegality is not absence but an alternative mode of rule, managed through *hybrid governance* arrangements that entangle elders, NGOs, religious leaders, cartels, and state actors (Meagher, 2012; Kimari, 2022).

At the same time, these practices demonstrate the *vernacularisation of global greening norms* (Schroeder, 2021), where international agendas such as AFR100 and NIUPLAN are selectively reinterpreted in everyday practice. This results in contested interactions with *green urbanism* (Anzilotti & Appavoo, 2025; Lehmann, 2010), a concept capturing top-down sustainability initiatives, for example, riparian restoration, tree planting, and park development that are mediated by national politics, global investment, and local land markets. In informal settlements, green urbanism often becomes a means for land commodification, displacement, and the reproduction of colonial legacies of spatial inequality (Myers, 2021).

Within this process, *urban greening*, the creation or restoration of parks, riparian zones, and gardens, becomes deeply political. While promoted as a universal environmental good, it frequently benefits affluent districts while marginalising settlements through selective enforcement, appropriation, and *green gentrification* (Anguelovski et al., 2023). In Nairobi, green gentrification is shaped by tenure insecurity and rapid urbanisation, producing displacement through projects that claim ecological improvement but entrench inequality (Anguelovski, 2016).

Article 2 further examines the role of land cartels, socially embedded networks of brokers, chiefs, politicians, and youth groups that establish control over land. These actors exploit regulatory ambiguity to act as *de facto* service providers and gatekeepers, often through coercion, corruption, and hybrid practices (Huchzermeyer, 2011; Klopp, 2000). Their authority is based on social embeddedness, longstanding ties of residency, community recognition, and institutionalised legitimacy, which enables them to operate both as protectors and exploiters (Wahome 2022; Rigon, 2016).

The state's relationship with these cartels is mediated through *performative politics*: symbolic actions such as demolitions, tree-planting ceremonies, or public denunciations of corruption that project legitimacy while masking systemic failures. These performances sustain the illusion

of order without dismantling entrenched informal power structures, thereby reproducing illegality and uneven governance (Butler, 2010; Rai, 2015). The concept of *urban invisibles* (Oranga, 2022) draws attention to the populations rendered unseen by planning discourses, state mapping, and academic categories. Informal residents are often erased institutionally, spatially, and epistemically, yet resist invisibilisation through collective strategies such as community gardens, mutual aid, and informal networks. Feminist methodologies are crucial here to visibilise their agency, histories, and everyday practices, shifting the focus from absence to presence in urban transformation (Elwood & Lawson, 2017).

Finally, the framework situates these practices within *Urban Political Ecology (UPE)*, and its variants of CUPE, SUPE and FUPE, which views Nairobi's green space politics as shaped by uneven development, power, and socio-ecological conflict (Heynen et al., 2006). CUPE helps reframe *informality* as a constitutive governance modality characterised by hybridity, shadow markets, and embeddedness (Roy, 2005; McFarlane, 2012). Informality here is understood as a continuum, sustaining everyday urban life while enabling accumulation and dispossession. Together, these concepts constitute the analytical scaffolding of this dissertation. They situate Nairobi's contested green spaces within broader debates on urban political ecology, postcolonial urbanism, and feminist approaches to urban life, while providing methodological and theoretical tools to account for both material exclusions and epistemic erasures.

2.3. Theoretical framework

This thesis builds its foundation on the Political Ecology (PE) theory, which offers the fundamental framework for the dissertation by situating environmental change and urban greening within contexts of power, property, and political economy; it shifts focus to who benefits and who loses from greening initiatives, how environmental policies redistribute value, and how ecological interventions can reinforce social inequalities (Robbins, 2012). Building on PE, Urban Political Ecology (UPE) and its critical variants, including Critical UPE (CUPE) and Situated UPE (SUPE), locate these conflicts within the city's socio-ecological metabolism, where infrastructure, capital flows, and state practices jointly shape uneven ecological relations. CUPE highlights the macroeconomic drivers of accumulation and the integration of greening into land markets and speculative value chains (Heynen et al., 2006; Roy, 2005).

SUPE addresses Northern bias by emphasising the specifics of the Global South, fragmented governance, layered informality, customary authorities, and hybrid institutional arrangements, explaining why standard technocratic greening models often fail in Nairobi's informal settlements (Lawhon et al., 2014; Monte-Mór, 2007). Postcolonial Urbanism contextualises

contemporary green urbanism by exploring how colonial zoning, buffer zones, and aestheticised greens created spatial hierarchies that still influence current planning and dispossession. In this view, riparian restorations and park developments often reproduce colonial spatial logics that favour wealthier districts while making dispossession seem technical or apolitical. Feminist Urban Political Ecology (FUPE) offers a crucial micro-analytic correction: it focuses on gendered and embodied labour, care practices, and everyday infrastructure for survival, illustrating how these practices are rendered invisible by technocratic greening (Nightingale, 2011; Elmhirst, 2015). Together, FUPE and SUPE highlight the everyday, gendered labour through which Mtaa and infrastructures of belonging are maintained, and they reveal how greening policies differentially impact women and other marginalised groups.

The Travelling Models or Travelling Concepts perspective explains how international sustainability frameworks, such as SDG 11, AFR100, and NIUPLAN, are circulated as packaged policies and metrics. These are then reinterpreted, adapted, resisted, or appropriated within specific political economies. This framework is essential for tracing how global greening agendas are translated into local initiatives that may seem compliant but, in reality, enable land commodification, selective enforcement, or ‘green grabbing.’ Complementing these perspectives, performative politics emphasises the role of spectacle, such as tree-planting ceremonies, prominent demolitions, digitisation initiatives, and media events, in creating a rhetoric of legitimacy, even without substantial redistributive change (Butler, 2010; Rai, 2015). These performative acts thus sustain hybrid governance arrangements, where state actors, non-governmental organisations, cartels, and local elites collaboratively produce outcomes that often conceal dispossession.

The integration of these elements results in a practice-oriented, multi-scalar analytical toolkit rooted in Mtaa and infrastructures of belonging. At the macro level, CUPE illustrates how capital, tenure insecurity, and speculative land markets transform greening into a mechanism for accumulation and exclusion. At the meso level, SUPE and Postcolonial Urbanism provide contextualization of governance contradictions and colonial continuities that influence perceptions of what constitutes an urban area. At the micro level, FUPE demonstrates how gendered care labour not only sustains urban ecologies but also functions as a site for resistance. Travelling Models investigates the translation of global agendas into local political economies, while Performative Politics interprets symbolic productions that legitimise contested interventions. The pairing of macro and micro perspectives facilitates the avoidance of two prevalent analytical errors: reducing everyday agency solely to structural determinism and

disconnecting micro-practices from the broader political-economic processes that enable dispossession.

The framework corresponds to the four articles as follows. Article 1 emphasises CUPE and Performative Politics to explain how land cartels function as hybrid governance actors and how state spectacle masks deeper informal power. Article 2 relies on SUPE, FUPE, and Travelling Models to explore how global green initiatives are adapted locally and how gendered care practices challenge dispossession. Article 3 employs Postcolonial Urbanism alongside CUPE and Travelling Models to historicise green gentrification and trace policy developments from global plans to local displacement. Article 4 draws on FUPE and situated reflexivity to justify embodied, “dirty” methods that reveal invisible labour, emotions, and epistemic exclusions. These mappings make the framework practice-oriented: CUPE addresses tenure, capital flows, and cartels; FUPE guides coding, life histories, and attention to care labour; SUPE and Postcolonial perspectives historicise dispossession; and Travelling Models follow policy translation.

Integrating Critical, Situated, and Feminist Urban Political Ecology with Postcolonial Urbanism and Travelling Models, this dissertation presents a perspective that is uncommon in contemporary scholarship. The distinctiveness of this methodology resides in its incorporation of embodied, gendered everyday practices within broader debates surrounding land, power, and policy. Concepts such as infrastructures of belonging, vernacular governance, and outlaw greening are introduced here not solely as analytical instruments but also as contributions to the rethinking of how urban green spaces are conceived, contested, and envisioned in the Global South.

3. METHODOLOGY, CASE STUDIES AND POSITIONALITY

3.1. Study Area

Geographical Area

Nairobi's green-space policy landscape can be most effectively understood through three interconnected facts: a limited and shrinking resource base, significant spatial inequality in access, and a fragmented governance structure that prioritises environmental investments for accumulation rather than collective well-being. The city covers approximately 69,610 hectares and, according to county estimates, had around 4.9 million residents in 2018; more recent demographic data indicate that Nairobi's population ranged between 4.4 and 5.3 million in the early 2020s, highlighting the rapid demographic pressure on urban ecosystems (CGN, 2018; World Bank, 2023; OECD, 2020).

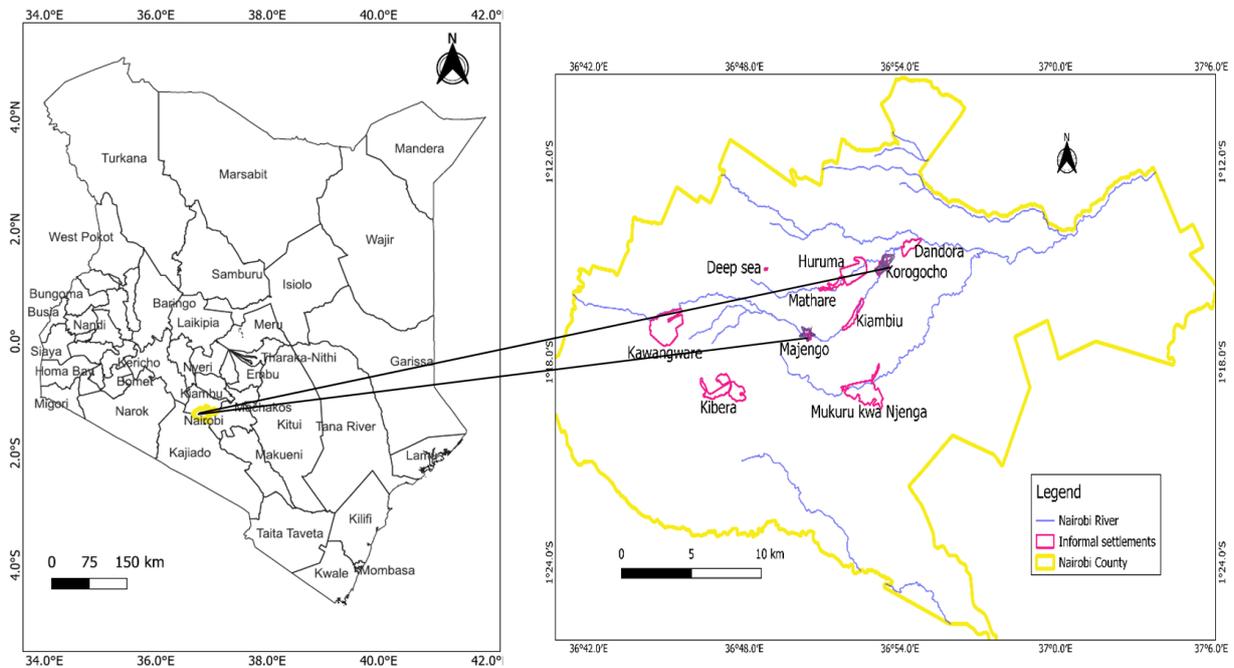


Figure 5: Map of Nairobi showing Informal settlements along the Nairobi River

Source: Author, 2024

The inventory of designated open spaces maintained by UN-Habitat provides a valuable baseline for current extents: several hundred to a few thousand hectares designated as urban forests, nature reserves, parks, playgrounds, rights-of-way, and other open areas (UN-Habitat, 2020). Nevertheless, these figures conceal two critical issues: per-capita green space remains significantly below international benchmarks (approximately 1.9 m² per individual in Nairobi compared to the WHO standard of 9 m²), and the distribution of green spaces throughout the city exhibits considerable disparities (Goro & Mwasi, 2018; WHO, 2019).

Affluent suburban neighbourhoods such as Karen and Muthaiga possess substantial green coverage, exceeding 30%. In contrast, informal settlements, including Kibera, Mathare, and Korogocho, feature less than 5% green cover and are afflicted by severe overcrowding (Nairobi City County, 2021; Bournibini, 2015; K’Akumu & Oyugi, 2007). This spatial inequality has deep-rooted historical and political origins. Colonial zoning policies and post-independence urban planning established spatial hierarchies that concentrated green infrastructure within wealthy districts, marginalising informal settlements both in land allocation and service provision; these legacies influence current patterns of benefitting from greening initiatives and displacement caused by them (Miraza, 2017; Monte-Mór, 2017).

Nairobi’s loss of green spaces is uneven over time and concentrated in specific areas; the map below displays the net change in vegetative cover across the city from 1988 to 2016 (See Figure 6), highlighting hotspots of land conversion, especially along riparian corridors and peri-urban fringes, where settlement growth and land reclassification are most prominent (Miraza, 2017; UN-Habitat, 2020). From the 1980s to the 2000s, Nairobi experienced a significant net decline in urban green cover, mainly driven by housing demand, informal land conversions, and infrastructural expansion (Miraza, 2017). Recent years show a contested intensification of these processes: although official greening initiatives and conservation discussions have increased, they are often carried out through methods that promote land commodification, reclassify riparian buffers, transform parks into marketable amenities, or facilitate private encroachment under the guise of formal restoration (Myers; Ridolfi et al., 2017).

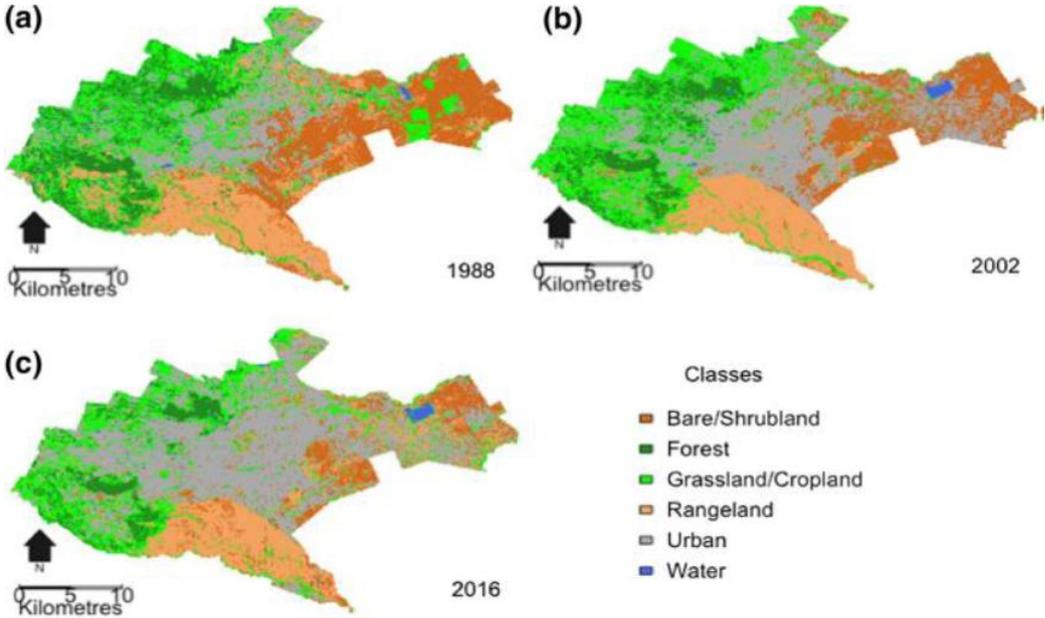


Figure 6: Changes in green spaces in Nairobi (1988-2016)
 Source: Miraza, 2017

The governance environment amplifies these ecological pressures. Multiple, overlapping statutes and institutions, from the Physical and Land Use Planning Act (2019) to the Environmental Management and Coordination Act (EMCA, 2016), coexist with weak enforcement, unclear jurisdictional boundaries between national and county levels, and incomplete documentation of public green assets. This institutional fragmentation creates opportunities for informal actors and private interests to seize green space: informal land markets and cartels increasingly facilitate transactions in riparian and peri-urban areas, while developers and politically connected actors bypass environmental safeguards (National Land Commission, 2022; Opanga & Müller-Mahn, forthcoming). The outcome is selective upgrading: projects described as “restoration” or “clean-ups” can serve as tools for dispossession, restrict access for low-income communities, and enable green gentrification (Anguelovski et al., 2023).

The human consequences are profound; widespread tenure insecurity affects many residents, as only a minority in informal settlements possess official land rights. Consequently, conservation or redevelopment initiatives often pose eviction risks rather than protections (GoK, 2021). In 2024, directives from the cabinet and security measures to clear riparian zones along the Nairobi River resulted in the displacement of tens of thousands of residents inhabiting valley buffers; humanitarian organisations and community federations expressed concerns regarding inadequate relocation plans and compensation, emphasising that restoration efforts can cause immediate social harm if not coupled with secure resettlement and livelihood strategies (Muungano wa Wanavijiji, 2024).

Concurrently, arguments founded on biodiversity preservation and public goods are compromised when iconic reserves and protected areas suffer from private encroachment and land loss. For instance, Nairobi National Park has experienced a considerable reduction in size to facilitate development and infrastructure projects (Kenya Wildlife Service, 2023).



Figure 7: Waste from the Dandora dumpsite floating on sections of the Nairobi River

Source: Fieldwork, 2024

Green-space governance perpetuates wider inequalities: Nairobi contributes a substantial share of national GDP, yet wealth and access to environmental amenities remain highly concentrated (Kenya Economic Report, 2022). Private gated parks and fee-based green facilities further divide access, effectively excluding poorer residents even where green land exists. Informal settlement economies, where unemployment and precarity are prevalent, depend on small plots, riparian cultivation, and shared commons for subsistence; when these spaces are formalised, fenced, or transformed, the immediate beneficiaries are often developers and wealthier residents rather than those displaced.

Therefore, Nairobi's green-space governance operates at the crossroads of ecological scarcity, historical spatial injustice, and modern political-economic challenges. Tackling this issue requires integrated, equity-driven policy measures that combine ecological restoration with tenure security, participatory planning, and safeguards against capture by private and informal elites. Otherwise, the city's remaining green assets will continue to function as sites of displacement rather than as resources for urban resilience and justice (UN-Habitat, 2020; Goro & Mwasi, 2018; National Land Commission, 2022; Muungano wa Wanavijiji, 2024).

Case studies

While Nairobi's rapid urban transformation and widening socio-economic disparities characterise the city as a whole, the informal settlements of Korogocho and Pumwani-Majengo exemplify these dynamics in concentrated form. Both are intricately connected to the Nairobi River and demonstrate how land tenure insecurity, displacement, and contested governance influence the politics of urban greening. Their selection as case studies is deliberate: they reveal

broader contradictions within Nairobi’s development narrative, where sustainability initiatives and growth are pursued alongside exclusion and environmental injustice (See Table 3).

Korogocho, established between 1972 and 1978 following mass demolitions of other informal settlements, is now home to more than 400,000 people within just 1.5 km² (Population Matters, 2024). The settlement is densely populated, service-poor, and adjacent to the Dandora dumpsite, which pollutes both land and riverine ecologies (see Figure 7). Despite such challenges, Korogocho sustains fragmented but active community-led greening practices: riverbank gardens, reclaimed verges, and erosion-control initiatives. These interventions are precarious, constantly threatened by encroaching housing and unstable land tenure, and mediated through hybrid governance in which community elders and cartel-like networks negotiate claims to land and space. The result is a highly adaptive but conflictual greening landscape (see Figure 8).

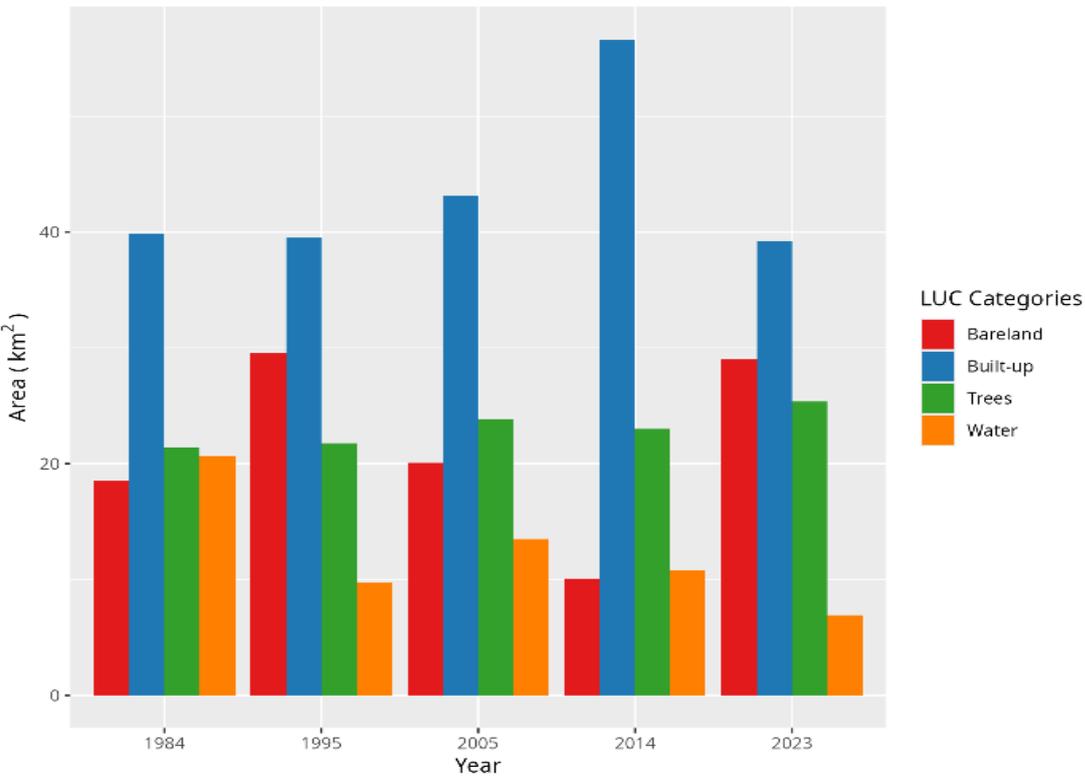


Figure 8: Graphs showing changes in Green Spaces in Korogocho

Source: Author, 2025

Pumwani-Majengo, in contrast, was established in 1924 under colonial administration to accommodate migrant labourers, including Somali communities. With approximately 43,000 residents (KNBS, 2019), it is situated near the Central Business District, rendering its land particularly vulnerable to commercial speculation and government-supported redevelopment. Traditionally characterised by green courtyards, mosque compounds, and institutional grounds, Pumwani-Majengo has experienced increasing enclosure, paving, or privatisation of these

areas. While trees and landscaped spaces still exist, communal access has progressively diminished as local greening initiatives are replaced by more formalised, exclusionary infrastructures (see Figure 9).

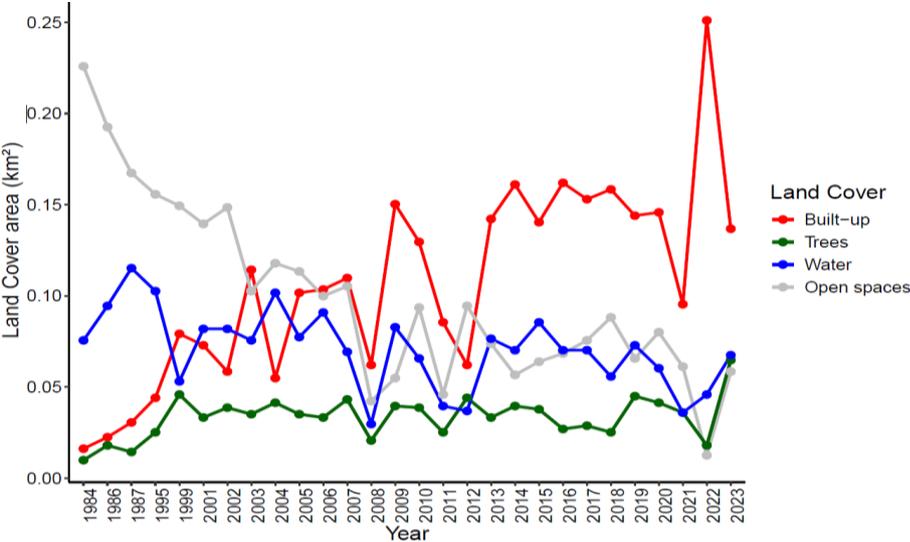


Figure 9: Graph showing changes in Green Spaces in Pumwani-Majengo⁸

Source: Author, 2025

Table 3 summarises these dynamics, illustrating Korogocho’s irregular, informally managed green spaces and Pumwani-Majengo’s hybrid yet increasingly privatised ones (Mgele, 2014; Odhengo et al., 2024; Fieldwork, 2023-2024). Together, they reveal how local ecologies of power, access, and imagination generate contrasting greening trajectories: Korogocho’s survivalist practices of care and collective memory, versus Pumwani-Majengo’s aesthetic, institutionalised greening that masks deeper inequalities. These divergent spatial forms emphasise the dissertation’s core claim that green space governance must be understood relationally, attentive to both informal negotiations and formal enclosures that determine who benefits, who is displaced, and whose futures are envisioned in Nairobi’s “green” urbanism.

Table 3: Summary of Green Space dynamics of Korogocho and Pumwani-Majengo

Aspect	Korogocho	Pumwani-Majengo
Spatial Form	Irregular, clustered plots	Grid-like, formalised parcels

⁸ The long-term trend is clear, with approximately 76% reduction in green cover, while built-up areas increase from about 5.2% to 41.4%, as shown in the results section of Article 2. However, short-term fluctuations in the built-up area reflect a mix of actual, episodic events such as clearance or demolition before redevelopment, market fires, policy-driven evictions, and riparian clearances. These are used to distinguish permanent conversion from temporary dips in built cover; field evidence links many mapped changes to remittance-driven redevelopment and selective enforcement that accelerate land commodification and displacement.

Green Space Gains	Informal plantings, reclaimed verges	Tree cover in institutional plots
Green Space Losses	Riverbanks and open commons	Enclosure of formerly public courtyards
Greening Agents	Community, informal networks	Religious groups, NGOs, local authority
Access	Mostly open but precarious	Increasingly privatized
Governance	Cartel-led, hybrid negotiations	Formalising, institutional influence

Source: Fieldwork, 2024; Mgele, 2014; Odhengo et al, 2024; Opanga, 2025

These contrasting spatial patterns support the dissertation’s central argument that green space governance must be viewed relationally, grounded in specific local ecologies of power, access, and imagination. They also highlight two approaches to greening: one driven by survival, care, and collective memory; and another that follows formal, often aesthetic, principles that can obscure deeper inequalities.

3.2. Research Design

The methodological design of this dissertation reflects both the complexity of Nairobi’s green space politics and the limitations of current approaches. While many studies on African urban greening rely on remote sensing, policy analysis, or household surveys, these methods often overlook the informal, embodied, and relational practices that sustain daily ecologies. Combining participatory mapping, transect walks, semi-structured interviews, life histories, focus groups, and long-term ethnographic engagement ensured that invisible, gendered, and marginalised practices are brought to light. This approach is therefore not only suitable but essential for producing a credible and inclusive account of green space governance.

The thesis used a qualitative, mixed-methods case-study design centred on the middle segment of the Nairobi River corridor and two purposively selected sites: Korogocho and Pumwani–Majengo. Research was structured around three key themes: green space making, everyday green spaces and green space futures. It employed a comparative, mixed-methods case study within a constructivist/interpretivist framework. Two deliberately selected sites, Korogocho and Pumwani–Majengo, provided contrasting yet complementary contexts concerning informal governance, tenure insecurity, and greening policies. The comparison of these sites enhanced understanding by emphasising both recurring patterns and distinctive local dynamics (Yin, 1994; Stake, 1995; Given, 2008). The empirical investigation was concentrated on the Nairobi River corridor, which is subdivided into source, middle, and mouth segments. The middle

segment was examined in detail owing to its heightened urban pressure, governance issues, and restoration initiatives.

Regarding methodology, the research design incorporated three primary approaches. Firstly, ethnographic and participatory fieldwork documented daily practices and spatial claims through semi-structured interviews, participant observation, walking interviews, transect walks, storytelling sessions, participatory mapping, and network mapping of intermediary actors. Secondly, critical policy analysis and discourse examination employed process-tracing of key policy and project events, close reading of legislation and regulatory instruments, and systematic media analysis to determine the timing, rhetoric, and performative aspects of greening interventions. Thirdly, spatial and quasi-quantitative analyses combined Landsat time-series data (1984–2023) and GIS overlays to map land-cover change, household surveys to assess distributional impacts and perceptions, where causal inference regarding displacement or rent effects was necessary; such estimates were always interpreted in conjunction with qualitative process evaluation.

Data collection and analysis were iterative and designed for triangulation: qualitative findings, thematically coded and validated with local research assistants and through member-checking, were cross-verified with photographic, participatory map, and archival evidence. These were then spatially examined in relation to GIS change layers to test hypotheses- such as whether mapped vegetation loss coincided with eviction events or policy directives. Process-tracing connected policy events to observed land-cover and livelihood outcomes. The mixed-methods approach ensured that statistical estimates were contextualised with ethnographic detail to avoid over-claiming causality. Detailed procedures- comprising coding cycles, software, and co-coding protocols- are detailed in the Data Analysis section.

Ethical and reflexive practices remained central throughout the research process: informed consent, both written and oral, trauma-sensitive interviewing, anonymisation, encrypted data storage, interpreter validation, co-coding, and community feedback informed both the development of research instruments and analysis. The comparative, longitudinal design aimed to produce contextually grounded, empirically robust explanations of how urban greening was implemented, contested, and resulted in varied outcomes related to access, enclosure, and displacement along the Nairobi River corridor.

3.3. Sampling and Data Collection Methods

This study employed a qualitative case study approach to examine the socio-political dynamics, environmental justice concerns, and processes of green-space appropriation in informal

settlements in Nairobi. Fieldwork was conducted during two extended visits (August 2023–January 2024; June–August 2024), using adaptive and iterative sampling strategies that responded to emerging insights and changing field conditions (O’Reilly, 2009). A total of forty-five semi-structured interviews were carried out with residents, displaced persons, community leaders, government officials, land professionals, and private sector representatives.

This research adopted a mixed-methods framework and made explicit the ethical, positional, and access decisions that shaped engagement with sensitive material in a politically tense environment. Semi-structured interviews followed a topic guide organised around governance and tenure, everyday uses and meanings of green space, eviction and adaptation narratives, and perceptions of land claims. Each section was mapped to research questions and supported by flexible probes, enabling unanticipated issues to surface. Data analysis involved thematic coding aligned with UPE themes and iterative revision of instruments in response to field learning.

To gather a broad range of perspectives, purposive and snowball sampling (Given, 2008) were used to include residents, displaced persons, cartel actors, government officials, NGOs, and activists. Sampling entry points included tenant associations, youth groups, mosque and school committees, local CBOs, and prior urban research contacts to create multiple, independent routes into the field and reduce gatekeeper bias.

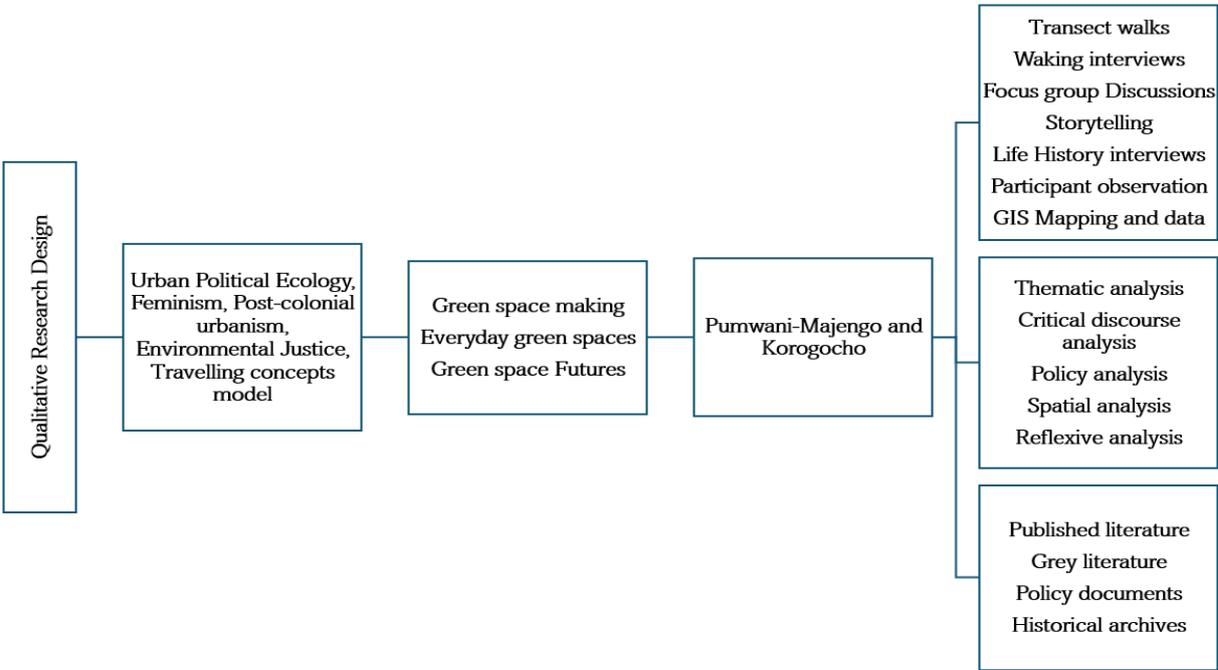


Figure 10: Methodological Framework for Urban Greening in Nairobi’s Informal Settlements
 Source: Author, 2025

Fieldwork combined primary and secondary data. Secondary sources included policy documents, historic newspaper archives, journal articles, books, and grey literature (including NGO and unpublished reports). These were systematically catalogued in a project library for textual analysis and included legislative instruments such as EMCA, NIUPLAN, the Water Act, and the Physical & Land Use Planning Act, as well as government reports and organisational statements on the 2024 riparian directives. The research was conducted in two main phases.

During the exploratory phase (June 2023), transect walks were undertaken to gain in-depth insights into the spatial dynamics of green spaces along the Nairobi River. Accompanied by local youth, these walks enabled an immersive understanding of how green spaces were utilised, contested, and perceived. Key features of the landscape, such as areas of environmental degradation, restored sections, land use patterns, and community-managed green spaces, were identified and discussed. In total, eight transect walks were completed (four per site); maps produced in the field were later digitised and georeferenced to enable spatial linkage with GIS layers and interview references.

Table 4: Summary of Data Sources and Timelines

Data Type	Source / Context	Location	Quantity	Time Frame
Semi-structured interviews	Residents, community leaders, cartels, NGOs	Korogocho, Pumwani-Majengo	45 Interviews (25 women, 20 men)	2023 -2024
Storytelling sessions	Group and individual narrative workshops	Korogocho (3), Pumwani (2)	5 sessions	2023-2024
Transect walks	Accompanied by residents or elders	Both settlements	8 walks (4 per site)	2023-2024
Participatory mapping	Community-generated spatial knowledge	Korogocho, Pumwani	4 maps (2 per site)	2024
Field diary entries	Reflexive researcher notes	All sites	~ 200 pages	2023-2024

Source: Fieldwork, 2023-2024

During transect walks, maps were created from visual and oral data (see Figure 11). Community members marked landmarks, contested zones, and environmentally significant sites, producing collective visual depictions of their connection with the river. These maps proved valuable for understanding how power, exclusion, and access to green spaces are spatially distributed. Features from these maps were later cross-referenced with interview transcripts and GPS waypoints to support place-based triangulation of narratives and spatial change.

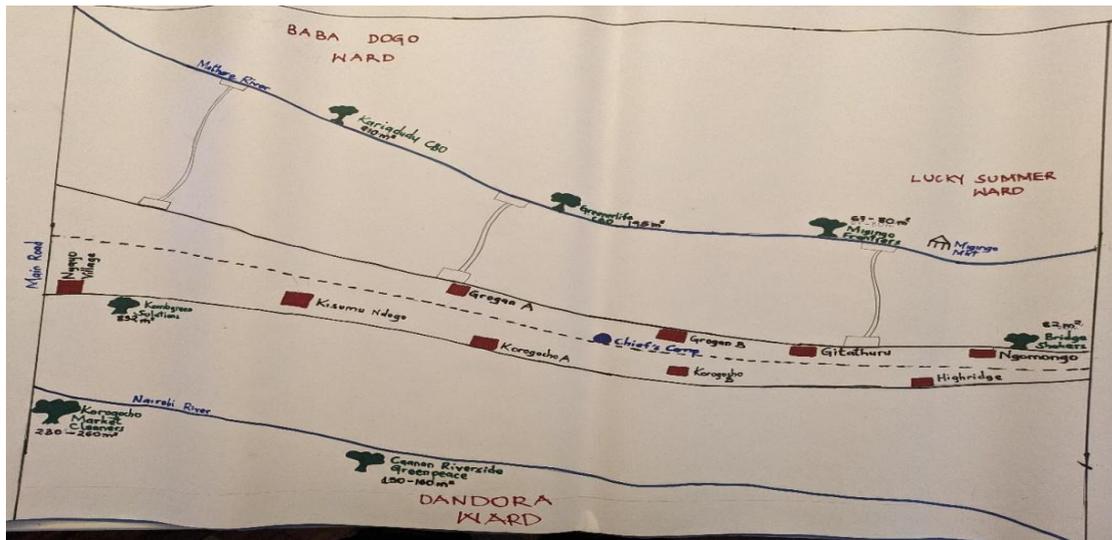
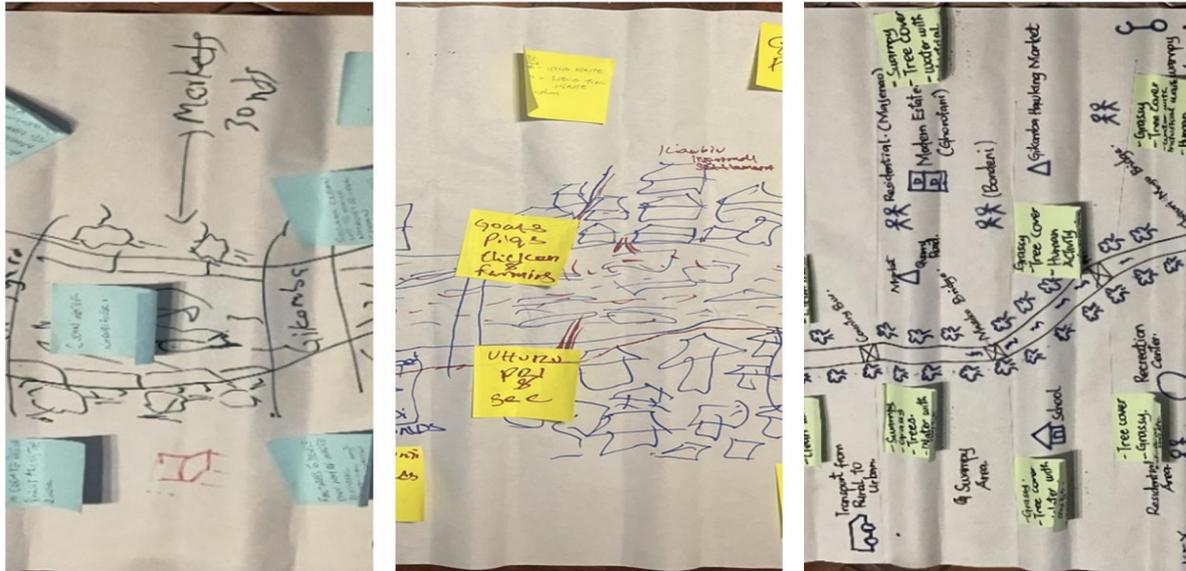


Figure 11: Transect map produced during our transect walk along the Nairobi River in Korogocho

Source: Valentine and Korogocho community members

The data-gathering phase also included walking interviews, in-depth interviews, photographic documentation, and participant observation of eviction protests, community greening initiatives, and informal land transactions. This was complemented by grey literature reviews, community meetings, and five storytelling sessions. Storytelling allowed participants to share historical memories, current realities, and aspirations for the river’s future, offering deeper insights into local environmental knowledge and contested spaces (Slingerland et al., 2021). These outputs were transcribed, thematically coded, and linked to mapped locations and photographic records.



i) The Past (Planned) ii) The Present (Chaotic) iii) The future (Aspirations for greener Pumwani-Majengo)



Figure 12: Visualisation of the Nairobi River – Pasts, Presents and Futures

Source: Valentine and Pumwani-Majengo community members

Preliminary findings were returned to the field during member-checking sessions and refined through dialogue with participants. A co-produced “community voices” document was created and shared locally as part of reciprocal dissemination. Over 10 months, forty-five semi-structured interviews were carried out, complemented by six focus groups and six life-history interviews that offered long-term narratives from those directly affected by displacement. Reflexive diaries, totalling over 200 pages of field notes, were kept, and parts of the corpus were co-coded with local research assistants to uncover meanings embedded in Sheng and other idioms, reducing translation bias.

To complement these qualitative methods, spatial analysis was conducted using GIS mapping and remote sensing techniques. Landsat imagery from 1984–2023 was processed via Google

Earth Engine, with ground-truthing from field observations and participatory maps. Supervised classification routines were refined iteratively, and multi-seasonal time slices were created to enhance detection of persistent vegetation loss. All spatial outputs were integrated with coded qualitative themes (e.g., eviction, dispossession, vernacular greening) to identify where policy events aligned with observed land-cover change. Policy and media analysis, including reviews of EMCA, NIUPLAN, and the Water Act, further highlighted the legal ambiguities and selective enforcement practices underpinning patterns of land appropriation.

3.4. Data Analysis

To establish a comprehensive, multi-scalar account of urban greening and land contestation, the thesis employed a combination of complementary qualitative, visual, and spatial methodologies. Qualitative data were systematically coded and analysed using Atlas.ti, guided by a codebook derived deductively from the research questions- namely governance, tenure, greening practices, and eviction narratives- and subsequently expanded inductively through open coding to encapsulate emergent phenomena such as vernacular greening, affective atmospheres, performative clean-ups, and cartel negotiations (See Table 5).

Table 5: Analytical Themes Used in Coding

Theme	Definition
Vernacular Greening	Informal, local strategies of planting, watering, or maintaining green spaces
Invisibilization	Erasure of community labor, especially women’s work, from policy or planning
Hybrid Governance	Overlapping or competing claims to authority over space or resources
Affective Atmospheres	Emotions, embodied responses, and sensory experiences tied to green spaces
Performative Politics	Actions taken by actors to symbolically demonstrate environmental legitimacy
Speculative Ecologies	Future-oriented imaginaries of environmental and urban life by residents

Source: Author, 2025

The primary analytical themes (refer to Table 5), including vernacular greening, invisibilisation, hybrid governance, affective atmospheres, performative politics, and speculative ecologies, directed focused and axial coding procedures that explored the interrelationships among practices, actors, and outcomes (Tracy, 2018). Portions of the corpus were co-coded in

collaboration with local research assistants to verify colloquial language renderings and mitigate cultural or translation biases; these co-coding sessions produced memos that were integrated into the analytic record.

A narrative analysis of life histories traced trajectories of residence, dispossession, and adaptation, focusing on chronology, turning points, and moral logics that shape testimonies (Symon, Cassell, & Maitlis, 2012). Discourse analysis of policy texts, government statements, and media reports identified rhetorical devices such as “clean-up,” “restoration,” and “public good,” and aligned policy events with field timelines, notably the April–May 2024 riparian directives and related Cabinet and Public Security orders. The combination of narrative and discourse approaches highlighted disjunctions between rhetorical frames and lived experiences and demonstrated how language can legitimise spatial intervention (Jacobs, 2006).

Visual data from transect walks, community events, and eviction episodes were catalogued, coded, and utilised to corroborate textual assertions (Rose, 2014). Photographic sequences documented embodied labour- such as attendance at greening tasks- material interventions like paving, fencing, and tree planting, as well as performative events including official clean-ups and protests. Selected images were employed in member-checking workshops to solicit participant feedback regarding interpretation.

Spatial analysis linked coded qualitative data to GIS outputs, enabling targeted integrated investigations: examining polygons of vegetation loss in relation to interview codes concerning eviction or land sales; mapping instances of “performative clean-ups” from media reports and relating them to subsequent changes in vegetative cover; and triangulating timelines of policy announcements, such as the 30 April 2024 Cabinet directive and the Public Security Orders of 2 and 4 May 2024, with mapped land-cover changes. Participatory maps and transect sketches were digitised, georeferenced where possible, and connected to interview references and GPS waypoints, allowing the interpretation of spatial patterns alongside local testimonies (Åkerblad, Seppänen-Järvelä, & Haapakoski, 2020).

All audio recordings were transcribed verbatim; interviews conducted in Kiswahili or local slang were translated into English with the assistance of local research aides, and original-language extracts were retained in analytic memos to preserve nuance. Transcripts, field notes, photographic files, participatory maps, and policy documents were systematically stored within a version-controlled project library according to an established document management protocol. These materials were anonymised prior to being imported into Atlas.ti. Sensitive data were stored securely in encrypted repositories in accordance with ethical approval.

Methodological validation was ensured through co-coding, interpreter validation, and member-checking procedures.

Collectively, these methodologies have culminated in a highly integrated dataset whereby thematic coding, narrative and discourse analysis, visual corroboration, and spatial querying mutually inform one another's interpretations. This comprehensive approach interlinks policy rhetoric, hybrid governance practices, and local ecological transformations, thereby facilitating the formulation of contextualised statements concerning mtaa, platforms of belonging, vernacular governance, and unauthorised green spaces. (Tracy, 2018; Symon et al., 2012; Rose, 2014; Åkerblad et al., 2020; Jacobs, 2006)

3.5. Positionality, Reflexivity and Ethics

My identity, location, knowledge, and experiences as a researcher inevitably influence how I undertook fieldwork and interpreted findings (Ayala, 2012). Research in contexts of deep inequality is never neutral; it is rooted in complex power relations where researchers hold symbolic power through knowledge creation (Ackerly & True, 2008). Working in Korogocho and Pumwani-Majengo, this dynamic was intensified by the stark asymmetries of privilege between me and the participants. Occasionally, these disparities were made explicit: in Kisumu Ndogo village, Korogocho, residents sometimes called me “*Boss yangu*”, “my boss”, a term laden with assumptions of financial authority and access to opportunities. Such moments highlighted that my presence was never seen as neutral; it was relational, shaped by expectations, and embedded in broader struggles over visibility.

To address these positional tensions, I used reflexive memos and notes on positionality during the coding process. Co-coding sessions with local research assistants helped clarify when Sheng or idiomatic Swahili conveyed layered meanings. Member-checking workshops with residents further refined initial interpretations and corrected spatial or linguistic misunderstandings. Ethical measures, such as oral and written consent, trauma-informed interviewing, anonymity, and encrypted storage, were essential but not sufficient on their own. Most importantly, fostering reciprocity through the co-production of a “community voices” report, shared locally, served both as validation and as an ethical counterbalance to extractive research practices (Bührs et al., 2024; Lawhon et al., 2018).

Even with these safeguards, fieldwork uncovered the fragility of trust and the widespread fatigue related to research. In Mashimoni, Majengo, several participants anticipated my questions with rehearsed responses, while others, sometimes known as “professional workshop attendees,” approached focus groups with transactional expectations. WhatsApp conversations

persisted well beyond the interviews, blurring the boundaries between researcher and resource provider, and raising uncomfortable questions about where research ended and obligation began. These blurred boundaries showed that research was not an outside activity but part of the political economy of visibility: participants actively influenced what was shared, withheld, or staged.

A striking moment in Mashimoni illustrated this dynamic. A resident gestured toward a small courtyard garden behind a school and described it as “*nafasi yetu*”, literally “our space.” Translated plainly, it could mean “our plot” or “our opportunity.” However, local assistants explained its deeper connotations: the garden was simultaneously a food source, a tenure claim, and a collective assertion of dignity and belonging. Without that interpretive guidance, I would have risked flattening a dense political claim into a mere economic descriptor, losing sight of how language itself resists invisibilisation.

Such encounters demonstrated how “friendship-as-method” became both empowering and intricate. Building trust through youth leaders, elders, tenant associations, and NGOs allowed access to sensitive stories of displacement and resistance, but these same connections also entangled me in rivalries and local politics, requiring constant reflexivity. As Nagar (2014) argues in her call for “situated solidarities,” collaborative research demands relational ethics and accountability amid unsettled conditions. My approach reflects this stance but also highlights the analytical importance of messiness itself, echoing Routledge’s (2002) reflections on the emotional complexities of alliance-building.

These entanglements are directly related to the fundamental arguments of Article 4 concerning urban invisibles. Fieldwork conducted in Korogocho’s Kisumu Ndogo and Pumwani-Majengo’s Mashimoni demonstrated how residents are systematically erased across institutional, spatial, and epistemic dimensions. Nevertheless, they resist this invisibilization through idioms, place-making activities, and performative acts of naming. Recognising the influence of my positionality on both what was articulated and its interpretation was crucial to prevent the reproduction of erasures within the analysis. Consequently, reflexivity served as a vital method to perceive everyday negotiations of power as central to the governance of green spaces in Nairobi.

Ultimately, positionality is a key element of responsible research. My fieldwork in Korogocho and Pumwani-Majengo took place in complex, emotionally charged, and ethically difficult circumstances, which require acknowledgement rather than concealment. This thesis explores the complexities of fieldwork as a valuable source of insight into invisibilities, exclusions, and

resistances central to Nairobi's green-space politics by incorporating reflexivity, reciprocity, and situated solidarity into the research process.

These methodological choices enhance credibility by triangulating various types of evidence while emphasising ethical accountability. Cross-checking spatial data with narratives, observing practices alongside policies, and sharing initial findings with community participants for feedback, the research diminishes risks of bias and misrepresentation. Additionally, reflexivity about my own positionality, especially as a woman researcher navigating authority and vulnerability, acknowledges that power relations influence knowledge production but is also enriched by them.

3.6. Research Limitations

The research phase faced several interconnected methodological and practical constraints that affected data collection, analysis, and interpretation. These limitations are clearly outlined below, with specific examples from fieldwork. The role of the interpreter is thoroughly described, including possible biases each constraint could create and the strategies used to reduce their impact. The source materials consulted were deliberately varied; however, they were inevitably limited by language barriers. These sources included academic articles and monographs, mainly in English, as well as municipal and national planning documents, and environmental impact assessments, in English.

Non-governmental organisations and donor reports, as well as project briefs, are mainly in English, with some summaries in Kiswahili, alongside local community notices and meeting minutes, often in Kiswahili and occasionally in Sheng. Furthermore, there are newspaper articles and online blogs, in English and Kiswahili, along with archival colonial maps and planning documents (in English). Materials in less common regional languages, internal community records not transcribed into English or Kiswahili, and any francophone donor reports circulating solely within specific bureaucratic channels remain systematically inaccessible. As a result, written perspectives in those languages are probably under-represented in this thesis.

Access to the field and gatekeepers imposed secondary practical constraints. Entry to Korogocho and Pumwani–Majengo necessitated negotiations with youth leaders and established community organisations; these gatekeepers were essential for ensuring safety and facilitating participant recruitment. However, their mediation occasionally introduced bias into the sample. For example, youth leaders initially organised multiple focus groups primarily comprising their peer networks and members of local savings groups. These groups actively

discussed community gardening initiatives and anti-eviction campaigns, providing valuable insights into organised grassroots actions.

Nonetheless, this approach risked overrepresenting networked and activist perspectives while underrepresenting older residents, transient labourers, or households avoiding public forums. To mitigate this ‘gatekeeper bias’, I intentionally supplemented gatekeeper-assisted recruitment with purposive sampling targeting underrepresented groups, including elders, recent arrivals, and precarious tenants. Additionally, I employed snowball sampling that bypassed the initial gatekeepers and carried out follow-up interviews identified through health clinics and informal markets.

Language and slang have influenced the evidence in ways that warrant explicit attention. The settlements exhibit linguistic adaptability: Kiswahili, English, Sheng (an urban slang mixing Kiswahili, English, and local lexical items), and multiple native languages are actively in use. Slang and culturally loaded terms frequently condense intricate social meanings into a single phrase; for instance, residents commonly referred to the Nairobi River as “*Ruii*,” used the expression “*isikuwe kipindi tu*” as a performative declaration, loosely translated for analytical purposes “not merely for show”, and named a narrow riparian plot a “*shamba ya mitaani*”, literally a “street farm”, a phrase that, in practical terms, connotes livelihood, customary land use, and an informal assertion of space. Furthermore, interlocutors consistently rejected the external label “slum” and insisted on the term “*mtaa*,” which carries moral, social, and governance connotations that surpass the neutral English term “neighbourhood.”

These instances illustrate how literal translation can reduce nuanced political assertions and daily moral economies into overly simplified categories. Consequently, the role of the interpreter extended well beyond mere word-for-word translation: the professional interpreter employed was proficient in Kiswahili, Sheng, and English, and was attentive to local idiomatic expressions, while community research assistants facilitated additional languages as required. Interpreters identified register shifts, recognised idiomatic or performative expressions for subsequent analysis, and supported back-translation validation. All interviews were audio-recorded with informed consent; original Kiswahili and Sheng excerpts were documented in analytical memos, and interpreter translations were systematically compared to original transcripts during transcription review and member-checking with a subset of participants.

Notwithstanding these measures, translation and mediation processes may introduce biases into the findings in predictable ways. Idiomatic expressions, irony, and performative speech acts are often diminished in translation, which can lead to an underrepresentation of contestation or

humour that conveys social critique. The selection of translation approaches by interpreters, whether literal or contextual, may also influence emphasis, for example, translating “mtaa” merely as “neighbourhood” rather than as a politicised assertion, thereby modifying the interpretive framework.

Moreover, reliance on interpreters or assistants introduces the potential for inadvertent framing by intermediaries. Such biases could result in the thesis portraying accounts as more consensual or depoliticised than they truly are, understating the emotional labour associated with green spaces, or overlooking subtle forms of resistance embedded in slang. To address these issues, I triangulated interview data with participant observation, community documents, NGO reports, and photographic records; retained original language excerpts within the dataset; conducted interpreter validation sessions in which translations were discussed and revised; and employed member-checking for key analytical claims whenever feasible.

Additional constraints further shaped the scope of my observations. The political volatility between June and August 2024 made in-person fieldwork intermittently unsafe; consequently, on days when travel was considered inadvisable, I conducted telephone interviews. While remote interviews allowed for continuity, they generally produced shorter, less richly contextualised responses and offered limited opportunities to observe embodied practices such as gardening routines, informal market exchanges, or the spatial logic of alleys. Therefore, data collected via telephone is regarded as supplementary rather than equivalent to in-person data.

Furthermore, safety and environmental hazards such as riparian encroachments, proximity to dumpsites, and unstable structures also hindered prolonged observation of the most hazardous or legally contested green spaces. As a result, I relied on participant-guided, brief visits to hazardous sites, supplemented by accounts from NGO personnel who more regularly navigated these areas. This limitation may lead to the under-documentation of the most precarious green spaces and an underestimation of the health and safety trade-offs faced by residents.

Community dynamics introduced additional sources of bias. Many residents exhibited signs of research fatigue due to repeated studies within their neighbourhoods, and the presence of eight professional workshop attendees who charge fees at public events complicated group interactions. Responses in such settings were sometimes rehearsed, performative, or financially motivated. These dynamics might lead to response bias by exaggerating narratives that align with donor-friendly templates or by amplifying the voices of those earning income from facilitation. To mitigate these effects, I used mixed methods, including individual interviews, small focus groups, and extended participant observation, cross-checked public statements with

private interviews, documented the presence and role of paid facilitators, and explicitly triangulated self-reported achievements with observable indicators.

Finally, the rise in digital communications, such as WhatsApp groups, SMS threads, and social media posts, expanded the dataset but also increased complexity. These channels recorded real-time disputes, announcements, and mobilisations that held analytical value, though they also raised concerns about consent and representativeness. Unsolicited digital material was regarded solely as contextual evidence, with messages included in the dataset only when explicit consent was obtained. Otherwise, digital traces served as prompts for follow-up interviews rather than standalone evidence. This cautious approach reduces the risk of including private messages without permission; however, it also leads to a less complete picture of fleeting, rapidly changing interactions.

These limitations plausibly bias the findings towards more networked, visible, and organised perspectives, and away from the most isolated or hazard-exposed residents. They also risk reducing idiomatic and performative content in translated interviews and underestimating forms of informal coercion when participants fear reprisals. Where possible, I triangulated across data types, retained original-language material, validated translations, targeted under-represented groups in follow-up sampling, and documented the influence of gatekeepers and facilitators in field notes and analytic memos. This reflexive account locates it: it makes explicit how language, access, safety, and institutional fragmentation have shaped the evidence base and how those realities have been addressed in analysis. This transparency enables a more cautious and contextualised interpretation of the findings, and it foregrounds the limits within which claims about Mtaa, infrastructures of belonging, vernacular governance, and outlaw green spaces are made.

4. THESIS STRUCTURE

The thesis is structured as a series of interlinked Articles, each functioning as an individual research paper that contributes to the overall narrative on urban greening, land governance, and exclusion in Nairobi's informal settlements and beyond. The work begins with an introductory section that sets the stage for the inquiry, outlining the research objectives, theoretical frameworks, and methodological approaches that underpin the thesis.

Following this, four interconnected articles examine the central themes of green space making, everyday green spaces, and green space futures, each offering a distinct yet complementary perspective to the overall analysis (See Fig.13). Article 1 provides an in-depth overview of the dynamics of land governance in Nairobi's informal settlements. It uses a Critical Urban Political Ecology (CUPE) framework to reinterpret cartels as integral components of Nairobi's urban metabolism. This Article narrows its focus to Korogocho, where it illustrates the roles of both formal and informal actors in land politics, exploring how land cartels manipulate governance structures, political narratives, and social networks to control land while also influencing urban greening and governance of green spaces.

Article 2 builds on the insights from Article 1 by shifting the focus to conflicts over green spaces in Pumwani-Majengo. It utilises the Situated Urban Political Ecology (UPE) framework to examine how various actors, including government agencies, community groups, and private sector entities, safeguard their interests amid competing socio-political and economic pressures. It critically explores the processes of land commodification, privatisation, and spatial exclusion, arguing that urban greening is closely linked to historical land inequalities, elite-led urban planning, and political contestation, and is far from being a neutral or universally beneficial process.

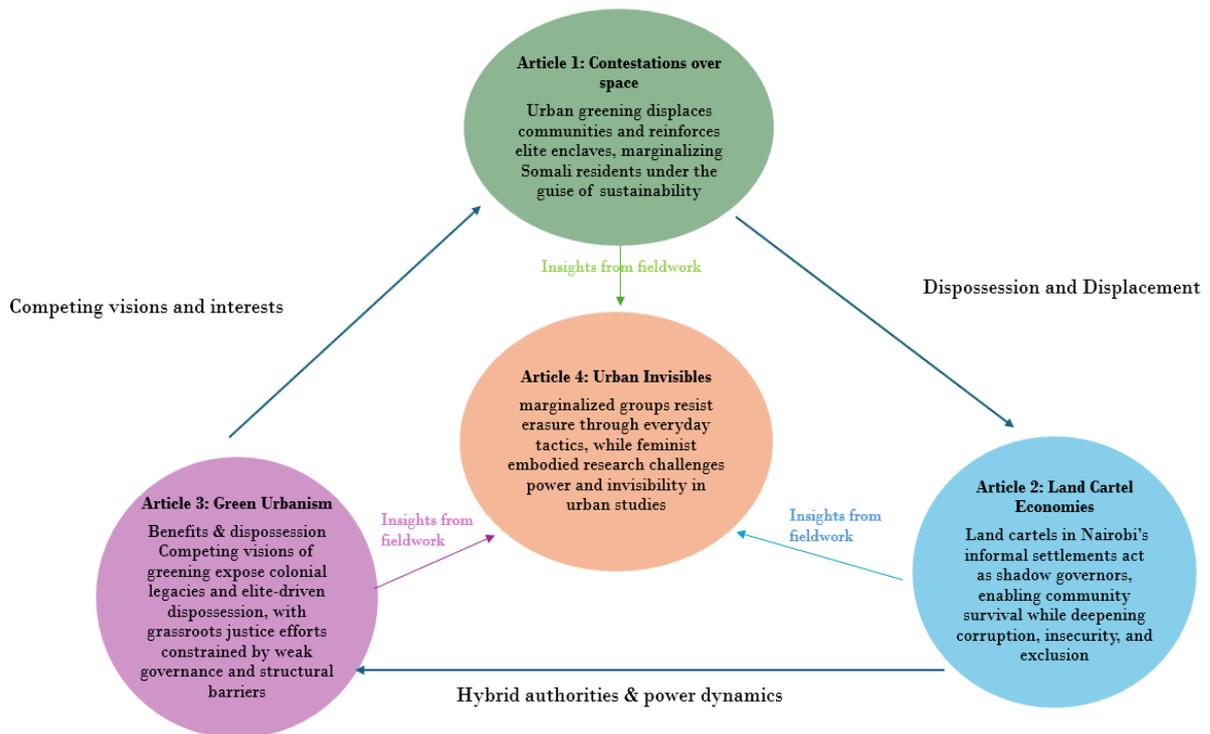


Figure 13: Diagram illustrating the interconnected thematic and spatial progression of the four articles

Source: Author, 2025

Article 3 explores how global sustainability agendas are reinterpreted in Nairobi’s settlements through Feminist Urban Political Ecology, Postcolonial Urbanism, and Travelling Models. Its focus broadens to encompass a comparative analysis of both Korogocho and Pumwani-Majengo. This article scrutinises how urban greening is conceptualised, politically framed, and executed within these informal settlements, emphasising the influence of colonial legacies and current governance contradictions. Furthermore, it explores the resistance offered by marginalised communities, demonstrating how grassroots initiatives challenge exclusionary policies and advocate for alternative models of urban environmental governance.

Article 4 adopts a feminist and decolonial epistemological perspective to critically explore methods, positionality, and the production of knowledge. It is based on fieldwork conducted in Nairobi and Addis Ababa, with a primary focus on the researcher’s experiences in Nairobi. The study examines urban exclusion and invisibility using feminist and decolonial approaches, highlighting mechanisms that sustain marginalisation across spatial, institutional, and epistemic levels. It specifically looks at groups such as women, children, the elderly, and persons with disabilities, critically analysing how invisibility operates within urban governance, land tenure, and environmental policies.

Additionally, it considers the researcher's positionality and embodied practices in challenging dominant paradigms of knowledge creation and research. It builds on section 3.5, which discusses positionality, ethics, and reflexivity. The final section summarises the key findings from all the articles, highlights researchers' contributions to theory, empirical research, and debates in urban greening, provides a comprehensive conclusion, and suggests directions for future research.

5. PUBLICATIONS⁹

5.1. Cartel Economies and Urban Governance: The Interplay of Performative Politics, Social Embeddedness, and Land Control in Nairobi's Informal Settlements¹⁰

Valentine Opanga^{a*} Detlef Müller-Mahn^b

^a *Center for Development Research (ZEF), University of Bonn, Bonn, Germany*

^b *Department of Geography, University of Bonn, Bonn, Germany*

*Valentine Opanga, Genscherallee 3, Bonn, vopanga@uni-bonn.de

Abstract

Land governance in Nairobi is shaped by hybrid systems that blur the boundaries between formality and informality, especially in informal settlements housing over 60% of the city's population. Land cartels have emerged as powerful intermediaries, controlling access to land and services through 'informal' channels. This paper examines how cartels operate, sustain authority, and influence urban development in Korogocho, one of Nairobi's largest informal settlements. Using a Critical Urban Political Ecology (CUPE) framework, the study reframes cartels as structurally embedded actors central to Nairobi's urban metabolism. Based on a systematic literature review, 45 interviews, six focus group discussions, participatory mapping, and field observation, we find that cartels exploit both state tools and community legitimacy. Their power is rooted in long-standing relationships, trust, and entanglements that cast them as protectors and gatekeepers. Both they and officials engage in performative politics to mask systemic failures. These findings challenge legality/illegality binaries and call for rethinking governance through embedded informality and political performance.

Keywords: Cartel economy, informal settlements, performative politics, land tenure insecurity, urban land governance

⁹The cumulative thesis comprises published and/or accepted papers. Consent to include these papers was obtained from, and granted by co-authors.

¹⁰ This paper has been submitted to the African Spectrum Journal. **Status:** Paper accepted for publication; currently in copy-editing and production

Introduction

According to the Center for Affordable Housing, Kenya has an accumulated housing deficit of 2.0 million housing units, growing by 200,000 units annually. This is due to the difference between the demand for 250,000 housing units and an estimated supply of 50,000 units every year (Centre for Affordable Housing Finance, 2023). Widespread urban poverty forces many to live in informal settlements, where privately owned and public land is often controlled and occupied illegally by informal organisations that are locally called 'land cartels'. These actors control land transactions without regulation, perpetuating corruption and exacerbating the housing crisis (Centre for Affordable Housing Finance, 2023). The rise of these land cartels and shadow land markets dates back to the pre-independence era when Africans were confined to the outskirts of Nairobi in informal settlements and were not allowed to own land in the city (Kamau, 2009).

Nairobi is home to approximately 5 million people (CIDP, 2023) of whom more than 60% reside in informal settlements that occupy 5% of residential land and only 1% of the total area of the city (UN-Habitat, 2023). The historical legacy of social and spatial exclusion in urban planning has deep roots in colonial and postcolonial governance structures. Nairobi exemplifies how discriminatory historical and current urban policies and practices cause spatial concentration of poverty and create informal settlements, thereby exacerbating marginalization (Burugu, 2015). Consequently, the illicit land market controlled by cartels has flourished in these neglected areas.

In this paper, the term '*land cartel*' is used in an expanded, analytical sense to describe informal yet enduring arrangements among local elites that concentrate control over land transactions and land-use governance. While *cartel* conventionally refers to formal economic or business consortia, particularly in competition law where it denotes collusive agreements among firms to fix prices, limit output, or divide markets—thus undermining competition and triggering regulatory sanctions—the term has evolved in criminal studies to describe illicit, profit-driven syndicates sustained by corruption and extralegal networks. This criminal usage, derived from the Italian/Spanish *cartello*, a pact among producers, highlights the strategic coordination and shadow governance typical of such formations (Magaloni & Melo; Kleeman 2014).

In Korogocho, residents use 'cartel' in a looser, context-specific sense, often interchangeably with terms like “mafias,” “land grabbers,” or “government of thieves,” to describe brokers, developers, state-linked actors, and fixers who control land access and service provision (Fieldwork 2023–2024). While often seen as exploitative, these actors are also considered

necessary substitutes for absent or ineffective state functions. This paper adopts this emic usage, rooted in lived experience and local vocabulary, to highlight how these actors consolidate authority through informal rules, relational networks, and political access. These cartels are not formal institutions but act in ways that resemble regulatory capture, elite collusion, or shadow governance, often clashing with democratic or legal norms.

This conceptual framing, elaborated in Section 2, draws on scholarship on informal institutions and hybrid political economies to illuminate how *land cartels* function as both self-interested actors and de facto service providers in Nairobi's informal settlements. Their presence prompts critical questions: How do land cartels form and sustain influence? Who are the key actors shaping land dynamics, particularly along Nairobi River's riparian zone, and how do performative politics and social embeddedness underpin their operations?

The paper is organized as follows: Section 2 presents the literature review, outlining the historical and contemporary dynamics of land governance in Nairobi's informal settlements. Section 3 discusses the conceptual framework, drawing from Critical Urban Political Ecology (CUPE) to theorize the concept of land cartels. Section 4 details the methodology, including the case study design, data collection techniques, and systematic literature review process. Section 5 presents the findings, focusing on the roles of performative politics and social embeddedness in sustaining land cartels. Finally, Section 6 presents the discussions and Section 7 concludes with reflections on the paper's contributions to CUPE.

Urban Land Governance and the Cartel Economy in Nairobi's Informal Settlements

Urban Land Markets in Kenya

Research reveals that (in)formal yet influential actors shape land governance across various contexts. In Zimbabwe, peri-urban elites and land barons exploit reforms and institutional gaps to dominate markets and incite conflicts (Bhanye et al., 2024; Mudapakati et al., 2024). In India, "development mafias" and corruption demonstrate how political patronage influences land access (Weinstein, 2008; Doshi & Ranganathan, 2017), while in politically unstable cities, trader associations strategically consolidate power (Bandauko & Arku, 2025). Nairobi's land cartels exhibit similar patterns, where shadow governance, informality, and state complicity shape urban land markets. Rapid urbanisation, growing informal settlements, and weak enforcement exacerbate these dynamics: over 60% of Nairobi's population live in informal settlements expanding at 4.1% annually, facing eviction threats, poor infrastructure, limited formal housing, and exclusion from planning (UN-Habitat, 2023; Githira, 2016; Mundia & Aniya, 2006).

This paper approaches informality from both UN-Habitat (2015) and Kenyan national policy definitions, highlighting the friction between international and domestic understandings. Kenya's legal instruments, including the National Slum Upgrading and Prevention Strategy (2024-2034), Sessional Paper No. 2 of 2016, and the Community Land Act (2016), emphasize tenure insecurity and state-led regularisation. Meanwhile, UN-Habitat highlights vulnerability to speculative markets and environmental hazards. These definitional tensions influence how dominant actors and communities understand and manage informality in settlements like Korogocho. Interviews reveal that residents themselves define informality not only by the absence of legal regulations but by service-deficit and governance hybridity, where informal practices complement or substitute weak formal mechanisms. These competing frameworks have practical implications: they shape what kinds of interventions are seen as legitimate or effective and may result in fragmented or contradictory policy responses on the ground.

Land tenure in informal settlements remains highly fragmented, marked by overlapping claims and minimal coordination (Siakilo, 2014). Informal settlements function as affordable living areas for low-income residents who cannot access formal housing markets (Ren et al., 2020; Ono & Kidokoro, 2020). These spaces rely heavily on informal rental arrangements, often dominated by absentee landlords. This dynamic reinforces what Panek and Sobotova (2017) call "dead capital," where land remains economically valuable but legally trapped. Yet, as Carrizosa (2022) notes, these settlements also sustain vibrant economic life. Nairobi's land market thus operates on a formality–informality continuum, with legal frameworks often circumvented across all income levels even in affluent neighbourhoods (Jimmy, 2024).

Ultimately, Nairobi's urban land economy is characterized not simply by administrative failure, but by systemic hybridity. Despite having legal tools such as zoning and titling, enforcement gaps have normalised practices such as bribery, unauthorized development, and informal transfers (Kamunyori, 2016; Joireman, 2011). Population density in the informal settlements is estimated to exceed 63,000 people per km² (Mundia and Aniya, 2006). Under these conditions land cartels exploit regulatory ambiguity to consolidate control. Sverdlik et al. (2025) argue that even substandard housing can yield high returns, making informal settlements central to urban capital accumulation. Informality in Nairobi must therefore be understood as an entrenched, adaptive governance modality, an "order in disorder" (Schroeder, 2021), that functions across socio-economic strata and embeds actors such as land cartels within both community systems and state structures.

In/formality as Continuum: Formal Land Systems in the Shadow

Urban land governance in Nairobi’s informal settlements is best understood through the concept of hybrid governance and institutional bricolage, where both state and non-state actors co-produce authority, regulate land access, and deliver services in areas more or less neglected by formal planning systems. Actors such as village elders, chiefs, brokers, and community-based organisations perform roles typically associated with formal institutions, including land allocation, dispute resolution, and documentation of structures (Kamunyori, 2016; Joireman, 2011) (See Table 6). These (in)formal systems are not ephemeral substitutes; rather, they are durable mechanisms rooted in colonial legacies and adapted through local social norms. Their longevity and legitimacy illustrate how informal governance has become institutionalised, especially in rapidly growing informal settlements.

Table 6: key actors in Land Governance in Informal Settlements

Actor / Force	Nature of Power	Primary Practices and Roles	Effect on Residents	How Literature Characterises Them	Parallel in Affluent Areas
Village Elders	Customary, community-based, legitimised by tradition	Mediate disputes, allocate plots, organise communal tasks, maintain social norms	Trusted by many; offer accessible justice, though roles vary by village	Described as adaptive governance figures filling legal gaps (Cleaver, 2012; Kamunyori, 2016)	Traditional clan councils or landowner committees managing rural estates
Local Chiefs	State-delegated, hybridised authority	Issue Temporary Occupation Licences (TOLs), record structures, resolve conflicts	Seen as both helpful and extractive; central to land recognition	Viewed as “bureaucratic entrepreneurs” (Joireman, 2011); key hybrid actors (Lund, 2006)	Local planning officers who selectively enforce zoning laws
Community Organisations	Organised civic power, often linked to NGOs	Mobilise residents, document housing, push for services or tenure security	Build collective agency, support formalisation efforts	Seen as grassroots planners and intermediaries (SDI Kenya, 2020; Huchzermeyer, 2011)	Residents’ associations lobbying county assemblies for amenities
Religious Leaders	Moral authority, informal mediator	Intervene in land disputes, promote peace, support vulnerable residents	Mixed trust; respected by some, questioned by others	Sometimes mediate urban conflict or uphold social order (Karanja, 2021)	Faith leaders advocating for ethical real estate development

Informal Brokers / Land Cartels	Negotiated authority, often self-appointed	Facilitate land access or rentals, connect residents to chiefs or landlords	May ease processes but also charge fees or distort access	Identified as part of informal land networks (Syagga et al., 2001; Kimari, 2021)	Estate agents or middlemen charging facilitation bribes for title processes
Structure Owners	Recognised in practice but without formal title	Allocate plots, enforce tenancy rules, gatekeep utilities, collect 'infrastructure fees'	Exert landlord control; reinforce inequalities; act as power brokers	De facto land controllers; actors in 'petty landlordism' (Lines & Makau, 2017)	High-end developers negotiating 'expedited approvals' with authorities
Youth Groups	Collective, enforcement-based	Impose protection fees, mobilise in favour/against development actors	Can threaten dissent or offer security; seen as both agents and resisters	Para institutional actors of informal control (Mutahi, 2017)	Private security contractors in gated communities control access
County Officials	Formally appointed/elected but informally influential	Overlook illegal extensions, endorse zoning violations, engage in symbolic governance	Undermine planning laws; reinforce informal status quo	Actors of performative governance (Anderson & McFarlane, 2011)	Planners ignoring code violations in affluent suburbs for political favour
Residents' Committees	Established under upgrading programmes	Vet projects, manage NGO relationships, control community funds (often captured)	Shape inclusion/exclusion in development; can be co-opted	Community gatekeepers; intermediaries of participation (Clever, 2001)	HOAs determining contractor access and lobbying local authorities

Source: Fieldwork, 2023-2024

Up to 70% of land transactions in Nairobi take place through informal channels, often yielding significant economic returns. Structure owners in Kibera, for example, recover investments in under two years (Syagga et al., 2002). These practices exemplify Cleaver's (2012) concept of institutional bricolage, where diverse governance logic—customary, legal, and pragmatic—coalesce to meet urban needs. In settlements like Korogocho, local legitimacy often supersedes statutory regulation, producing a layered governance landscape. However, as intermediary actors like brokers and structure owners consolidate influence, contestations over legitimacy arise. Informal authority, once adaptive and responsive, becomes a mechanism for monopolisation and exclusion, especially when linked to powerful networks with coercive or extractive capacities.

Cartels in Nairobi exist parallel to the formal state-controlled system, but they are neither purely criminal syndicates ¹¹ nor external disruptors. They are socially embedded networks composed of structure owners, brokers, youth groups, chiefs, civil servants, and occasionally professionals or academics (Maru et al., 2024). Operating at the intersection of informal governance and political patronage, these actors navigate both functional and coercive roles. Some manipulate slum upgrading to extract rents or influence planning processes; others deliver vital services where the state is absent (Kamunyori, 2016; Kimari and Parish, 2020). Their flexibility is underscored by their fluidity within illicit markets, from land fraud to gold scams (DCI, 2024). Government officials frequently denounce these networks, yet simultaneously enable them through tacit complicity, a dynamic mirrored in the study of Corburn et al (2022) of Mukuru. This form of performative politics, where leaders enact reformist gestures while preserving informal privileges, sustains the power of cartels. Cartels align with local chiefs and county officers, exploiting weak regulatory oversight and blurring the boundaries between formal and informal systems (See Table 7). This is not unique to poor areas—elite developers in Kilimani¹² also use informal means to bypass planning controls (Jimmy, 2024). This shows that illegality is embedded across socio-economic strata.

Table 7: Cartel Strategies in informal Settlements and Affluent areas of Nairobi

Strategy	Description	Example in Korogocho	Common Actors Involved	Core Traits / Example Functions	Affluent-Area Parallel
Co-production of order	Cartels and state actors jointly govern land access and dispute resolution.	Structure owners sit on county forums, allocating plots in exchange for political support.	Structure owners, local chiefs, county officials	Collaborative governance, power-brokering, negotiation over plot allocation and legitimacy	Developers fund “community outreach” events to secure planning approvals.
Performative politics	Public denunciations of cartels are paired with symbolic gestures (tree-planting, digitisation launches) that leave	Rivers Commission launch with no follow-up; media-highlighted “cartel purges”	Politicians, county officials, media	Symbolism over substance, maintaining status quo while appearing reformist	Press releases on “crackdown” of over-height buildings, while inspectors still

¹¹ A criminal syndicate is a structured and enduring organisation that engages in a range of illicit activities, such as drug trafficking, extortion, and money laundering, through a hierarchical command system, enforced secrecy, and the strategic infiltration of legitimate businesses (Encyclopedia Britannica, 1998)

¹² https://www.cytonn.com/uploads/downloads/Kilimani_Research_Report.pdf

	informal practices intact.	that never materialize.			rubber-stamp them.
Embedded authority	Long-standing community ties legitimize cartel actors; historic tenure claims are institutionalized through upgrading programmes.	KSUP 2008 formalizes claims of structure-owner descendants, embedding them in Residents' Committees.	Elders, long-term residents, structure owners	Community legitimacy, conflict resolution, plot allocation	Legacy homeowners' groups influence condo bylaws to favor long-term residents over new buyers.
Shadow revenue extraction	Informal fees at every transaction point—from plot access to service connections—create a predictable income stream for cartels.	Brokers charge KES 5,000 per plot access; youth collect KES 500 monthly “security levy.”	Brokers, youth groups, structure owners	Rent-seeking, fee inflation, coercive collection	Estate managers charge “expedited processing” fees of up to 10% of project value.
Program co-optation	Cartel actors infiltrate slum-upgrading or development committees to steer resources toward their interests and stall unwanted projects.	Committee members delay water-project approvals when not contracted by structure-owner networks.	Structure owners, Residents' Committees, NGO liaisons	Obstruction, elite capture, selective participation	Local HOA committees block infrastructure upgrades unless contractors pay kickbacks.
Multi-scalar networking	Cartels operate through interlinked nodes—from village elders to national land agencies—ensuring influence over policy, planning, and local enforcement.	Chiefs coordinate with county officers to approve informal subdivisions; national land officials turn a blind eye to forged deeds.	Chiefs, brokers, national planners, land registry officials	High-level collusion, forgery, strategic tolerance	Developers lobby both city hall and national ministries to maintain favorable building regulations.
Coercive enforcement	Uses threats, violence, and intimidation to enforce control and compliance.	Youth groups forcibly evict tenants or seize plots for hire.	Rogue youth groups, enforcers, ex-security personnel	Violence, intimidation, forced evictions	Private security firms “muscle out” competitors in contract disputes in wealthy estates.

Service-oriented fixes	Offers informal services such as protection, dispute mediation, or access facilitation—often masking extractive motives.	Religious leaders help resolve land disputes or coordinate garbage collection.	Religious leaders, “fixers,” community gatekeepers	Mediation, service provision, local influence	Estate managers facilitate quick fixes for rule-bending homeowners for a fee.
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Source: Fieldwork 2023-2024; Jimmy 2024

These networks generate a parallel governance system. Structure owners extract monthly rents ranging from KES 1,000–5,000, brokers charge “connection fees” to facilitate plot access, and chiefs demand “recording fees” to document dwellings. Youth groups may collect “informal taxes” or offer protection in exchange for payment. Though extralegal, this informal revenue stream creates predictability in land and service access, stabilising daily life in the absence of formal state services (See Table 5) (Kamunyori, 2016; Kimari and Parish, 2020). However, such control also enables obstruction. In Korogocho and Kibera, structure owners and affiliated cartels have disrupted participatory forums and manipulated upgrading processes to maintain rent flows (Burugu, 2015; Ipamba, 2019; Anyango, 2022).

Cartel dominance has also undermined tenure security; in Korogocho and Mathare, 55% of land disputes involve cartel actors like brokers or structure owners (Wahome, 2022; Vusha, 2018). Even digital titling initiatives and community land claims are often co-opted by cartels to consolidate control, exploiting regulatory ambiguities and weak enforcement (Datta & Hoefsloot, 2024; Jimmy 2024; Sverdlik et al., 2025).

Drawing from this evidence, we define land cartel economies as hybrid governance systems in which socially embedded actors (i.e. structure owners, brokers, chiefs, and politicians), co-produce access to land by leveraging informal legitimacy and selective engagement with state institutions. These cartels flourish in spaces of legal ambiguity, where informal practices are normalized and institutional complicity is routine. Their authority is sustained by performative politics and masked through public displays of legality and reform. This paper situates them at the core of Nairobi’s urban land economy as symptoms and agents of uneven urban governance. Recognizing their embeddedness is essential to rethinking land reform strategies, particularly in high-density settlements like Korogocho, where informal power structures and state authority are deeply entangled.

Towards a Conceptual Framework for Urban Land Governance

This paper is grounded in a Critical Urban Political Ecology (CUPE) framework to interrogate the role of land cartels in shaping Nairobi's informal urban land markets. CUPE enables a relational analysis of how power, capital, and governance coalesce in the production of urban space, treating cities as socio-ecological assemblages shaped by conflict and uneven development (Angelo & Wachsmuth, 2013). The approach situates informal land markets not as aberrations from official planning but as central sites through which urbanisation is negotiated, contested, and commodified. Gandy (2021) calls for an expanded CUPE that engages with agency, scale, and the symbolic practices of urban actors, thereby opening space to theorise land cartels as institutionalised, relational actors embedded within the metabolism of the city. Tzaninis et al. (2020) expand CUPE by incorporating peri-urban and marginal spaces, where urban expansion is governed through informal power as by formal rules.

This paper conceptualises land cartels as pivotal intermediaries in Nairobi's fragmented and hybrid land economy. Drawing on Simone's (2004) and Roy's (2005) theorisation of informality as both improvisational and strategic, it contends that cartels influence not only who accesses land but also how plots of land are land defined, transacted, and regulated. Through their entanglement with state actors, these cartels actively shape planning outcomes, often evicting or displacing low-income residents under the guise of slum upgrading (Yunda & Sletto, 2017; Kimari, 2016). As Kimari and Parish (2020) and Leaf (1992) argue, informal markets often have their own internally coherent systems of governance and legitimacy but are rendered 'illegal' only when they threaten elite or state interests. In informal settlements, cartels manage plot allocation, mediate land disputes, and control housing supply, thereby structuring the very foundations of urban development in contexts where formal mechanisms are weak, absent, or selectively applied.

Land cartels also derive power through the performative politics of urban governance, whereby both state and non-state actors engage in symbolic actions that sustain the illusion of legality and order. As Swyngedouw (2004) conceptualises, the city is produced through ongoing contestation between formal rules and informal practices. Public demolitions, infrastructure rollouts, and digitisation schemes function as spectacles of state authority, even as government actors collude with informal power brokers behind the scenes (Sergi & Storti, 2020). Roy (2005) critiques this duality, noting that the state's selective application of legality protects politically insulated actors while criminalising the urban poor. Cartels operate with dual

legitimacy in this context: publicly denounced but privately engaged. They thrive within this duplicity, leveraging public performance to cloak private consolidation.

The social embeddedness of land cartels further complicates efforts to classify or regulate them. Rather than external disruptors, these actors are often deeply rooted in community histories, institutional arrangements, and everyday forms of negotiation. Drawing on the work of Kleemans (2013) and Jaspers (2020), the study understands illicit urban markets as entangled with formal governance. Cartels in Korogocho, many of whom evolved from former community leaders or youth organisers, maintain legitimacy through long-standing ties with residents, religious institutions, and chiefs (Burugu, 2015; Maru et al., 2024). They play active roles in service delivery, managing water access, enforcing informal tenancy rules, and coordinating land transactions.

As Rigon (2016) and Wahome (2022) demonstrate, these actors are not passive beneficiaries of a broken system; they actively produce governance outcomes, shape urban infrastructure, and claim a central place in political negotiations, especially during slum upgrading processes. Their embeddedness blurs distinctions between legality and legitimacy, thereby frustrating traditional policy responses rooted in formalist logic. The CUPE framework enables the conceptualisation of informal settlements as sites of contested authority, where cartels engage in performative politics to claim legitimacy while remaining deeply entangled in local and institutional networks. The paper further draws on critiques of De Soto's (2000) property rights thesis to highlight the disjuncture between state imaginaries of order and the lived realities of residents and structure owners.

Through this synthesis, the study contributes to a more relational and politically grounded understanding of how land is governed in Nairobi's informal settlements. In doing so, it advances a postcolonial urban critique, aligned with Roy (2005) and Mbembe & Nuttall (2004), that sees informality not as a deviation from modern urbanism but as a constitutive feature of it. Land cartels, as both coercive and facilitative actors, exemplify the complex interplay between regulation, resistance, and adaptation in the making of Nairobi's urban futures.

In sum, Critical Urban Political Ecology (CUPE) enables a grounded understanding of how land governance in Nairobi's informal settlements emerges through complex entanglements of power, space, and infrastructure. As recent scholarship on African spatial orders emphasises, territorial authority is not imposed from above but co-produced through contested negotiations, everyday practices, and infrastructural claims (Boeckler, Engel & Müller-Mahn, 2017). This

framework provides the conceptual foundation for analysing how land cartels function as informal but consequential producers of urban order.

Methods

This study employs a mixed-methods approach to investigate land cartel economies and the role of structure owners in the informal settlement of Korogocho, Nairobi. This section begins by providing a detailed description of the study area, followed by an exploration of the research methods employed.

Study Area

Korogocho, located approximately 11 kilometres northeast of Nairobi's Central Business District (see Fig 13), is one of the city's oldest and most densely populated informal settlements. In 2019, Korogocho had a population of 36,900 residents, living in 11,757 households across 0.9 km², resulting in a population density of approximately 42,401 persons per km² ¹³ (KNBS, 2019). Established between 1972 and 1978, Korogocho became a refuge for people displaced by earlier demolitions in Nairobi, particularly from forced relocations under urban renewal programs (The Weekly Review, 1977). The settlement's population is ethnically diverse, with Kikuyu, Luo, Luhya, and Kamba communities forming the largest groups. Despite the precariousness of its living conditions, Korogocho has developed into a self-sustaining community, with residents relying on informal economies such as street vending, recycling, and casual labour for their livelihoods (Ipamba, 2019).

¹³ Population data in Korogocho varies due to lack of official enumeration, transient residents, politicization, inconsistent boundary definitions, methodological differences, and the hidden nature of informal housing. This makes the settlement both over- and under-counted depending on who's asking and why ((Burugu, 2015; Mbathi, 2012; Rigon, 2016; Rodriguez-Torres, 2010; Stellamaris, 2019; Weru et al., 2015). In this case, the paper adopts the 2019 Census data.

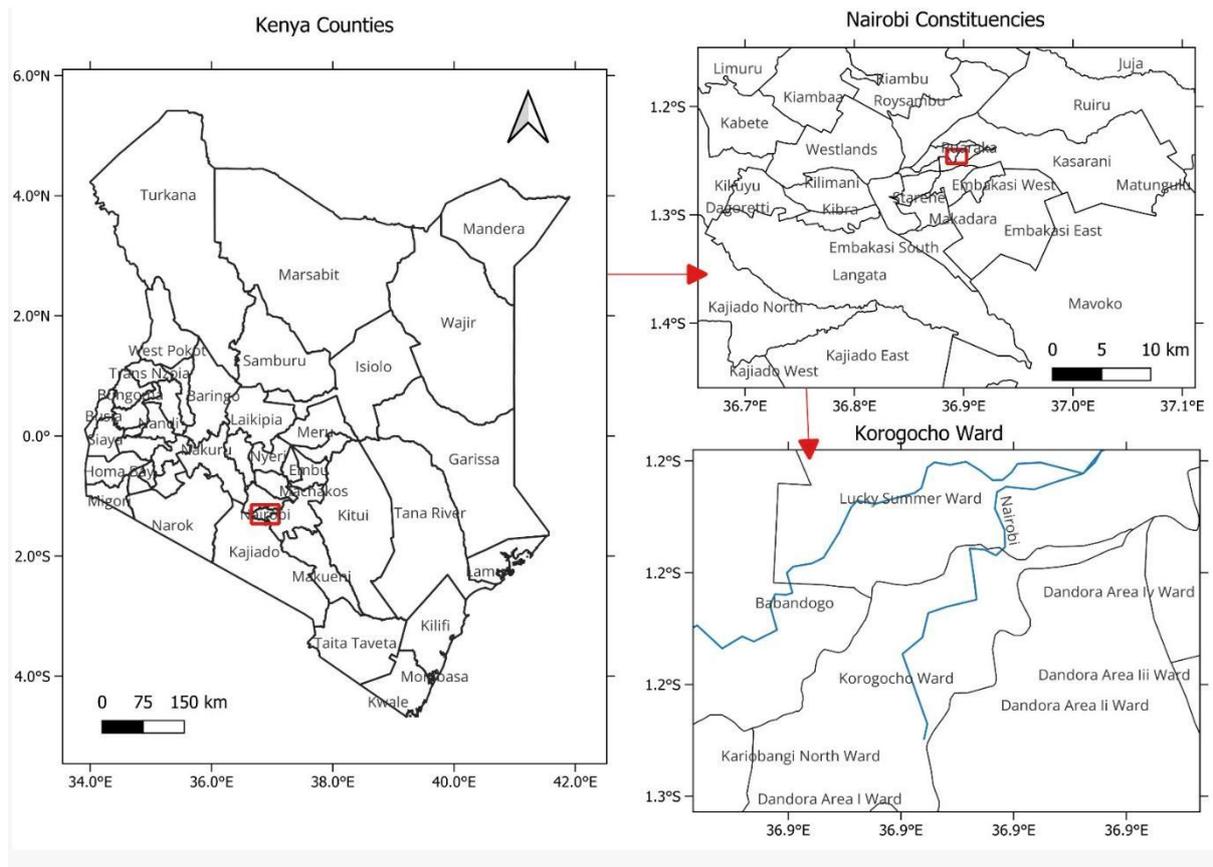


Figure 14: Map of Korogocho Informal settlement

Source: Authors, 2024; data source- Humanitarian Data Exchange, 2024

Korogocho's land tenure system emerged in the late 1970s when the Nairobi City Council permitted settlers to occupy unalienated government land—then marked as sisal farm—informally. This prompted early inhabitants to erect semi-permanent shelters and, over time, convert these into rental properties for new migrants (Kamunyori, 2016; UN-Habitat, 2012; Muggah et al., 2012). Over time, Korogocho's structure owners have become deeply embedded in local governance, a status formalised by the 2008 Korogocho Slum Upgrading Programme (KSUP). The KSUP acknowledged their claims dating back to the 1970s to stave off unrest by integrating them into decision-making processes (Burugu, 2015; Mutua & Kiruhi, 2021) following the collapse of a 2001 upgrading effort over conflicts over property rights and redistribution (UN-Habitat, 2003).

This recognition has entrenched structure owners as both gatekeepers of the local economy and intermediaries between tenants, NGOs and government, even as tensions over land rights and development participation persist. As a result, structure owners have become key intermediaries in local governance, participating in residents' committees and often resisting reforms that threaten their economic interests. This has led to the formation of cartel-like networks, where

owners control land, infrastructure, and political access, raising concerns about property consolidation and exclusionary outcomes (Mitullah & Nyakoe, 2014; UN-Habitat, 2012; IFRA Nairobi, 2011). Their position has transformed from survival strategies to powerful governance mechanisms, often working alongside political actors to manipulate land allocations and rents, thus entrenching social and economic disparities (Gathuthi et al., 2010).

Historically, the government's interventions in Korogocho's land tenure system have been driven by a need to address urban land shortages and provide services to the growing population. However, these initiatives have often disregarded the socio-political context of land occupation, exacerbating local tensions (Burugu 2015). For example, the KSUP's prioritization of structure owners, rather than formal landowners, led to the exclusion of residents with formal claims to land titles as in the *Vision Peoples case*, (Kenya Law 2017) which brought attention to the conflicts between registered landowners and government interventions (Huchzermeyer, 2011). This underscores the importance of understanding both the historical and contemporary dynamics of structure ownership in informal settlements, as these are crucial for addressing land tenure insecurity and informing urban governance policies.

Originally a product of colonial land alienation and post-independence urban neglect, Korogocho is marked by marginalization, with residents often feeling invisible to the state, and only acknowledged only during election seasons or when facing eviction. Often referring to themselves as “wanyonge” (the helpless or powerless) and “hustlers” (Chulek 2019; Fieldwork, 2023-2024), Korogocho residents navigate these challenges through what Simone (2004) terms *people as infrastructure*, creating informal systems of mutual aid and governance to sustain daily life. This self-reliance is embodied in the concept of “*Mtaa*”, Swahili for neighbourhood or village. *Mtaa* reflects not just a physical space but the strong community bonds and collective identity that residents build, defend, and continuously improve, countering external narratives of deprivation and marginalisation (Chulek,2019). The use of the term *Mtaa* over “slum” or “informal settlement” reveals a collective refusal to be defined solely by deprivation.

Methods

This study used a two-pronged research design combining a Systematic Literature Review (SLR) and primary qualitative case study research to explore the dynamics of land cartels and the governance of Korogocho. The SLR synthesised both historical and contemporary sources, including scholarly articles, policy documents, and grey literature, to build a comprehensive understanding of land governance and upgrading in informal settlements. The review was

guided by three key search terms to capture relevant studies on urban cartels, informal settlements, and land governance in Kenya and the Global South which yielded 71 sources of literature. These were then screened based on pre-defined inclusion criteria, including peer-reviewed status, methodological rigour, and relevance to the study's thematic focus. Following this, 43 studies were selected and subjected to thematic synthesis, categorising them into key domains: land governance and tenure, slum upgrading, political economy, community engagement, and infrastructure provision. Table 8 summarises the distribution of the reviewed literature across these themes.

Table 8: Thematic Categorization of SLR Sources

Thematic Category	Representative Sources	Number of Sources
Land Governance and Tenure	Stellamaris (2019), Kameri-Mbote & Muriungi (2017), Vusha (2018), Wandaka (2019), Obala (2020), Wahome (2022)	10
Slum Upgrading and Participatory Planning	Burugu (2015), Anyango (2022), Ipamba (2019), Achungo (2014), Muthama (2022), Mgele (2014), Mbathi (2012)	11
Political Economy and Informality	Rigon (2016), Kinyanjui (2022), Jimmy (2024), Mwangi (2018), Datta & Hoefsloot (2024), Woo & Jun (2020), Kothari (2021)	8
Community Engagement and Urban Resilience	Weru et al. (2015), Musya (2023), Mitra et al. (2017), Muggah et al. (2012), M'ithai (2012), Ogweno (2023), Stacey (2019)	8
Infrastructure and Service Provision	Muchira (2017), Odongo & Donghui (2021), Ochieng (2011), Wafula (2014), Osiol et al. (2017), Rodriguez-Torres (2010), Adhiambo (2022), Chileshe (2019)	6

Source: Author, 2025

Primary data collection took place in two phases between August 2023 and January 2024 and June 2024 to August 2024. The research employed purposive sampling and snowball techniques to identify participants, ensuring that key informants were selected based on their relevance to land governance and tenure issues within the settlement. A total of 45 semi-structured interviews were conducted, targeting a range of participants, including government officials (n=7), civil society representatives (n=5), informal settlement residents which included tenants, village elders, youth leaders (n=26), and private developers including small scale and large businesses and structure owners (n=7). Focus Group Discussions (n=6) with youth, women,

elders, and displaced families provided collective insights into land commodification, while Life Histories (n=6) documented land-related issues and conflicts. These interviews were complemented by extensive field observations to triangulate data and identify emerging themes. Ethical protocols were strictly followed, with all participants providing informed consent and assurances of confidentiality.

The data were analysed by Atlas.ti software. This qualitative analysis was guided by critical urban political ecology, focusing on power relations, governance structures, and socio-economic dynamics within Korogocho. The study's methodological approach also emphasized the importance of community participation, as outlined in participatory research models (Gurney et al., 2016), ensuring that the voices of marginalized groups, such as tenants and informal service providers, were adequately represented in the analysis. This approach to data collection and analysis allowed for a comprehensive understanding of the socio-political forces shaping land tenure, governance, and upgrading in the settlement.

Results

Our study highlights how land cartel economies in Nairobi's informal settlements represent hybrid governance systems that blur the lines between formality and informality. Far from being peripheral criminal actors, these networks are deeply embedded in daily urban life, functioning as de facto authorities over land access, services, dispute resolution, and community representation. The findings that follow illustrate how these dynamics unfold through five interrelated themes: co-produced urban order, performative politics, embedded authority and exclusion, normalised informality, and multi-level cartel influence.

Land Cartels as Co-Producers of Urban Order

Field data demonstrated that land cartels in Korogocho are entwined with formal governance structures; they function as co-governance actors and are deeply embedded in the urban landscape (Burugu, 2015, p. 75). Participants identified them as comprising structure owners, youth groups, brokers, village elders, and often local chiefs (see Tables 2, 3, and 4), actors historically legitimised through customary and state systems. These cartels regulate access to land, mediate disputes, manage informal taxation, and frequently serve as intermediaries between the community and development actors.

This is the government or someone of great power. They know the 'who is who' in the community. So, when they stand against you, even if you go to court, I doubt anything can be done... (Interview, Participant 18, September 2023)

This quote illustrates how land cartels command power that rivals the formal state by embedding themselves within community governance structures. Their historical trajectory—from state encouragement in the 1970s–80s, through formal recognition in the 2008 KSUP programme, to their continued authority today—reflects a long-standing pattern of hybrid governance. Contrary to the misconception of cartels as purely criminal entities, participants described them as key providers of missing services and maintainers of order in the state’s absence.

Some residents support them because they feel heard and supported by them and also ‘get things done’ (Interview, Participant 10, June 2024)

However, perceptions differ significantly across stakeholder groups. While their governance role is acknowledged, concerns persist over their legitimacy, coercive power, and monopolistic tendencies (see Table 9). These divergent perspectives confirm that cartels operate in a governance grey zone: their social embeddedness and community functions complicate attempts to categorise them simply as criminal, even as they exploit formal institutions for private gain.

Table 9: Perception of Land Cartels amongst different Actors

Stakeholder Group	Perception of Land Cartels	Key Insights
Government Officials	<ul style="list-style-type: none"> - Threat to Formal Governance: Disruptive elements that exploit legal gaps and infiltrate formal institutions. - Corrupt Influence: Issue fake titles, manipulate bureaucracy. 	<p>“They even have their own people inside county governments, issuing fake titles.”</p> <ul style="list-style-type: none"> • Officials report challenges enforcing laws where cartels operate.
Communities	<ul style="list-style-type: none"> - Ambivalent Acceptance: Some residents view them as effective problem-solvers. - Feeling of Exclusion: Others see them as self-interested actors who reallocate public benefits for private gain. 	<ul style="list-style-type: none"> • “Some residents support them because they ‘get things done.’” • “When reclaimed lands fall into cartel hands, it undermines community welfare.” • “Conflicts over land boundaries...exemplify the contested nature of their control.”
Civil Society	<p>Critical and Watchful: Seen as informal networks exacerbating inequality and operating beyond legal oversight.</p> <p>Calls for Reform: Urgent need for transparency and stronger regulatory frameworks.</p>	<ul style="list-style-type: none"> • “Cartels who have taken over the government... They are even sitting in Parliament.” • NGOs stress the role of cartels in shaping land markets and reinforcing urban dysfunction.

Even with statutory frameworks and multiple agencies in place, weak enforcement and fragmented mandates, particularly between county and national government, create gaps that land cartels readily exploit (Interview, Participant 24, December 2023). They do not merely operate outside the law but actively intrude upon and derail formal initiatives: projects from which they stand to gain are co-opted, while those deemed unprofitable are subverted (Interview, Participant 24, December 2023). Moreover, a parallel set of informal norms often overrides legal titles, producing a de facto land regime in which residents recognise cartel authority over officially state-owned parcels (Interview, Participant 8, June 2024). Thus, land cartels both co-produce urban order and simultaneously destabilize, the formal institutions meant to govern Korogocho's land and development.

Performative Politics and the Reproduction of 'Illegality'

Participants described a dual performance by both the state and cartel actors; politicians publicly denounce land cartels, yet little is done to dismantle them. Meanwhile, land cartels engage in symbolic performances of legitimacy, participating in development meetings, supporting visible community projects, and presenting themselves as legitimate community voices.

They are here, they are everywhere, but you can't see them (Charity Ngilu, Former Lands CS, excerpt from The Standard Newspaper, 2014)

We will start with reshuffling, and we will go on to purge them. (Mariamu el Maawy, Former Cabinet Secretary in the Ministry of Lands, excerpt from Reuters Newspaper, 2016)

They are surrendering their plots after realising that we are closing in on them (Twalib Mbarak, Former Chief Executive Officer of the Ethics and Anti-Corruption Commission, excerpt from The Standard Newspaper 2019a)

I am glad to inform Kenyans that these (cartels) will now be history with digitisation (Zacharia Njeru, Cabinet Secretary, Ministry of Land, excerpt from the Star Newspaper, 2023)

I do not know whether those cartels are.... in the public or whether it is a phantom (Ministry of Lands Cabinet Secretary Alice Wahome, excerpt from Kenya Broadcasting Corporation Newspaper, 2024)

These public statements demonstrate a rhetoric of successive efforts to combat the pervasive influence of cartels on land dealings in Kenya a decade apart. The reference to cartels as ‘They are here, they are everywhere, but you can’t see them...’ underscores their ghostly nature, existing in the shadows of both formal and informal structures, making them elusive targets in the realm of performative governance. The sequence of statements over a decade paints a picture of performative politics where the emphasis on verbal or symbolic commitment to reform has not necessarily translated into effective action.

First, the shift from aggressive stances to technological solutions indicates a lack of consistency in strategy and possibly an underestimation of the systemic nature of corruption. Second, each statement, though assertive, rarely comes with evidence of follow-up or successful dismantling of cartel networks. Lastly, the ongoing references to deep-seated resistance and the ‘invisibility’ of cartels suggest that the problem is not just with individual corrupt actors but with a corrupted system that allows these actors to thrive.

Korogocho residents expressed cynicism over such symbolic gestures. An example was the launch of the Nairobi Rivers Commission in Korogocho, which included tree planting and media spectacle but no tangible follow-up at the time.

Politicians and media houses are just using us. Nothing much has changed since the launch... We continue to depend on our contributions and ourselves as volunteers (Focus Group Discussion 5, November 2023)

Similarly, members of land cartels mirror these tactics by publicly claiming representational legitimacy while manipulating land-related decisions privately.

Embeddedness, Authority, and the Risk of Exclusion

The persistence of land cartels in Korogocho is closely tied to their deep social and institutional embeddedness. As documented in interviews as well as archival records, many of the structure owners who dominate the local land market trace their authority back to the 1970s and 1980s, when the state encouraged settlement but failed to formalize tenure. Their positions were further legitimized by the Korogocho Slum Upgrading Programme (KSUP) launched in 2008, which formally recognised structure owners’ claims to land to stabilize the area following previous upgrading failures and the post-election violence of 2007–08.

Since then, land cartels have evolved into key figures in local governance, exercising control over land transactions, public space allocation, and participation in upgrading forums. Their

embedded authority functions through networks of trust, coercion, political protection, and historic residency. As one participant stated:

The current landlords are children of the people who were brought here by the government when they were removed from near the CBD. But most remain squatters and have no titles. They lay claim and control the land (Interview, Participant 15, September 2023)

Long-term structure owners now dominate residents' committees and use their status to manipulate redevelopment for personal gain. This legacy has enabled structure owners to become both landlords and political intermediaries—roles that are difficult to challenge without threatening community stability. However, this same embeddedness has also produced exclusionary dynamics. Tenants, who now represent the majority of Korogocho's population, are increasingly marginalised in decision-making processes. Their vulnerability is heightened by land consolidation trends, often led by land cartels, anticipating redevelopment. The risk of displacement is growing as land consolidation increases in anticipation of redevelopment, reinforcing concerns about monopolistic gatekeeping by embedded elites.

If cartels perceive they won't benefit, they sabotage the project (Interview, Participant 25, December 2023).

Politicians, aware of the electoral power of these communities, often tailor their strategies to secure votes rather than address systemic issues. Fear of backlash and losing support leads many to avoid controversial topics altogether.

Informal settlements are rich voting blocs... Most politicians will not touch the issue of land governance (Interview Participant 8, August 2023)

When addressed, these issues are often tackled superficially to satisfy immediate concerns rather than implement long-term solutions. The focus remains on maintaining voter support through short-term, visible actions, perpetuating cartels, and superficial engagement with land governance issues.

Informality and the Normalisation of Shadow Markets

“Land cartels” in Nairobi do not lurk at the edges of the city's land market; they operate within an informal but normalized shadow land market that spans both low-income and affluent areas of Nairobi. In Korogocho, these actors provide informal services, enforce tenancy norms, and regulate access to infrastructure, functions often viewed by residents as necessary or even beneficial in the absence of effective state presence. Yet, this role blurs the boundary between

legitimacy and exploitation. Chiefs and village elders, for instance, are formally recognized by the state but simultaneously implicated in rent-seeking and land grabbing. Their authority is reinforced through state delegation and informal governance practices.

When you build a structure without telling the village elder or the chief, in the next five minutes you will see them coming and demanding something [a bribe]... it's a longer chain than we can even imagine (Interview Participant 17, September 2023)

In the affluent Kilimani area of Nairobi, a study by Jimmy demonstrates that developers use almost identical mechanisms, only scaled up and rebranded. “Developers here pay for ‘expedited processing’, a series of under-the-table fees to planning inspectors, so their towers can rise floors above the official limit.” The study further confirms that planners publicly threaten the demolition of “illegal extensions” while privately approving them (Jimmy 2024). Moreover, customary actors - village elders, and chiefs - embody “institutional bricolage” by blending statutory licenses with customary norms. They resolve conflicts that formal courts cannot, yet they also extract rents as a resident notes:

They issue you a licence for your shack, but the minute you breathe, they want their cut—otherwise, you're ‘illegal’ (Interview Participant 23, December 2023)

Additionally, attempts at slum upgrading are routinely captured. In Korogocho’s 2008 Slum Upgrading Programme, structure-owners negotiated to keep plot shares: in Kilimani, Jimmy (2024) reports developers reserving “community units” in luxury condominiums, only to sublet them at a premium. In both contexts, the results confirm that informality is not a deviation from formal urbanism but a constitutive element of it, sustained by both regulatory failure and institutional complicity.

Cartels, Governance, and Nested Power Dynamics

Across Nairobi, land cartels constitute intricate, interwoven networks that span village committees, county authorities, and national land agencies. Participants consistently described how these cartels coordinate their interventions—from community “back-room” deal-making to high-level decisions about citywide zoning policies to ensuring that their influence shapes every stage of land governance (See Figure 14). As one interviewee explains:

We have had different levels of cartels... It goes as high as you can imagine in the government. It's a controlled cartel (Interview, Participant 17, September 2023)

Deploying bribes, legal manipulation, and co-opted bureaucrats cause cartels to quietly override formal checks on plot allocation, licensing, and building approvals. Cartel operatives embedded

in county planning offices stamp illegal extensions or ignore unauthorized subdivisions, turning state institutions into instruments of shadow power rather than safeguards against it.

Chiefs hold a monopoly over public spaces. So when we approached them with our ideas, they denied us access (Interview, Participant 5, August 2023)

Additionally, at the neighbourhood level, land cartels find their face in community elders and chiefs to exercise control over public spaces. They leverage their historical standing and official recognition to cement a hybrid authority that residents grudgingly accept as indispensable. Additionally, participants reported that land cartels are structured across multiple governance levels, from community-based groups to national land institutions. These networks oversee specific governance areas such as zoning, licensing, and plot allocation. In practice, however, they settle land disputes, impose “infrastructure fees,” and grant or withhold plot access, extracting rents at every turn. Their dual legitimacy, both customary and state-sanctioned, makes them powerful intermediaries capable of enforcing cartel dictates in the heart of communities.

In addition, even well-intentioned reform initiatives quickly fall under cartel sway, as hybrid authorities and complicit officials co-opt programs for their benefit. From slum-upgrading schemes to environmental commissions, high-profile launches and media spectacles mask the absence of meaningful follow-through.

Our officials aren't absent—they're just covert. They profit more from informality than they ever would from transparent, regulated development (Interview, Participant 1, August 2023)

It is evident that behind the scenes, the very actors tasked with reform divert resources, stall implementation, or repurpose benefits to shore up their patronage networks. In this performative governance paradigm, symbolic gestures replace substantive action, ensuring that the hybrid regime of formal and informal power remains unchallenged.

Urban Governance and Land Reform

The pervasiveness of land cartels and their symbiotic relationship with state actors reveal that informality in Nairobi's land markets is less an aberration than a politically engineered equilibrium. Participants voiced deep scepticism that conventional reform tools, such as titling programs or regulatory crackdowns, could succeed without confronting the underlying incentives that bind cartels and officials together. As one community member explained:

Government officials can only make extra money by promoting the informal economy... they're the ones behind the cartels (Interview Participant 23, December 2023)

This sentiment highlights the political economy at the heart of urban governance: reform proposals that fail to dismantle rent-seeking networks will be co-opted or subverted. Indeed, the very committees and working groups intended to design and implement slum-upgrading or land-titling projects are often dominated by structure owners and cartel affiliates, systematically marginalizing tenants, youth, and other vulnerable groups.

Moreover, when excluded from decision-making forums, land cartels deploy sabotage as a defensive strategy, derailing projects that threaten their interests. A surveyor working in government-led development projects in informal settlements in Nairobi recounted how well-meaning development initiatives were made to serve private agendas:

They sabotage development projects as a means to an end, and they are entangled in land ownership scandals (Interview Participant 25, December 2023)

Tactics include manipulating public participation processes, blocking implementation through bureaucratic delays, and undermining legitimacy through misinformation or intimidation (Interview, Participant 25). Such sabotage is not random vandalism but a calculated response to protect lucrative informal charges and maintain control over land transactions. Public opposition to these practices is muted by fear of reprisal and eroded confidence in formal institutions, a dynamic illustrated by a community member:

Some people live in 'shit' houses not by choice, they could build better houses if they had land titles (Interview, Participant 18, September 2023)

This sentiment underscores a paradox of informality: while it perpetuates insecurity and substandard living conditions, it also represents the only accessible pathway to land tenure and basic services for many residents. Consequently, any attempt to formalise land must reckon with the fact that informality currently delivers real, although imperfect, benefits to the urban poor.

Discussion

This section interprets the findings by framing land cartels as informal institutions embedded within formal governance structures, involving actors who are both unofficial and officially sanctioned. They sanction land access through coordinated, exclusionary practices and their authority emerges from social legitimacy, political ties, and institutional gaps. Framing them this way helps explain their role in co-producing urban order, sustaining illegality through

performative politics, consolidating authority via embeddedness, normalising shadow markets, and operating across multiple scales. Each of these dynamics is explored in the subsections that follow.

Land Cartels as Co-Producers of Urban Order

The findings from Korogocho reinforce the conceptualisation of land cartels as embedded governance actors rather than mere criminal anomalies. These networks—composed of structure owners, brokers, youth groups, and state-aligned figures—operate within the gaps of formal governance, fulfilling roles typically reserved for state authorities. Their entrenchment in everyday urban life mirrors Cleaver’s (2012) notion of institutional bricolage, whereby governance systems emerge organically from hybrid legalities and social necessity. Land cartels allocate plots, resolve disputes, regulate service access, and negotiate with NGOs and state agencies. They thrive within the co-produced governance landscape described by Kamunyori (2016) and Joireman (2011), reflecting the city’s deeply hybrid land economy where over 70% of transactions bypass formal channels.

As Boeckler, Engel, and Müller-Mahn (2017) note, spatial order in African cities emerges through competing claims and fragmented sovereignties, rather than centralized control. In Korogocho, land cartels operate within this fragmented landscape, asserting territorial control through informal mechanisms that often intersect with formal governance structures. Far from undermining order, their practices constitute a situated form of spatial organization under conditions of institutional plurality. Viewed through the lens of Critical Urban Political Ecology (CUPE), these cartels are not peripheral actors but central agents in Nairobi’s urban metabolism—intermediaries embedded within both community dynamics and state logics (Tzaninis et al., 2020). Their actions represent not anomalies but adaptive responses to a political economy shaped by contradictions, scarcity, and uneven state presence.

Performative Politics and the Reproduction of Illegality

A salient insight emerging from the data is the performative nature of state interaction with cartels. While political leaders publicly condemn cartels, fieldwork revealed that many officials benefit from these same informal economies. This dualism affirms Swyngedouw’s (2004) view of cities as sites of symbolic statehood, where governance is enacted through performance rather than substantive intervention. The study observed how cartels participate in public meetings and slum upgrading forums, presenting themselves as legitimate community representatives while resisting reforms threatening their interests. This duplicity is politically functional: it maintains a veneer of participation and legality while sustaining elite dominance

over land and services. As Roy (2005) contends, the state produces informality selectively, using legality as a tool of control rather than inclusion.

This performative duality extends beyond informal settlements. As documented by Jimmy (2024), similar dynamics play out in elite neighbourhoods where developers exploit regulatory ambiguities to expand construction unlawfully, yet under the cover of legal reformist rhetoric. This widespread performativity—across income and space—suggests that illegality is not an aberration but a defining feature of Nairobi’s urban governance. Government statements about fighting cartels, as seen in high-level media pronouncements from successive officials (Ngilu, 2014; Wahome, 2024), serve more to reinforce state legitimacy than to address underlying structures of collusion and complicity.

Embeddedness, Authority, and the Risk of Exclusion

The social embeddedness of cartels in Korogocho is central to their stability and influence. Structure owners, many of whom have resided in the area since the 1970s, derive legitimacy not from legal title but from community history and political accommodation, especially after their claims were recognised in the 2008 KSUP programme. This recognition transformed them from informal actors into de facto authorities. However, this embeddedness has a double edge. While it enables predictable service delivery and conflict mediation, it also fosters exclusionary practices, particularly against tenants and newly arriving migrants. As wealthier individuals consolidate land in anticipation of redevelopment, the risk of displacement grows. This echoes Wahome’s (2022) and Rigon’s (2016) caution that embedded informal actors can evolve into monopolistic gatekeepers, hindering equitable development.

Field interviews reveal a growing marginalisation of renters, despite their numerical dominance in settlements like Korogocho. The collapse of the 2001 upgrading programme—triggered by structure owners’ resistance to redistribution—and the state’s subsequent political accommodation in 2008 highlight how cartels gain legitimacy through both community ties and crisis management. This legitimacy, however, is rarely inclusive. In practice, upgrading programmes risk consolidating cartel control under the guise of community participation, unless mechanisms are established to ensure the representation of tenants, youth, and other non-owner groups.

Informality and the Normalisation of Shadow Markets

The study confirms that Nairobi’s land economy does not merely tolerate informality—it requires it. The city’s planning failures, regulatory gaps, and affordable housing crisis have created a demand for extra-legal mechanisms of survival. Cartels fill this vacuum, managing

land access in a city where legal title remains unattainable for most. Informality here is not synonymous with disorder but constitutes an alternative logic of urbanisation, an “order in disorder” (Simone, 2004; Roy, 2009). As demonstrated in both Korogocho and upper-income areas like Kileleshwa (Jimmy, 2024), cartels operate across class and space, revealing that illegality is not marginal but systemic. Nairobi’s formal and informal land markets are intertwined through patronage, strategic ambiguity, and regulatory failure.

Indeed, the illegalities observed in informal settlements mirror practices in formal developments, such as overbuilding or permit manipulation. This calls for a broader analytical lens, one that sees illegality as a continuum, rather than a fixed boundary between state and non-state actions. Land cartels, in this framing, do not exist outside governance; they are governance.

Cartels, Governance, and Nested Power Dynamics

The results reveal that cartels do not operate only at the community level. They are nested within broader networks of political patronage and bureaucratic complicity, extending into municipal and national institutions. As participants noted, land boards, chiefs, and even elected officials are implicated in these networks, blurring distinctions between informal authority and formal power. This reflects Lessing’s (2020) concept of a “duopoly of violence”, where criminal and state actors co-produce governance.

Korogocho’s cartels exemplify this entanglement. Chiefs, for instance, issue Temporary Occupation Licences and record land transactions, functioning as both regulators and enforcers. Their monopoly over public space reinforces their authority, even as they extract informal rents. Similarly, Residents’ Committees, initially established to facilitate upgrading, often act as cartel fronts. This underscores the need to avoid simplistic readings of community leadership as inherently progressive. Embeddedness confers legitimacy, but without checks, it can entrench inequality and coercion.

Implications for Urban Governance and Land Reform

The entrenchment of land cartels in Nairobi’s informal settlements raises critical questions for land policy and urban reform. First, any effective intervention must reckon with the legitimacy and power of actors such as structure owners and local brokers. Ignoring them risks resistance while over-legitimising them risks exclusion and elite capture. Second, slum upgrading programmes must be accompanied by robust mechanisms of transparency, equity, and tenant protection, especially in areas with growing property consolidation. Third, the blurred boundaries between formality and informality suggest that policy should shift from binary

enforcement to nuanced governance models that accommodate complexity without legitimising exploitation.

Conclusions

This paper sheds light on the complex interplay of performative politics, social embeddedness, and urban land governance in perpetuating and reinforcing land cartels within informal settlements of Nairobi. We demonstrate how land Cartels in Korogocho initially arose to compensate for state neglect but quickly morphed into powerful cartels that wield influence via land grabbing, document forgery, zoning manipulation, and illicit real estate investment.

We establish that first, land cartels have emerged as essential co-producers of urban order - allocating plots, settling disputes, and negotiating developmental projects when formal institutions falter. This reframing challenges the notion of informality as residual: cartels perform roles akin to those of the state and cannot simply be “eradicated” without viable alternatives for land access, conflict arbitration, and infrastructure provision. Secondly, we find that performative politics is a deliberate strategy by which both cartels and state actors project legitimacy while perpetuating illegality.

Despite public denunciations, covert cooperation remains. The rhetoric of reform becomes a smokescreen, reinforcing shadow-market dynamics rather than dismantling them. Thirdly, we establish that land cartels are deeply embedded at different levels of governance; they are rooted in customary legitimacy, state delegation, and community networks. This paper demonstrates how these actors enforce “rules” through social contracts and coercion. Yet this embeddedness is double-edged: while it enables predictable service delivery, it also entrenches exclusion, marginalizing tenants, youth, and newer migrants and replicating inequalities under the guise of community stewardship.

This paper advances debates on urban land markets by showing that informality and illegality are central to Nairobi’s governance regime. It challenges the conventional divisions of formal/informal and legal/illegal by demonstrating how land cartels co-produce urban order through their interactions with state actors and hybrid institutions. These findings extend Critical Urban Political Ecology (CUPE) by highlighting how performative politics and institutional bricolage sustain shadow markets despite public condemnation. This paper further critiques policy approaches that focus on eradicating informality through top-down enforcement, advocating instead for governance models that recognize embedded actors, align incentives across governance levels and address the underlying logic of informality. CUPE’s focus on scale, agency, and contestation offers a comprehensive understanding of land cartels

as flexible assemblages responding to political and economic forces. The paper calls for land reform strategies that are sensitive to local histories, structural inequalities, and the contested nature of representation.

References

- Angelo H and Wachsmuth D (2013) Urbanizing urban political ecology: A critique of methodological cityism. In: Imrie R and Lees L (eds) *Urban political ecologies in the anthropo obscene*. London: Routledge.
- Anyango S (2022) *The sustainability of participatory slum upgrading: A case study of the Kambi Moto settlement upgrading programme in Huruma, Nairobi City County*. Master's Thesis, University of Nairobi, Kenya.
- Bandauko E and Arku G (2025) Navigating political opportunity structures: Street traders' associations and collective action in politically volatile urban environments. *Political Geography* 109: 103292.
- Bhanye J, Matamanda A, Kohima J et al. (2024) Implications of peri-urban land reform programs on urban land markets: A case study of Harare, Zimbabwe. *Humanities and Social Sciences Communications* 11: 1120.
- Boeckler M, Engel U and Müller Mahn D (2018) Regimes of territorialization: Territory, border and infrastructure in Africa. In: Engel U, Boeckler M and Müller Mahn D (eds) *Spatial Practices: Territory, Border and Infrastructure in Africa*. Leiden: Brill, pp.1–20. DOI: 10.1163/9789004367012_002.
- Burugu D (2015) *Conflict in slum upgrading programme: A case study of Korogocho slum in Nairobi*. Master's Thesis, University of Nairobi, Kenya.
- Carrizosa M (2022) *Urban informality and the making of African cities*. Nairobi: Friedrich Ebert Stiftung Kenya Office.
- Centre for Affordable Housing Finance (2023) *Nairobi metropolitan area dashboard: Housing developments in the NMA (2021–2023)*. Available at: <https://housingfinanceafrica.org/documents/housing-developments-in-the-nairobi-metropolitan-area/> (accessed 4 May 2025).
- Chulek M (2019) *Bottom up hustling in Nairobi's slums*. Cambridge: Cambridge University Press.

- Cleaver F (2012) *Development through bricolage: Rethinking institutions for natural resource management*. London: Routledge. DOI: 10.4324/9781315094915.
- Corburn J, Njoroge P, Weru J et al. (2022) Urban climate justice, human health, and citizen science in Nairobi's informal settlements. *Urban Science* 6(2): 1–17. DOI: 10.3390/urbansci6020036.
- County Government of Nairobi (2023) *Nairobi county integrated development plan*. Report, Nairobi, Kenya.
- Cytonn (nd) *Kilimani Research Report*. Available at: https://www.cytonn.com/uploads/downloads/Kilimani_Research_Report.pdf (accessed 1 May 2025).
- Datta A and Hoefsloot FI (2024) *The state as auteur: Timing digitisation in Africa's Silicon Savannah*. *Dialogues on Digital Society*.
- de Soto H (2000) *The mystery of capital: Why capitalism triumphs in the West and fails everywhere else*. London: Black Swan.
- Directorate of Criminal Investigations (2024) *Beware: Land cartels issuing forged title deeds*. Available at: <https://www.dci.go.ke/beware-land-cartels-issuing-forged-title-deeds> (accessed 24 April 2025).
- Doshi S and Ranganathan M (2017) Contesting the unethical city: Land dispossession and corruption narratives in urban India. *Annals of the American Association of Geographers* 107(1): 183–199.
- Encyclopaedia Britannica (1998) *Syndicate*. Available at: <https://www.britannica.com/topic/syndicate> (accessed 25 April 2025).
- Gandy M (2021) *Urban political ecology: A critical reconfiguration*. *Progress in Human Geography* 46(1): 21–43. DOI: 10.1177/03091325211040553.
- Gathuthi C, Muindi M, Mwalali T et al. (2010) *Korogocho socioeconomic survey report 2010*. Nairobi: Participatory Training Promotions Institute Ltd.
- Githira D (2016) *Growth and eviction of informal settlements in Nairobi*. Master's Thesis, University of Twente, Netherlands.
- Government of Kenya (2016) *Sessional paper No. 02 of 2016 on national slum upgrading and prevention policy*. Report, Ministry of Land, Housing and Urban Development, Nairobi, Kenya.

- Government of Kenya (2022) The Community Land Act, Chapter 287 (Revised Edition 2022). Nairobi: National Council for Law Reporting. Available at: <https://www.kenyalaw.org/lex//actview.xql?actid=CAP.%20287> (accessed 10 March 2024).
- Government of Kenya (2024) National slum upgrading and prevention strategy (2024–2034). Report, Ministry of Land, Housing and Urban Development, Nairobi, Kenya.
- Gurney K, Pieterse E and Govender T (2016) Creative methodology for futures thinking. Available at: <https://www.africancentreforcities.net/visualising-the-futures-of-our-neighbourhoods/> (accessed 14 May 2024).
- Huchzermeyer M (2011) Cities with ‘slums’: From informal settlement eradication to a right to the city in Africa. Cape Town: UCT Press.
- IFRA Nairobi (2011) Korogocho slum upgrading programme. *Les Cahiers d’Afrique de l’Est / The East African Review*. DOI: 10.4000/eastafrica.541.
- Ipamba E (2019) An assessment of community participation in slum upgrading. Master's Thesis, University of Nairobi, Kenya.
- Jaspers JD (2020) Strong by concealment? How secrecy, trust, and social embeddedness facilitate corporate crime. *Crime, Law and Social Change* 73: 67–68. DOI: 10.1007/s10611-019-09847-4.
- Jimmy EN (2024) Reconsidering informality: Informal housing practices, illegal actors, and planning response strategies within middle income neighbourhoods in Nairobi City, Kenya. Unpublished manuscript.
- Joireman SF (2011) Where there is no government: Enforcing property rights in common law Africa. Oxford: Oxford University Press.
- Kamau P (2009) Urbanization and the growth of informal settlements in Nairobi, Kenya. In: *The state of Nairobi: Challenges and opportunities in urban development*. Nairobi: Nairobi University Press.
- Kamunyor SW (2016) The politics of space: Negotiating tenure security in a Nairobi slum. PhD Thesis, London School of Economics and Political Science, UK.
- Kenya Broadcasting Corporation (2024) Wahome promises to wipe out cartels in land sector. Available at: <https://www.kbc.co.ke/wahome-promises-to-wipe-out-cartels-in-land-sector/> (accessed 4 May 2025).

- Kenya Law (2017) Environment & Land Case 492 of 2017: Vision Peoples in Mission Limited & another v Ministry of Lands, Housing & Urban Development & 3 others. Available at: <https://kenyalaw.org/caselaw/cases/view/166050> (accessed 4 May 2025).
- Kenya National Bureau of Statistics (2019) 2019 Kenya population and housing census Volume II: Distribution of population by administrative units. Nairobi: KNBS.
- Kimari W (2016) We do not want any more masters: The politics of planning in Nairobi's informal settlements. PhD Thesis, University of Nairobi, Kenya.
- Kimari W and Parish J (2020) What is a river? A transnational meditation on the colonial city, abolition ecologies and the future of geography. *Urban Geography* 41(5): 643–656. DOI: 10.1080/02723638.2020.1743089.
- Kleemans ER (2013) Organized crime and the visible hand: a theoretical critique on the economic analysis of organized crime. *Criminology & Criminal Justice* 13(5): 615–629. DOI: 10.1177/1748895812465296.
- Langat A (2019) In Kenya's largest slum, the World Bank battles cartels for control of electricity. Available at: <https://www.devex.com/news/in-kenya-s-largest-slum-the-world-bank-battles-cartels-for-control-of-electricity-93878> (accessed 20 August 2024).
- Leaf M (1992) Informality and urban land markets. *Berkeley Planning Journal* 7(1). DOI: 10.5070/BP37113107.
- Lessing B (2020) Conceptualizing criminal governance. *American Political Science Review*. DOI: 10.1017/S1537592720001247.
- Magaloni B, Franco Vivanco E and Melo V (2020) Killing in the slums: Social order, criminal governance, and police violence in Rio de Janeiro. *American Political Science Review* 114(2): 552–572. DOI: 10.1017/S0003055419000856.
- Maru SK, Mwangi S and Bor EK (2024) Exploration of the urban residents' perceptions on crime prevention strategies: A case study of informal settlement neighbourhoods of Nakuru City, Kenya. *Journal of African Interdisciplinary Studies* 8(2): 83–97.
- Mbathi M (2012) Integrating geo information tools in informal settlement upgrading processes in Nairobi, Kenya. PhD Thesis, Newcastle University, UK.
- Mbembé JA and Nuttall S (2004) Writing the world from an African metropolis. *Public Culture* 16(3): 347–372.

- Mitullah WV and Nyakoe GN (2014) Ethnically disputed spaces: Lessons from Kenya's Rift Valley. *Eastern Africa Social Science Research Review* 30(1): 77–94.
- Mudapakati CP, Bandaiko E, Chaeruka J et al. (2024) Peri-urbanisation and land conflicts in Domboshava, Zimbabwe. *Land Use Policy* 144: 107222.
- Muggah R, Agevi E, Maviti J et al. (2012) Urban resilience in situations of chronic violence: Case study of Nairobi, Kenya. Cambridge, MA: Center for International Development.
- Mundia CN and Aniya M (2006) Dynamics of land use/cover changes and degradation of Nairobi City, Kenya. *Land Degradation & Development* 17(1): 97–108. DOI: 10.1002/ldr.702.
- Mutua J and Kiruhi T (2021) Village elders' participation in public governance in Kenya: A phenomenological study. *Open Journal of Leadership* 10: 110–128. DOI: 10.4236/ojl.2021.102008.
- Ono H and Kidokoro T (2020) Understanding the development patterns of informal settlements in Nairobi, Kenya. *Journal of Architecture and Planning*.
- Opanga V (2023–2024) Fieldwork in Korogocho, Nairobi, Kenya (August 2023–January 2024, June 2024–August 2024). Unpublished manuscript.
- Panek J and Sobotova L (2015) Community mapping in urban informal settlements: Examples from Nairobi, Kenya. *The Electronic Journal of Information Systems in Developing Countries* 68.
- Ren H, Guo W, Zhang Z et al. (2020) Population density and spatial patterns of informal settlements in Nairobi, Kenya. *Sustainability* 12(18): 7717.
- Reuters (2016) Kenya to “purge” land ministry of corrupt cartels: official. Reuters, 29 September. Available at: <https://www.reuters.com/article/kenya-land-corruption-idUKL8N1CI3UR/> (accessed 4 May 2025).
- Rigon A (2016) The effects of donors' ownership and participatory policy ideas on local power structures: A case study of informal settlements in Nairobi. In: *Local politics, global impacts*. Abingdon: Taylor & Francis.
- Rodriguez Torres D (2010) Public authorities and urban upgrading policies in Eastlands. In: Charton Bigot H and Rodriguez Torres D (eds) *Nairobi today: The paradox of a fragmented city*. Nairobi: IFRA.

- Roy A (2005) Urban informality: Toward an epistemology of planning. *Journal of the American Planning Association* 71(2): 147–158. DOI: 10.1080/01944360508976689.
- Schroeder S (2021) Produced types of informal public spaces and the new vernacular of the contemporary city. In: *Simposio Internacional de Doctorandos en Desarrollo Urbano Sustentable en Latinoamérica y el Caribe*. University of Piura & University of Bío Bío.
- Sergi A and Storti L (2020) Survive or perish: Organised crime in the port of Montreal and the port of New York/New Jersey. *International Journal of Law, Crime and Justice*. DOI: 10.1016/j.ijlcrj.2020.100424.
- Siakilo E (2014) Characteristics and the state of land ownership in informal settlements in Nairobi, Kenya. *International Journal of Innovation and Scientific Research* 3(2): 218–226.
- Simone A (2004) People as infrastructure: Intersecting fragments in Johannesburg. *Public Culture* 16(3): 407–429.
- Stellamaris OK (2019) The status of tenure security in Kenya. Research paper. Available via ResearchGate.
- Sverdlik A, Walnycki A and Ochieng D (2025) Informal settlements and land economies in Nairobi. African Cities Research Consortium.
- Swyngedouw E (2004) Scaled geographies: Nature, place, and the politics of scale. In: Sheppard E and McMaster RB (eds) *Scale and geographic inquiry: Nature, society, and method*, Chapter 7. DOI: 10.1002/9780470999141.ch7.
- Syagga P, Mitullah W and Karirah Gitau S (2002) Draft Nairobi situation analysis supplementary study: A rapid economic appraisal of rents in slums and informal settlements. Report for Government of Kenya and UN Habitat.
- The Standard (2014) Cartels have taken over Lands ministry, Ngilu warns. *The Standard*, 10 November. Available at: <https://www.standardmedia.co.ke/nairobi/article/2000097793/cartels-have-taken-over-lands-ministry-ngilu-warns> (accessed 4 September 2024).
- The Standard (2019a) 300 tycoons probed over Sh10b land grab. *The Standard*, 14 March. Available at: <https://www.standardmedia.co.ke/counties/article/2001337653/300-tycoons-probed-over-sh10b-land-grab> (accessed 4 September 2024).

- The Star (2023) Land records digitisation has tamed cartels in Ardhi house – Njeru. The Star, 11 September. Available at: <https://www.the-star.co.ke/news/2023-09-11-land-records-digitisation-has-tamed-cartels-in-ardhi-house-njeru/> (accessed 4 September 2024).
- The Weekly Review Ltd (1977) The Weekly Review, 3 October. Nairobi: The Weekly Review Ltd. Available at: <https://coilink.org/20.500.12592/p8czfpz> (accessed 4 September 2024).
- Tzaninis Y, Mandler T, Kaika M et al. (2020) Moving urban political ecology beyond the “urbanization of nature”. *Progress in Human Geography* 45(2): 229–250. DOI: 10.1177/0309132520903350.
- UN Habitat (2003) The challenge of slums: Global report on human settlements 2003. London: Earthscan.
- UN Habitat (2007) Twenty first session of the governing council (16–20 April 2007), Nairobi, Kenya. Nairobi: UN Habitat.
- UN Habitat (2012) Korogocho slum upgrading programme integrated physical development plan. Nairobi: UN Habitat.
- UN Habitat (2015) Habitat III issue papers: 22 – Informal settlements. Available at: <https://unhabitat.org/habitat-iii-issue-papers-22-informal-settlements> (accessed 4 May 2025).
- UN Habitat (2023a) Kenya country brief: A better quality of life for all in an urbanising world. Nairobi: UN Habitat.
- United Nations Human Settlements Programme (2023b) Annual Report 2023. Report, Nairobi: UN Habitat.
- Vusha SM (2018) An evaluation of the current land laws in solving the urban squatter land tenure problem. Master's Thesis, University of Nairobi, Kenya.
- Wahome P (2022) Statehood, sovereignty and identities: Exploring policing in Kenya's informal settlements of Mathare and Kaptembwo. PhD Thesis, University of Edinburgh, UK.
- Weinstein L (2008) Mumbai's development mafias: Globalization, organized crime and land development. *International Journal of Urban and Regional Research* 32(1): 22–39.

Weru J, Wanyoike W and Di Giovanni A (2015) Confronting complexity: Using action research to build voice, accountability, and justice in Nairobi's Mukuru informal settlements. *World Bank Legal Review* 6: 95–117.

Yunda CA and Sletto B (2017) The limits of formalization: Informality, urban planning, and the Right to the City in Bogotá, Colombia. *Planning Theory* 16(2): 165–185

5.2. Contestations over Space: Urban Greening and Displacement in Pumwani-Majengo, Nairobi¹⁴

Valentine Opanga^{a}, University of Bonn and Prince Guma^b,*

^a Centre for Development Research, ^bBritish Institute in Eastern Africa

**Corresponding author*

Abstract

This paper examines the intersection of urban land appropriation with greening and ungreening in informal settlements, focusing on how internal power struggles drive displacement and exacerbate inequality. Using Nairobi's Pumwani–Majengo as a case study, the research applies the Situated Urban Political Ecology (SUPE) framework, grounded in environmental justice, to analyse disputes over green spaces. Fieldwork combined semi-structured interviews, focus group discussions, life histories, field observations, and archival review with GIS and Landsat-based spatial analysis. Adaptive sampling, reflexivity, and methodological triangulation were used to navigate sensitive contexts and ensure data robustness. Displacement extends beyond physical relocation, breaking social, cultural, and economic ties that are vital to resilience. Residents respond through resignation, negotiation, or active resistance. “Greening” and “ungreening” occur simultaneously, politicised and tied to dispossession, enclosure, and “green evictions” that disproportionately affect vulnerable groups, particularly in riparian areas. Land changes create socioeconomic enclaves, privileging wealthier newcomers and marginalising low-income residents. The study challenges the notion of urban green spaces as neutral public goods, showing their appropriation for elite interests, and contributes to debates on environmental governance and land commodification in informal contexts by illustrating how green space disputes reproduce socio-spatial inequalities in rapidly growing cities.

Keywords: Urban appropriation, greening and ungreening, displacement, enclaves, power dynamics, informal settlements, environmental justice

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Introduction

Informal settlements in many African cities underscore the challenges of green space development, where community resilience often clashes with land commodification and urban sustainability. In many cities, encroachment on road reserves and riparian lands, combined with the unchecked appropriation of green spaces, have led to environmental degradation in many areas (Njoroge et al, 2020). Competing interests from businesspeople, politicians, and other actors further lead to the fragmentation of communities and the exacerbation of socioeconomic inequities (Lindell & Ampaire, 2016; Cobbinah & Finn, 2023; Titz & Chiotha, 2019). While community organizations foster hope through initiatives such as river clean-ups and tree planting, selective policy implementation and the commodification of communal open spaces continue to lead to the displacement and marginalisation of long-term residents in many settlements (Bloch & Meyer, 2023; Simone, 2010).

This phenomenon unfolds amidst global calls for greener urban areas as pathways to sustainable development and the realisation of resilient, sustainable, and inclusive cities, as outlined in key global frameworks such as the New Urban Agenda and the Sustainable Development Goal (SDG) 11 on cities and human settlements (Akanbang, et al., 2024). At the regional level, the African Urban Agenda encourages countries to prioritise environmental sustainability, resilience, and risk reduction in the implementation of the New Urban Agenda across Africa (African Union, 2020). To this effect, governments are rolling out national greening initiatives such as Kenya's Jaza Miti campaign, which aims to increase tree cover to 30 per cent by 2032 (The Nation, 2022). However, implementation can disproportionately affect informal settlements, cause displacement, and leave powerful actors unaffected.

Against this backdrop, governments across Africa are striving to meet set targets through frameworks such as Nationally Determined Contributions (NDCs). The Kenyan government, for instance, is pushing forward its green agenda through initiatives like the *Jaza Miti program*, a presidential directive through which the government seeks to increase Kenya's tree cover to 30 percent by 2032 (The Nation, 2022) to align the country with global sustainability goals. On paper, this represents a bold vision for combating climate change and positioning Kenya as an environmental leader. However, this vision often unfolds at the expense of the city's poorest residents, leaving powerful landowners untouched. As Nairobi, Kenya's Capital, and commercial nerve centre, continues to grow and urbanisation accelerates, land-related conflicts have become increasingly violent, often camouflaging under the guise of environmental restoration.

Following the May 2024 floods, mass evictions displaced approximately 42,000 households (Wakhungu et al, 2024), supposedly for disaster prevention (Opanga, 2025). These evictions mainly target the urban poor in informal settlements while wealthier, politically connected residents are unaffected (Fieldwork, 2024). Much of the land cleared is later repurposed for commercial development, often justified as infrastructure enhancement. Meanwhile, urbanisation increases demand for housing, hospitals, and schools, elevating the threat to green spaces as priorities shift towards development.

This study therefore explores the dynamics shaping the appropriation of green spaces amidst competing interests within Nairobi’s informal settlements by focusing on the informal settlement of Pumwani-Majengo. We explore how green spaces in informal settlements are shaped by fluidity and contestation, where economic, political, and environmental forces and local needs shape their appropriation. Additionally, we examine how non-state actors influence land dynamics, and community responses, recognising that urban greening initiatives disproportionately affect vulnerable groups leading to manifestations of neighbourhood fragmentation, marginalisation and displacement of low-income residents, and socioeconomic inequalities and conflicts (Lombard & Rakodi, 2016). We argue that changes in both ownership and use of communal and public green/open spaces are central drivers of Nairobi’s uneven “greening” and “ungreening” processes, producing new forms of dispossession and displacement in Pumwani–Majengo.

This study addresses three questions: (1) How have green and open spaces changed since the 1980s? (2) What mechanisms and actors drive ownership vs. use change? (3) What socio-ecological impacts and community responses follow? The remainder of the paper is structured as follows: Section Two offers a comprehensive review of the literature, exploring contestations associated with green space development. Section Three presents the conceptual framework highlighting Urban Political Ecology (UPE) as an analytical lens.

Section Four provides the background, and the materials and methods used to examine green space dynamics in Nairobi’s Pumwani-Majengo. Section Five explores the empirical data, examining land commodification and the power dynamics of urban greening initiatives, displacement processes and mechanisms shaping Somali enclaves, the socioeconomic, environmental, and cultural impacts, parallel but conflicting processes of ‘greening and ungreening’¹⁵, and community responses. This study, we argue, challenges the conventional

¹⁵ *Ungreening* involves the removal or destruction of vegetation, making spaces environmentally unfriendly and less sustainable (adapted from Collins Dictionary, 2024). In contrast, *greening* focuses on enhancing

view of urban green spaces as public goods, exposing their co-option for elite-driven aesthetic and commercial purposes. In summation, we offer insights for future urban sustainability initiatives and environmental agendas in African cities, contributing to broader debates on urban greening, politics, and contestation.

Researching Contestations Over Green Space Development

Urban greening, while often promoted as a technical policy and cornerstone of sustainable development, often heightens inequalities rather than mitigating them. Critical scholars have shown how greening initiatives benefit wealthier populations while displacing marginalised communities through gentrification and commodification (Davies, 2021; Lancione, 2019). O’Loughlin (2021) attributes these disparities to inherent flaws in urban planning, while Gyawali et al (2016) highlight how, amidst climate change pressures, such processes showing urban expansion perpetuate inequity and inequality. Anguelovski et al. (2023) note that greening initiatives often drive up property values, displacing lower-income residents. Wachsmuth and Angelo (2018: 452-455) critique these initiatives for being marketed as public goods while primarily serving to enhance urban competitiveness, often at the expense of inclusive public access.

Urban appropriation, or the contested claiming, control, and transformation of land, has often been examined in terms of “appropriation to green,” where land is repurposed for environmental restoration. However, this paper considers “appropriation involving both greening and ungreening,” in which ownership and use change simultaneously, resulting in both restoration and loss. These processes are particularly evident in cities of the Global South, where informal tenure systems, fragmented governance, and entrenched power asymmetries influence access to and control over land. Focusing on the local urban scale enables a more detailed tracing of these mechanisms than broad, continent-wide accounts of “African greening.”

In the global North, debates about green spaces often focus on planning, governance, and ecological sustainability, highlighting issues such as rapid urbanisation, socio-economic inequalities, and the political motives behind greening initiatives (Rizzo, 2020; Ghertner, 2014; Leitner et al., 2008; Karic & Diller, 2023). In contrast, research on African cities stresses the politicisation of greening, where projects are frequently used as tools of state power, urban branding, and capital accumulation (Ndebele-Murisa et al., 2020; Mwaura & Lawhon, 2024). Green space policies often favour wealthier neighbourhoods, neglecting marginalised

environmental protection and restoring or maintaining green spaces to improve ecological sustainability (adapted from Cambridge Dictionary, 2024).

communities and reflecting broader enclosure and urban growth patterns. Studies from South Africa, Kenya, and elsewhere show weak tenure security and enforcement allow powerful actors to privatise communal land, leading to loss of green infrastructure and increasing inequalities (Hansen, 2014; Lombard & Rakodi, 2016; Huchzermeyer, 2011; Myers, 2011). In African cities, green spaces are highly adaptable, often changed through contested governance, commodification, and shifting ownership. This is evident in Nairobi, where enclosure, reclassification, and speculative development have transformed communal green spaces.

Previous studies highlight contestations over Nairobi's urban green spaces, rooted in socio-political struggles and uneven governance (Mbatia, 2016; Anguelovski et al., 2019). Research emphasises the role of diverse actors, migrant networks, local elites, officials, and investors, in shaping land markets and the Somali business community. Eastleigh is a significant contributor to growth, but its activities relate to speculative urbanism, informal economies, and governance gaps (Carrier, 2017; Scharrer, 2018; Goodfellow, 2022). Studies reveal how overlapping interests among state and non-state actors co-construct uneven development and contested land use, positioning Somali investments within broader processes of accumulation and exclusion shaping Nairobi's green spaces.

In Kenya, ambition to position Nairobi as the *green city in the sun* has led to high-profile greening projects aligned with the country's constitutional commitment to environmental sustainability, yet these efforts often prioritise political visibility and economic gains over inclusivity (Goodfellow, 2022: 100). In practice, urban greening initiatives are contested processes, shaped by challenges rooted in urban poverty, governance, and contested land tenure. Kariuki (2023) identifies land grabbing and weak policy enforcement as critical obstacles to equitable access to green spaces in Nairobi, where urbanisation pressures further complicate efforts to protect these areas. Njoroge et al (2020) highlight the essential role green spaces play in urban livelihoods, yet their utility is frequently contested as public lands are increasingly repurposed for commercial developments such as malls and high-rise buildings (Marx, 2016). These dynamics illustrate how socioeconomic disparities and political power intersect to marginalise vulnerable populations in green space planning.

These patterns correspond with broader debates on accumulation-by-dispossession and green grabbing, where privatisation, selective investment, and strategic neglect transform communal lands into exclusionary assets (Harvey, 2003; Elliott-Cooper et al., 2020). In Nairobi, such processes are evident in the targeted upgrading, neglect, or removal of green amenities that fragment neighbourhoods and open spaces, fostering speculative redevelopment (Wachsmuth

& Angelo, 2018). Titz & Chiotha (2019) demonstrate how elite-driven greening projects can coexist with enclosure and loss of commons, a dynamic reflected in Nairobi's city-wide initiatives such as the Nairobi Integrated Urban Development Master Plan (NIUPLAN, 2014-2030), which encourages urban greening through park rehabilitation and wetland conservation, and the Breathe Cities Initiative launched in 2024, designed to reduce emissions by promoting urban forestry and green infrastructure in high-pollution areas, including informal settlements (Nairobi City County, 2024).

These programmes risk reinforcing historic exclusions by prioritising planned neighbourhoods (Njoroge et al., 2020; Kariuki, 2023; Nairobi City County, 2024). In this context, appropriation denotes power-laden processes where state and non-state actors exert control over land, often displacing lower-income groups under the guise of sustainability or development (Anguelovski et al., 2019; Wachsmuth & Angelo, 2018). These city-level dynamics set the stage for understanding how contestation over green and open spaces occurs most sharply within informal settlements. Within informal settlements, urban greening initiatives are deeply contested due to the intersection of poverty, displacement, and environmental justice. Yet, they play a key role as sources of livelihood and climate resilience for people who live in informal settlements (Parker, 2020).

In Nairobi's informal settlements, green space governance efforts are further complicated by inconsistent policies and regulatory gaps, leaving these spaces vulnerable to appropriation by powerful actors (Njoroge et al, 2020). Although Kenya's Constitution guarantees the right to a clean environment and public land access, business interests and political elites often undermine these rights. The Nairobi River clean-up initiative, for example, was framed as an environmental project but resulted in evictions without proper compensation, exemplifying the socio-political dynamics at play (Opanga, 2025). Meso (2013: 22-28) explains that green spaces in informal settlements in Kenya often function as 'transitional zones' where control shifts based on power dynamics, encapsulating the broader socio-political struggles. Additionally, Goodfellow (2022: 100-105) highlights how informal governance networks deepen urban inequality, with politically connected individuals securing exclusive access to green spaces at the expense of the marginalised.

This literature, while extensively examining urban greening as a contested space shaped by socioeconomic inequities and governance dynamics, highlights a critical gap: the need for a more nuanced understanding of internal power dynamics in the appropriation and use of green spaces within spaces of contestation prioritise. As much of the existing research focuses on

issues such as gentrification, commodification, and the marginalisation of vulnerable populations through urban greening projects, there is a need for a deeper understanding of how power dynamics within informal settlements influence the appropriation and use of green spaces. Accordingly, this paper challenges the conventional view of urban green spaces as universally accessible public goods by examining how competing interests disrupt social equity and foster elite-driven environmental agendas. In so doing, we respond to scholars such as Diko and Hollstein (2021) who in their critique of one-size-fits-all approaches to urban greening, have noted that theories originating in the Global North often fail to address the socioeconomic realities of the Global South. We underscore the commodification of land and the power dynamics underlying urban greening initiatives, as well as the resulting displacement, which gives rise to diverse socioeconomic, environmental, and cultural implications.

Toward a Conceptual Framework

This paper employs the Urban Political Ecology (UPE) framework to examine the intricate relationships among political, social, ecological, and economic processes shaping urban environments and their inhabitants (Heynen et al., 2006). Using UPE, the study analyses the dynamic and context-specific realities of green space appropriation in informal urban settlements, with a particular focus on the intersection of power, governance, and socioeconomic inequalities. This framework moves beyond merely exploring how capitalism, modernity, and historical factors shape urban spaces, delving into how various forms of social power are created and sustained through the production of ‘social natures’ (Swyngedouw, 1996).

Situated Urban Political Ecology (SUPE) expands and redefines UPE by focusing on urban experiences in the Global South. SUPE emphasises layered informality, negotiated property regimes, flexible land claims, non-state authority, and everyday practices that shape access to urban nature (Lawhon et al., 2018, 2020). It shifts focus to the institutional logics and normative frameworks of Southern cities, which conventional UPE often under-theorises. This study’s contribution is threefold: (1) applying UPE concepts within a SUPE-informed empirical framework; (2) introducing and refining the idea of ungreening, which describes simultaneous processes of commodification/privatisation and selective removal/neglect that occur alongside elite-led greening; and (3) empirically demonstrating how these processes unfold in Pumwani–Majengo, revealing ethnic–economic intersections and micro-level appropriation mechanisms that SUPE highlights but broader UPE texts seldom explore in Southern informal contexts. This includes the influence of powerful non-state actors like the Somali business community

(Carrier, 2017) and the vulnerability of communal green spaces to speculative encroachment (Lombard & Rakodi, 2016; Kariuki, 2023). SUPE therefore supports a contextually grounded analysis of how power operates through state control, capital flows, informal claims, customary practices, and localised resistance.

Our approach builds on earlier work that analysed the socio-political dimensions of green space contestation in Nairobi (Mbatia, 2016), but extends this by operationalising Situated Urban Political Ecology (SUPE) to examine both greening and ungreening, and empirically trace displacement dynamics in Pumwani–Majengo. We draw explicitly from principles of environmental justice and equity, informed by intersectional approaches that emphasise antisubordination and relational dynamics (Anguelovski et al., 2019). To evaluate competing claims in Pumwani–Majengo, this study integrates legal benchmarks from the Kenyan Constitution (2010) with UPE analysis: Article 40 (property rights), Article 42 (environmental access), Article 43 (housing and economic rights), and Article 67(2)(e) (redress for land injustices) provide normative tests. Claims are legitimate where they respect these provisions, promote inclusive greening and due process, and are illegitimate where they enable elite commodification and exacerbate inequality (GoK, 2010).

Central to this analysis is the concept of “ungreening,” the deliberate or indirect removal of green spaces through commodification, privatisation, and displacement, often masked as urban development or environmental restoration. Ungreening extends “green grabbing” (Rizzo, 2020) by linking it to processes of dispossession, where communal lands are appropriated for elite interests, leading to the fragmentation of neighbourhoods (Cobbinah & Finn, 2023). Drawing from the enclosure concept, ungreening encloses urban commons, historically open spaces for recreation and livelihoods, transforming them into exclusive enclaves that exclude low-income residents (Fernández, 2012). This aligns with “green evictions,” where environmental initiatives, such as riparian clearances, justify forced removals under the guise of sustainability, disproportionately affecting vulnerable groups (Asante & Helbrecht, 2020; Ouma, 2024). In Pumwani–Majengo, ungreening manifests in parallel with greening, politicised through selective implementation that reinforces socioeconomic inequalities and echoes colonial land enclosures (Whittaker, 2012).

Mainstream UPE’s Northern bias can obscure the historical and informal logics that shape Southern cities, which are often marked by flexible land regimes, informal governance, and non-state actors. Therefore, we adopt a SUPE approach (Lawhon et al., 2020; Lawhon et al., 2018), focusing on Southern urban settings and the layered informality, flexible land rights, and

non-state power structures typical of cities like Nairobi. SUPE emphasises embedded, relational, and everyday practices that influence urban environments, providing a more grounded understanding of how appropriation occurs in places like Pumwani–Majengo. Our contribution to Situated UPE lies in demonstrating how ownership or use changes the structure of urban greening-ungreening cycles under weak governance. We show that in informal and low-income settings, ownership changes of communal and public green spaces, often through enclosure or reclassification, serve as a key pathway to “ungreening.” We also highlight how cycles of greening and ungreening are co-produced by selective enforcement and speculative development, involving both state and non-state actors.

The Contested Greening of Space in Pumwani-Majengo, Nairobi

Background

Urban green spaces play a crucial role in making cities livable by offering a wide range of ecosystem services. For example, they provision food and raw materials; regulate water and air purification, carbon sequestration, and temperature control; support soil formation; and provide spiritual and recreational value (Mulwa, 2020). Despite these benefits, green spaces in urban centres are sometimes perceived as vacant, awaiting repurposing for infrastructure projects or other development goals with quantifiable economic returns (Mulwa, 2020). This perception has been true for informal settlements such as Pumwani-Majengo, where central and municipal governments have continuously prioritised development projects over preserving green spaces, thereby leading to their framing as underutilised resources rather than essential components of sustainable urban environments (Owen, 2016).

Pumwani-Majengo (See Figure 14) historically emerged from a settlement scheme set up by the colonial British government in 1924 for migrants from various parts of Kenya and other groups such as people migrating from Somalia (See Table 10). Over time, it has lost significant portions of its green spaces (see Figure 15). These green spaces, once essential to community life for recreation, livelihood, and social cohesion, are now being commodified and privatised, fuelling displacement pressures and exacerbating inequalities (Whittaker, 2012). Yet, Pumwani-Majengo houses approximately 43,000 residents (KNBS, 2019) and serves as affordable housing for Nairobi’s low-income residents.

However, the settlement’s proximity to the Central Business District (CBD) has made it a target for commercial interests, with rising land values and ongoing development projects creating persistent displacement pressures (Ochieng, 2007). Land commodification, driven by powerful business interests, has transformed green and open spaces into commercial properties,

intensifying pressures on green spaces and displacing vulnerable communities who rely on them for survival and climate resilience (Scharrer, 2018; Marx, 2016).

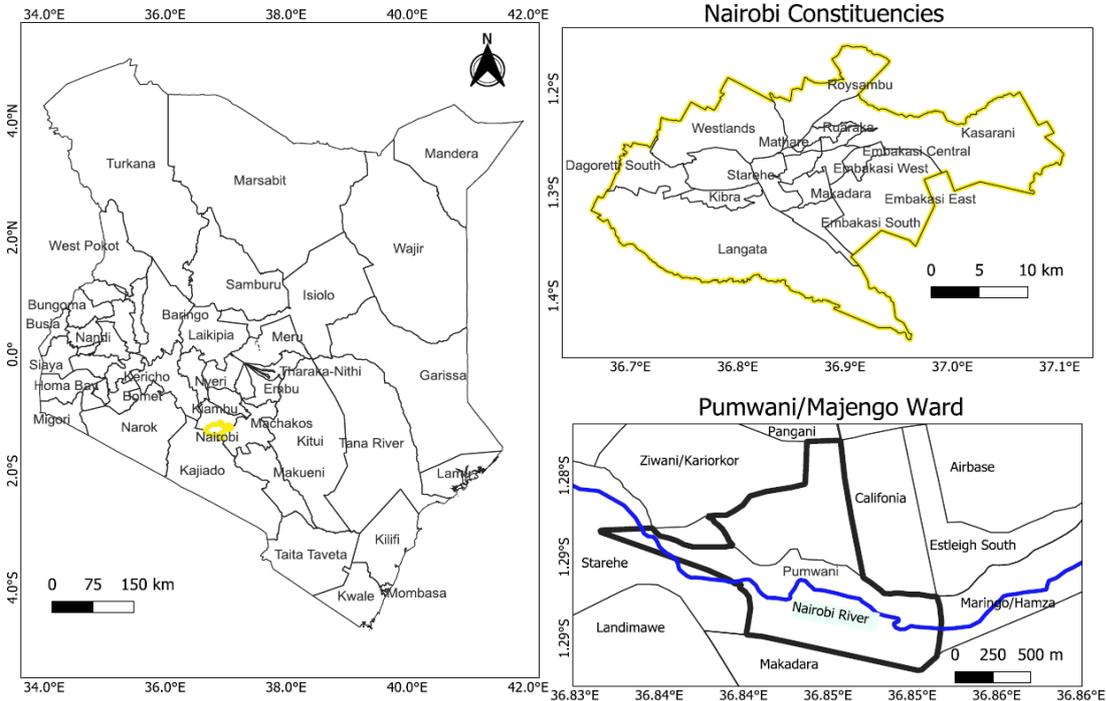


Figure 15: A Map of Pumwani-Majengo
 Source: Authors, 2024

The Somali community has shaped Pumwani-Majengo’s socioeconomic landscape through investments in land, businesses, and real estate, forming enclaves like Eastleigh that both resist cultural assimilation and contribute to urban fragmentation (Whittaker, 2012; Carrier, 2017; Shiza, 2019). The ongoing struggle of the community to assert its rights over land resources in Pumwani-Majengo reflects the deeper historical, cultural, and political forces shaping urban development in Nairobi. From precolonial trade to colonial-era displacement, post-independence marginalisation, refugee influxes, and ongoing socio-political tensions (Table 8), the Somali community’s history underscores the complexities of land access and urban exclusion (Bodomo, 2020; Whittaker, 2012). It highlights the deeply politicised nature of urban space, land, and environmental resources, where powerful actors influence both physical and social landscapes of marginalised communities (Bodomo, 2020; Whittaker, 2012).

Such political dynamics surrounding green spaces in cities like Nairobi compel marginalised communities to navigate exclusionary policies, commodification, and displacement, while also asserting their identities and protecting their livelihoods (Landau, 2006; Owen, 2016). This paper offers a comprehensive analysis of the competing dynamics surrounding the use and

appropriation of green spaces, highlighting the displacement and contestation that arise amidst rapid urban greening and ungreening initiatives.

Table 10: Timeline of the Somali Population presence and urban contestations in Nairobi

Period	Key Developments	Implications for the Somali Community
Pre-colonial to Colonial (precolonial –1963)	Somali traders and pastoralists migrated into Nairobi; land acquisitions in East Township (1917) were followed by forced relocation to Pumwani-Majengo (1921) (Carrier, 2017)	Early integration limited by colonial policies; established Somali presence in Pumwani-Majengo and spatial marginalisation (Carrier, 2017).
Post-independence to Early 2000s (1963–2010)	Shifita War (1963–1967) suppressed Somali separatism; refugee influx from Somalia (1980s–1990s); post-election violence (2007) and census disputes; Kenya’s 2011 Somalia operations (Scharrer, 2018; Carrier, 2017)	Political exclusion for indigenous Somalis; refugees faced marginality; economic influence rose in Eastleigh alongside securitisation and monitoring (Scharrer, 2018; Carrier, 2017).
Urban Planning, Governance, and Present (2010–present)	County governance enabled Somali political engagement; 2017 urban renewal in Pumwani; continued multi-ethnic settlement (Carrier, 2017; Shiza, 2019).	Somalis remain central to local economy and culture but face eviction risks, land loss, and ongoing spatial contestation (Carrier, 2017; de Vergès, 2022; Shiza, 2019).

Source: Author 2025

Materials and Methods

This study employs a case study design and qualitative methods to examine socio-political dynamics, environmental justice, and green space appropriation. Data was gathered over two extended field visits: (Aug 2023–Jan 2024; June–Aug 2024) using adaptive sampling. Semi-structured interviews (n=45) with residents, displaced individuals, community leaders, officials, land experts, and private sector representatives were selected through purposive and snowball sampling to capture diverse perspectives on land tenure and eviction. Focus Group Discussions (n=6) with youth, women, elders, and displaced families provided collective insights into land commodification, while Life Histories (n=6) documented displacement experiences.

Green space was defined to include street verges, vacant lots, vegetation along railway tracks, brownfields, riparian strips, and corridors beneath power lines (Rupprecht & Byrne, 2014). For analytical purposes, we distinguish five green space typologies: (1) riparian zones, (2) playgrounds and school grounds, (3) small open lots and verges, (4) markets and informal parks,

and (5) brownfields or underutilised land. This typology allows us to trace how different mechanisms of appropriation shape distinct forms of greening and ungreening. Model outputs were validated through ground truthing and historical maps. Data was transcribed, coded, and thematically analysed using ATLAS.ti. The study was approved by University of Bonn ethics review committee; anonymisation and trauma-informed practice were followed. The researchers’ positionality was reflexively considered.

Results and Discussion

Changes in Land Use in Pumwani Majengo

Spatial analysis from 1984 to 2023 shows a 76 percent reduction in green space, as built-up areas expanded from 5.2% to 41.4% (GIS Analysis, Figure 16). This loss of open land was corroborated by field observations and community accounts, which consistently described the conversion of communal spaces into commercial or residential developments. Residents explained that rising costs and the disappearance of affordable housing pushed many to peri-urban areas such as Kamulu and Joska, where land remained more accessible (Interview, resident, July 2024). These outward movements, combined with inward investment by wealthier developers, have altered both the physical environment and the social fabric of Pumwani–Majengo.

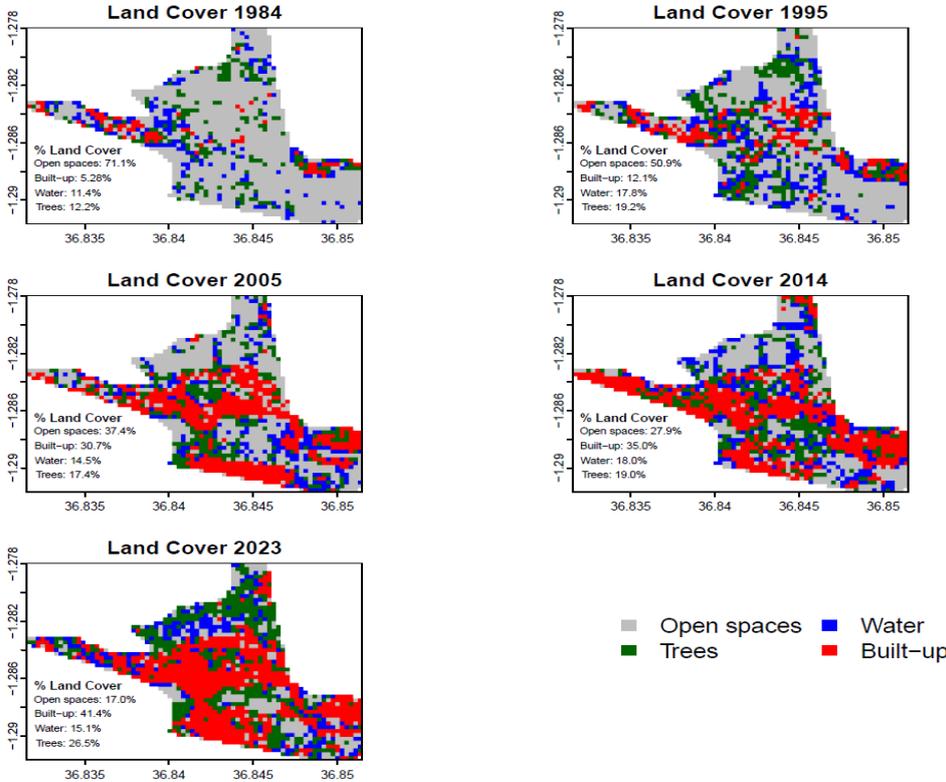


Figure 16: Maps showing land use and Land cover changes in Pumwani-Majengo (1984-2023)

Community testimonies emphasised the cumulative effect of these changes: as new high-rise developments replaced playgrounds, riparian zones, and market spaces, long-term residents found it increasingly difficult to maintain a meaningful stake in the neighbourhood. One resident reflected that relocation was “the only option once land became too expensive” (Interview, Resident, July 2024), while others noted that even those who stayed faced exclusion from decision-making as wealthier settlers consolidated influence over local planning. The GIS analysis and qualitative evidence highlight the profound connection between land commodification, displacement, and environmental loss. The transformation of green and open spaces into built-up areas not only reshaped the settlement’s physical landscape but also widened socioeconomic inequalities, setting the stage for the dynamics explored in later sections.

Private investment, especially speculative capital from diaspora networks¹⁶, has played a vital yet unevenly documented role in Nairobi’s urban transformation. While Somali business networks are often highlighted as influential in Eastleigh and surrounding areas, their exact scale remains debated, and caution is necessary to prevent overstatement (Carrier, 2017; Scharrer, 2018; Goodfellow, 2022). What is clear, however, is that remittance-driven investment interacts with weak governance and selective enforcement, raising displacement pressures in nearby settlements such as Majengo (Ouma, 2024). Our analysis contributes to this body of work by demonstrating how speculative investment not only accelerates land commodification but also interacts with localised practices of greening and ungreening.

For example, while Landsat imagery captured the broad reduction of green space, higher-resolution imagery and community accounts revealed socially significant but easily overlooked forms of greenery, gardens, courtyards, and market-edge vegetation, pointing to the need for situated, mixed-methods approaches that can trace both macro-level patterns and everyday practices (Lombard & Rakodi, 2016; Boeri et al., 2022). This situates these findings within the wider debates on accumulation-by-dispossession and green grabbing (Harvey, 2003; Anguelovski et al., 2019).

Land Commodification and Power Dynamics of Greening Initiatives in Pumwani-Majengo

Pumwani-Majengo’s urban greening initiatives are deeply shaped by land commodification and prevailing power dynamics. Our interviews and field observations reveal that these processes, along with patterns of displacement, were profoundly shaped by the interplay between formal

¹⁶ These estimates imply investments on the order of billions of dollars (de Vergès, 2022), but they are not drawn from audited accounts and should therefore be treated as indicative rather than definitive.

and informal actors through three mechanisms of ownership and use change. Firstly, politicians and cartels¹⁷ exploit unclear land tenure to privatise green spaces. In the settlement, we observed that green spaces previously used for community activities, such as school playgrounds, were fenced, reclassified, and converted to commercial plots. This exploitation has created significant barriers for vulnerable individuals, forcing them to navigate corrupt systems to secure their land rights.

Chiefs and ward administrators played a crucial role in facilitating these transactions, with chiefs directly involved in approving permanent structures, often demanding bribes. During election periods, politicians, such as Members of the County Assembly (MCAs), leveraged their temporary power to grab land for personal gain, further entrenching corruption within the land administration system. Community leaders reported cases where politicians and informal land cartels targeted green spaces. As one community member noted during our site visits, *'Public playgrounds and riparian areas were first fenced off, and then buildings appeared within months'* (Interview, women group leader, Pumwani-Majengo, September 2024).

Secondly, informal actors, particularly land cartels and ethnic networks, held substantial power, controlling land access through corruption and intimidation. These cartels altered land records, including title deeds and allotment letters, to displace rightful landowners. They also demanded a percentage of development budgets to facilitate projects, often using their influence over local chiefs and other formal institutions. A resident alleged that during the post flooding demolitions in May 2024, poorer residents' homes were disproportionately targeted, while properties on riparian land remained untouched after reported payments of up to 4 million shillings (Interview with Pumwani-Majengo Resident, August 2024). The unequal application of laws, where wealth determines land security, highlights how financial capacity and political connections dictated land access, leaving the less affluent marginalised and vulnerable to eviction. This reflects selective enforcement and transactional governance, core forms of use change.

Thirdly, the privatisation of public spaces, particularly green areas, exacerbates the struggles faced by marginalised groups, particularly women, who rely on these resources for their livelihoods. As private developers increasingly take control of these spaces, women are coerced into relocating, often with little to no compensation. Field interviews revealed that multiple

¹⁷ We define land cartels as (in)formal but highly influential networks of well-connected actors who conceal their involvement in urban land governance while manipulating allocation, tenure, and development. Operating in the blurred space between legality and informality, they leverage both legitimate and illegitimate resources to privatise communal land, displace residents, and repurpose green and open spaces. Their "ghostlike" presence highlights the hybrid governance system in which formal rules are selectively enforced, deepening inequalities in settlements such as Pumwani–Majengo (Opanga & Müller-Mahn, forthcoming).

community leaders and land experts identified politicians and land cartels engaging in corrupt land transactions. Public reports (e.g., Koyaro et al., 2023) detail how politicians and cartels manipulate processes by disguising private land as government property while using official symbols to legitimise their actions. These practices not only deepens land access inequities but also widens the divide between those with financial and political power and the disadvantaged residents. Consequently, environmental conservation efforts are met with resistance from residents who fear displacement, and politicians avoid addressing these concerns to avoid backlash, further perpetuating cycles of corruption and land grabbing.

The appropriation of public green spaces by land cartels and a range of state and non-state actors, including public officials, local elites, developers, intermediaries, and migrant and local business networks, demonstrates how urban spaces are shaped by power struggles over resources and identity (Asante & Helbrecht, 2020; Andersen et al., 2015). These practices, driven by economic gain, perpetuate socio-spatial inequalities where marginalised communities, particularly women, are displaced and excluded from these public resources (Asante & Helbrecht, 2020; Nikuze et al., 2019). Corruption, clientilism, and opaque land transactions further entrench these disparities, aligning with global urbanisation trends where elite interests dominate, side-lining the needs of low-income groups (Marx, 2016; Huchzermeyer, 2011). As critical studies have indicated, this situation underscores the urgent need for inclusive urban planning that prioritises transparent governance and equitable access to resources, ensuring that the rights of marginalised populations are safeguarded in the face of ongoing land commodification (Carrier, 2017; Lancione, 2019; Scharrer, 2018).

Displacement Processes and Mechanisms Driven by Socioeconomic Enclaves

Since 2010, escalating rental prices associated with the transformation of Pumwani-Majengo have driven displacement, forcing long-term residents out and reshaping the neighbourhood into a socioeconomic enclave. This transformation is fuelled by weak land governance, where plots intended for public use are illegally acquired and rapidly developed for profit, exacerbating environmental vulnerability. The drastic loss of green spaces signifies severe environmental degradation, leading to diminished biodiversity, poorer air and water quality, and reduced climate resilience. At the same time, the sharp rise in built-up areas reflects intensified infrastructure development and densification, which, while addressing housing and economic demands, has exacerbated issues such as displacement, overcrowding, and socioeconomic inequality. Together, these processes create new socioeconomic enclaves and intensify displacement pressures.

Community members reported that private investors including Somali business community have acquired large portions of land, leading to the displacement of households that could no longer keep up with rising costs. Residents are unable to afford the inflated rents, forcing many to operate informally or leave. This economic exclusivity pushes original settlers out and reshapes the neighbourhood's economic landscape, as local traders are priced out and wealthier tenants take their place. High rental prices and selective leasing by property developers have reshaped Pumwani-Majengo's urban fabric. As one resident observed, “*Once a green space is acquired, it is fenced off and transformed into high-rise apartments, which locals cannot afford*” (Interview, small-scale trader, August 2024). Participants frequently associated displacement with external investment, speculative construction, and selective leasing, which reinforced patterns of exclusion and created an increasingly segmented urban landscape.

Displacement has been driven by opaque land transactions and systemic corruption, deepening tenure insecurity and accelerating exclusion. Land sales occur secretly, often leaving displaced residents without warning. Moreover, corruption and legal ambiguities further complicate matters, as residents lack formal land ownership documents, leaving them vulnerable to exploitation by land cartels. Participants also reported coercive tactics, such as intimidation and deliberate harassment, aimed at forcing households to sell (Interview, resident, July 2024) As a resident explained, “*Selling is done in secrecy... people just sell and quietly disappear*” (Life history interview, resident, Pumwani-Majengo, July 2024). A surveyor added, “*They change the title deed or allotment letters into their names and backdate it*” (Interview, surveyor, August 2024). They linked these practices to powerful investors and cartels, sometimes supported by local officials, who could manipulate legal procedures and obtain land through bribery and coercion.

These displacement mechanisms not only change land ownership but also deepen socioeconomic enclaves, reshaping the cultural and economic fabric of Pumwani-Majengo. This aligns with Urban Political Ecology (UPE) perspectives, which emphasise how land commodification and urban exclusion reinforce inequalities and create uneven urban environments (Nikuze et al., 2019; Marx, 2016; Huchzermeyer, 2011). The disruption of communal life highlights the need for transparent land governance to protect vulnerable communities and promote fair urban growth (Fernandez, 2012; Elliott-Cooper et al., 2020; Acolin & Green, 2021; Simone, 2010).

Socioeconomic, Environmental and Cultural Impacts

Spatial analysis from 1984 to 2023 shows a 76 percent reduction in green spaces in Pumwani-Majengo, as built-up areas expanded from 5.2% to 41.4% (GIS Analysis, Figure 2). As green spaces disappeared and life became expensive, displaced residents were forced to relocate, often to peri-urban areas like Kamulu and Joska, where land remained affordable (Interview, resident, July 2024). This shift is further fuelled by the growth and development of socioeconomic activities in the area, as wealthier settlers take control, diminishing the influence of residents in decision-making processes. These processes have not only altered the social fabric but also contributed to the loss of communal green spaces.

Our field observations confirm that as wealthier developers acquire land, former communal spaces are repurposed into commercial or residential developments. Interviews with community members support this observation, with one of the residents arguing that as green spaces fell, displaced residents moved to peri-urban areas like Kamulu and Joska, altering the neighbourhood's social and economic composition (Interview, resident, Pumwani-Majengo, July 2024). As the region becomes increasingly dominated by wealthier settlers, the socioeconomic challenges for long-term residents intensify, making it difficult for them to retain any meaningful stake in their neighbourhoods.

Socioeconomic effects in Pumwani-Majengo were also evident in the transformation of nearby markets like *Gikomba*, where frequent, intentional fires have forced small-scale vendors to relocate, often into residential areas. The forced relocation created economic instability, with traders being pushed out of established market zones due to high rents. This created opportunities for private developers and investors, including migrants and locals, to buy old plots and replace them with high-rises and commercial stalls. This shift destabilised livelihoods, blurred residential and commercial zones, and increased overcrowding, worsening living conditions. Participants also linked repeated market fires and rising rents to deliberate strategies that displace small traders and open opportunities for investors to replace low-rise housing with high-rise commercial developments (Interview with an NGO representative, September 2023).

Politicians and affluent investors have further compounded the problem, contributing to land grabbing by targeting prime market locations, as one of our participants noted: *“The profitability of the Gikomba market has drawn politicians into the business, driving land grabbing and exploiting the voiceless”* (Interview with a small-scale trader in Pumwani-Majengo, July 2024). As such actors invest and continue to target such spaces, they not only

push out vulnerable occupants but also repurpose such spaces for commercial structure, thereby worsening socioeconomic impacts.

This loss of public space has worsened urban heat effects, reduced climate resilience, and further deepened economic inequality, as informal traders are left without affordable marketplaces. Residents noted that without adequate regulation, the rapid urban transformation risks permanently altering the landscape of Pumwani-Majengo, leaving its original residents without the means to reclaim their cultural history or secure sustainable futures, with one arguing: *“Ten to twenty years, the area would have changed completely... we are at the brink of losing the historical values, memories that the Pumwani-Majengo ward carries”* (Life history Interview, resident, Pumwani-Majengo, June 2024).

In sum, governance gaps and socioeconomic inequalities have enabled powerful actors notably politicians, business networks, and economic elites to appropriate land for profit, displacing long-term residents and disrupting community cohesion and cultural identity, aligning with UPE’s focus on the commodification of urban land (Marx, 2016; Huchzermeyer, 2011). This dynamic highlights how the privatisation of communal spaces, like the *Gikomba* market, deepens socioeconomic divides, pushing residents into precarious livelihoods while enriching elites, further entrenching urban inequalities (Lombard & Rakodi, 2016; Carrier, 2017). The transformation of Pumwani-Majengo not only threatens its physical environment but also erodes its historical and cultural identity, underscoring the urgent need for inclusive, sustainable urban policies that prioritise the rights and needs of marginalised communities (Bloch & Meyer, 2023; Asante & Helbrecht, 2020).

Greening and Ungreening as Parallel but Conflicting Processes

Processes of greening and ungreening in Pumwani-Majengo reflect conflicting goals among government, private sector, and community actors, creating a contested urban environment. Our findings reveal that various types of green spaces face different pressures: riparian zones are targeted by state-led ‘green evictions’; playgrounds and school grounds are converted into commercial plots; markets are cleared through deliberate fires, while vacant lots fluctuate between encroachment and small-scale re-greening. These differences emphasise the complex mechanisms through which greening and ungreening happen in informal settlements.

Community-led initiatives like tree planting that aligned with the national 30 percent tree cover target by 2032, were undermined by government-led infrastructure projects that converted some of the green spaces into social infrastructure. These contrasting activities underscore the dual role of the government in both promoting urban greening initiatives and contributing to

“ungreening” through urban expansion. This paradox was aptly captured by an NGO representative who noted, *“One green space was taken by the government for a sewer line... government agencies can sometimes disrupt our work”* (Interview, NGO representative, July 2023). Such actions reflect the tension between development priorities and environmental preservation, revealing the complexities of balancing infrastructure expansion with sustainable urban planning.

Our site visits indicate that as government initiatives like Jaza Miti, private sector environmental Corporate Social Responsibility (CSR) initiatives, and community-led efforts to promote urban greening exist alongside large-scale land privatisation, they frequently clash and undermine one another. For instance, while developers fund tree-planting programs, they simultaneously engage in land acquisitions that displace communities. In one case, a school playground in Kariorkor was converted into a commercial complex despite community protests (Interview, resident, Kariorkor, June 2023). On one hand, national policies encourage tree planting and reforestation, while on the other, the failure to regulate urban land conversions enables the sale of public green spaces for commercial projects. These contradictions expose fragmented land governance, where sustainability goals are subordinated to profit-driven urban development.

Caught between these competing interests, residents themselves played a dual role in creating and destroying green spaces. Overcrowding and inadequate infrastructure forced them to encroach on road reserves and communal areas for housing and trade, while simultaneously engaging in re-greening activities, such as tree planting and environmental cleanups. This dual role underscores systemic challenges like insecure land tenure and the absence of cohesive urban planning, leaving residents vulnerable to eviction and further environmental degradation. Residents explained that overcrowding forces some to extend into road reserves even as they participate in re-greening activities, illustrating simultaneous destruction and restoration driven by livelihood pressures (Interviews, Gikomba resident, November 2023; participants FGD6, Pumwani-Majengo, February 2024). This paradox of destruction and restoration illustrates how residents adapt to systemic pressures, expanding into available spaces for survival while simultaneously investing in restoration practices to sustain their environment.

Despite these challenges, there is growing awareness and effort within the community to promote environmental restoration. Schools and community groups actively participated in tree planting, signalling a shift toward preserving green spaces and improving the quality of life. However, the lack of a regulatory framework to manage competing land uses undermined these

efforts and perpetuated ad-hoc developments at the expense of sustainable growth. This precarious balance between environmental restoration and destruction remains central to the urban evolution of Pumwani-Majengo, as one resident highlights: “*We planted trees on Tree Planting Day with our teacher... while others focused on school premises and open spaces. However, businesspeople and developers often grab them to build malls or houses or even conduct businesses there*” (FGD 3, Pumwani-Majengo, November 2023). This interplay of community action and unchecked development underscores the urgency of implementing a cohesive regulatory framework to protect green spaces in Pumwani-Majengo as emphasised during our expert consultations.

Experts emphasised that fragmented land governance and profit-driven land conversions mean national greening targets coexist with practices that rapidly erode the same green spaces (Interview, government official, November 2023). While grassroots efforts, such as tree planting and environmental awareness campaigns, reflect a growing commitment to sustainability, their impact remains limited without institutional support. Addressing these regulatory gaps is crucial to fostering a more balanced urban evolution that harmonises environmental restoration with the community’s developmental needs.

Pumwani-Majengo’s greening and ungreening processes exemplify the tension between environmental sustainability and developmental priorities, shaped by government policies, private sector interests, and community actions to promote greening. Yet, these efforts are often undermined by infrastructure development, profit-driven private sector land conversions, and governance structures that favour elite interests, exacerbating socioeconomic inequalities (Andersen et al., 2015; Myers, 2008; Englestad, 2003). The Situated UPE framework highlights the socio-political and economic complexities of greening in Nairobi’s informal settlements, underscoring the need for inclusive policies that integrate environmental sustainability with social justice (Lawhon et al., 2018). The ongoing conflict between environmental restoration and urban development in the settlement highlights the urgent need for comprehensive regulatory frameworks that protect green spaces while addressing the community’s growing housing and infrastructure demands.

Community Responses

While some residents have resigned to the disappearance of green spaces, others have engaged in various strategies to address the challenges of land commodification and displacement, balancing resignation with resistance. These legal action, grassroots mobilisation, and everyday place-making practices reflecting the community’s ongoing struggle to assert their rights and

maintain control over their environment. Legal action has been one of the most direct forms of resistance, but high costs and bureaucratic delays often limit its effectiveness. During interviews, community members described the challenges of securing land tenure, with many noting that despite filing cases and submitting letters and responses, they were delayed or absent. High legal fees rendered courts inaccessible for most residents, prompting some to bypass municipal bureaucracy by turning to local chiefs, who were perceived as more responsive.

A few community groups have successfully resisted land grabs by retrieving historical title deeds, as one elder explained: *“We approached the Land Commission, which asked for documentation. Luckily, we had a copy of the original title deed”* (Interview, Community Elder, December 2023). These experiences highlight the uneven access to legal recourse and the potential of historical claims to reinforce tenure. Increasing affordable legal representation and financial support for grassroots organisations could enhance residents’ ability to challenge land rights grabs. Beyond legal channels, residents have mobilised through petitions, demonstrations, and direct negotiations with authorities. Many expressed frustration over being excluded from urban planning decisions, emphasising that *“we only hear about the plans when the bulldozers come”* (Interview, Resident, Pumwani-Majengo, 2024).

Public protests and advocacy efforts have drawn attention to land injustices, though fear of retaliation discourages some from openly opposing development projects. One activist recalled past consequences of speaking out: *“Last time we protested, some of us were visited at night”* (Interview, Women Activist, January 2024). These accounts demonstrate the effectiveness and risks of advocacy, highlighting the importance of transparent channels of engagement between communities and planners. When legal and advocacy efforts fail, residents turn to place-making strategies to assert their presence and resist displacement.

Community-led greening initiatives, informal land-sharing agreements, and occupation of contested spaces have become ways of preserving local identity and preventing land acquisition by external investors. Youth activists expressed that their proposals for community-led development are often dismissed, deepening the feeling that local voices remain marginalised in formal decision-making (Interviews, Youth Activist and Resident, Pumwani-Majengo, 2023–24). These frustrations highlight the need for genuine consultation, where community perspectives influence urban planning.

While some residents initially accepted this displacement, growing resistance against land commodification has emerged, as communities assert their historical ties and demand greater

participation in decision-making (Lombard & Rakodi, 2016). This resistance, often manifested in grassroots mobilisation and legal advocacy, reflects the agency of marginalised groups in challenging socio-spatial injustices (Campos et al., 2020). However, the influence of land cartels and power brokers complicates these efforts, as non-state actors contribute to the erosion of land rights (Andersen et al., 2015). Despite these challenges, community groups in Pumwani-Majengo continue to fight for transparency, legal recognition, and inclusive urban development, underscoring the need for a more equitable approach to land governance and environmental justice in rapidly transforming cities priorities.

Conclusion

This paper sought to explore the appropriation of green spaces in Nairobi's informal settlement of Pumwani-Majengo, focusing on how competing interests, government initiatives, private sector priorities, and community needs, shape their use, leading to displacement and socioeconomic transformations. The findings underscore four key themes. First, displacement in Pumwani-Majengo goes beyond physical relocation and disrupts the social, cultural, and economic networks that underpin community resilience. These disruptions compound vulnerability by undermining everyday practices, reciprocal support systems, and local livelihood strategies. Second, community responses to displacement vary, with some residents, expressing resignation, negotiating compromises, or mounting active resistance i.e. legal challenges, petitions, and grassroots mobilisation. These responses demonstrate local agency even where power asymmetries are acute, but access to legal remedies remain uneven and often constrained by cost, bureaucratic delays and threats of retaliation.

Third, greening and ungreening processes in Pumwani-Majengo occur concurrently and often function as mechanisms of dispossession, enclosure, and “green eviction”, selective environmental interventions e.g., riparian clearances, redevelopment of parks, and infrastructure siting, that are politicised and that disproportionately burden marginalised residents. Framing greening as potentially dispossessive helps explain how sustainability rhetoric can be instrumentalised to justify exclusionary redevelopment. Finally, land transformation has led to the emergence of socioeconomic enclaves, producing spatial fragmentation that privileges wealthier newcomers and external investors while marginalising long-term, lower-income residents. This process is driven by weak tenure, opaque transactions, and a mix of formal and informal actors seeking profit through commodification of communal land.

These findings challenge traditional views of urban green spaces as public assets, highlighting their role in serving elite-driven aesthetic and commercial agendas that fuel contestations, displacements, and dispossessions. This study makes critical contributions to understanding the socio-political implications of urban green initiatives in informal settlements. It demonstrates how the government's broader greening initiatives often overlook the historical and social significance of informal settlements like Pumwani-Majengo, turning these areas into flashpoints for conflict. The eviction of communities from their long-standing homes, followed by urban greening developments, reflects broader socio-political struggles and highlights the commodification of green spaces.

Increasingly, these spaces are appropriated for private and economic interests rather than being treated as public goods (see, e.g., Oponda, 2024). Greening policies, while framed as essential for ecological resilience, frequently neglect the lived realities of informal settlers. Vulnerable communities are often excluded from decision-making processes, resulting in environmental projects that prioritise aesthetic or commercial outcomes over social justice and equity. Thus, the simultaneous processes of greening and ungreening reflect broader systemic inequities, where marginalised populations bear the brunt of urban development pressures.

Using a Situated Urban Political Ecology (SUPE) lens, the paper demonstrates that green spaces in informally governed, Global South contexts are contested terrains instrumentalised by diverse actors, and that greening policies can unintentionally amplify governance failures and tenure insecurity. This reframing offers a theoretical contribution by specifying how internal appropriation processes within informal settlements, reconfigure environmental resources into commodified assets.

Moreover, it challenges urban development paradigms that prioritise ecological or economic development paradigms that prioritise ecological or economic growth over addressing social inequalities. It then emphasises how these inequalities are spatially constructed and perpetuated through governance structures, policies, and urban design, revealing the complex ways in which urban spaces are shaped by and reinforce power dynamics. It accentuates the need for more inclusive and participatory urban planning frameworks; alternative governance frameworks that counterbalance ecological goals with social equity; and participatory decision-making processes ensuring that the voices of marginalised populations are integral to urban planning. Yet, despite our contribution based on Pumwani-Majengo, further research is needed to explore whether similar dynamics of greening and ungreening initiatives exist in other contexts across Africa and the Global South.

The long-term impacts of simultaneous greening and ungreening processes warrant deeper exploration, particularly in understanding how these initiatives affect the sustainability and resilience of urban ecosystems in marginalised contexts. Additionally, the role of different actors (not just elites) in shaping urban greening policies across different settings calls for comparative analyses to better assess the broader implications of such trends and developments. Broadening the scope of inquiry to examine elite agendas vis-a-vis citizen responses in urban development globally can advance critical discourse on the intersection of power, environmental justice, and equity. This will not only deepen our understanding and exploration of more just and sustainable development processes but also shed light on the varying capacities of urban populations to assert themselves and claim their rights in ongoing urban transformations.

References

- Acolin, L., & Green, R. K. (2021) The role of ambiguity in land tenure: Evidence from urban Africa. *Land Use Policy*, 100, 104884. <https://doi.org/10.1016/j.landusepol.2020.104884>
- African Union. (2020) A Harmonised Implementation Framework for the New Urban Agenda in Africa. Addis Ababa, Ethiopia
- Akanbang, B. A. A., Akaateba, M. A., & Korah, P. I. (2024) Creating and sustaining urban green spaces in Africa under phenomenal urbanisation: Residents' perspectives on home gardens in Wa, Ghana. *Discover Cities*, 1(20)
- Andersen, J., Jenkins, P., & Nielsen, M. (2015) Who plans the African city? A case study of Maputo: Part 1 – The structural context. *International Development Planning Review*, 37, 329–350
- Anguelovski, I., Brand, A. L., Connolly, J. J. T., Corbera, E., Kotsila, P., Steil, J., ... Argüelles Ramos, L. (2020) Expanding the Boundaries of Justice in Urban Greening Scholarship: Toward an Emancipatory, Antisubordination, Intersectional, and Relational Approach. *Annals of the American Association of Geographers*, 110(6), 1743–1769. <https://doi.org/10.1080/24694452.2020.1740579>
- Asante, L. A., & Helbrecht, I. (2020) Urban regeneration and politically-induced displacement in a secondary African city: A case of the Kotokuraba Market Project, Cape Coast, Ghana. *Geoforum*, 113, 135–144. <https://doi.org/10.1016/j.geoforum.2020.06.017>

- Bloch, S., & Meyer, D. (2023) Displacement and affective economies in gentrification research. *Dialogues in Urban Research*, 1(3), 248-251. <https://doi.org/10.1177/27541258231210200>
- Bodomo, A. (2020) Historical and contemporary perspectives on inequalities and well-being of Africans in China. *Asian Ethnicity*, 21(4), 526–541. <https://doi.org/10.1080/14631369.2020.1761246>
- Boeri, A., Longo, D., Orlandi, S., Roversi, R., & Turci, G. (2022) Community engagement and greening strategies as enabling practices for inclusive and resilient cities. *International Journal of Environmental Impacts*, 5(1), 1–14. <https://doi.org/10.2495/EI-V5-N1-1-14>
- Campos-Manzo, A. L., Flores, M., Pérez, D., Halpert, Z., & Zevallos, K. (2020) Unjustified: Youth of Color Navigating Police Presence Across Sociospatial Environments. *Race and Justice*, 10(3), 297-319. <https://doi.org/10.1177/2153368717741346>
- Carrier, N. (2017) Little Mogadishu: Eastleigh, Nairobi’s global Somali hub. *Oxford University Press*
- Cobbinah, P. B., & Finn, B. M. (2023) Planning and climate change in African cities: Informal urbanisation and ‘just’ urban transformations. *Journal of Planning Literature*, 38(3), 361–379
- Davies, J. (2021). *Between realism and revolt: Governing cities in the crisis of neoliberal globalism*. Bristol University Press. <https://dx.doi.org/10.2139/ssrn.3818743>
- de Vergès M (2022) Diaspora money flows into Eastleigh, Nairobi's Somali Bazaar. *Le Monde*. https://www.lemonde.fr/en/international/article/2022/08/03/diaspora-money-flows-into-eastleigh-nairobi-s-somali-bazaar_5992394_4.html
- Diko, S. K., & Hollstein, L. M. (2021) Towards an alternative interpretation of the socio-cultural dimensions of urban Green space planning in the Global South: Evidence from the Kumasi Metropolis of Ghana. *Journal of Urban Affairs*, 45(3), 522–545. <https://doi.org/10.1080/07352166.2021.1919019>
- Elliott-Cooper, A. J., Hubbard, P., & Lees, L. C. (2020). Moving beyond Marcuse: gentrification, displacement and the violence of un-homing. *Progress in human geography*, 44(3), 492-509. <https://doi.org/10.1177/0309132519830511>
- Engelstad, F. (2003). National literature, collective identity and political power. *Comparative Social Research*, 21, 111–145. Oxford: Elsevier.

- Fernández, R. (2012) Neoliberalism and parks: The urban political ecology of green public space in Mexico City. *Sociedad Hoy, Universidad de Concepción*, Concepción, Chile, 83–115
- Ghertner, D. A. (2014) India's urban revolution: Geographies of displacement beyond gentrification. *Environment and Planning A*, 46(7), 1554–1571. <https://doi.org/10.1068/a46288>
- Goodfellow, Tom (2022) Politics and the Urban Frontier: Transformation and Divergence in Late Urbanizing East Africa, Critical frontiers of Theory, Research, and Policy in International Development Studies, ISBN 978-0-19-188744-4, Oxford University Press, Oxford, <https://doi.org/10.1093/oso/9780198853107.001.0001>
- Government of Kenya (GoK) (2010) The Constitution of Kenya, 2010. Nairobi: National Council for Law Reporting. <https://www.kenyalaw.org:8181/exist/kenyalex/actview.xql?actid=Const2010>
- Gyawali, D., Thompson, M., & Verweij, M. (2016). Afterword: The lessons from Nepal. In D. Gyawali, M. Thompson, & M. Verweij (Eds.), *Aid, technology and development: The lessons from Nepal* (pp. 218–221). Routledge. <https://doi.org/10.4324/9781315621630>
- Hansen, M. (2014) Struggles over conservation space: Social justice in the iSimangaliso Wetland Park, South Africa. *ResearchGate*
- Harvey, D. (2003). *The New Imperialism: Accumulation by Dispossession*. Oxford University Press. <https://doi.org/10.1093/oso/9780199264315.003.0007>
- Heynen, N., Kaika, M., & Swyngedouw, E. (2006) *In the Nature of Cities: Urban Political Ecology and the Politics of Urban Metabolism*. Tyler and Francis
- Huchzermeyer, M. (2011) *Cities with ‘slums’: From informal settlement eradication to a right to the city in Africa*. University of Cape Town Press
- Karic, S., & Diller, C. (2023) Introducing a multi-level governance phase framework for event-led urban development formats. *Erdkunde*. <https://doi.org/10.3112/erdkunde.2023.04.03>
- Kariuki, J. (2020) Approval of Kajiado buildings goes digital. Business Daily. <https://www.businessdailyafrica.com/bd/markets/market-news/approval-of-kajiado-buildings-goes-digital-3230128>

- Kenya National Bureau of Statistics (KNBS) (2019) Kenya Population and Housing Census Report
- Koyaro, M., Mwangi, C., Kimani, J., Mutua, R., & Njoki, N. (2023) Evidence-informed decision-making to spur action: ACRC uptake workshop held at Stoni Athi Resort, Machakos County. *SDI-Kenya*.
- Lancione, M. (2019) Radical housing: on the politics of dwelling as difference. *International Journal of Housing Policy* 1–17. doi:10.1080/19491247.2019.1611121.
- Landau, L. (2006) The humanitarian hangover: Displacement, aid and transformation in Western Tanzania. *Wits University Press*
- Lawhon, M., Le Roux, L., Makina, A., Nsangi, G., Singh, A., & Sseviiri, H. (2020). Beyond Southern Urbanism? Imagining An Urban Geography of A World of Cities. *Urban Geography*, 41(5), 657–667. <https://doi.org/10.1080/02723638.2020.1734346>
- Lawhon, M., Pierce J., & Makina A., (2018) Provincializing urban appropriation: Agonistic transgression as a mode of actually existing appropriation in South African cities. *Singapore Journal of Tropical Geography*. Vol.39 (1) 117-131 . <https://doi.org/10.1111/sjtg.12223>
- Leitner, H., Sheppard, E., & Sziarto, K. (2008) The Spatialities of contentious politics. *The Royal Geographical Society* Vol.33 (2), 157-172 <https://doi.org/10.1111/j.1475-5661.2008.00293.x>
- Lindell, I., & Ampaire C. (2016) The Untamed Politics of Urban Informality: “Gray Space” and Struggles for Recognition in an African City. *Theoretical Inquiries in Law*, 17(1):257-282. doi: 10.1515/TIL-2016-0010
- Lombard, M., & Rakodi, C. (2016) Urban Land Conflict in the Global South: Towards an Analytical Framework. *Urban Studies*, 53, 2683-2699
- Marx, C. (2016) Extending the analysis of urban land conflict: An example from Johannesburg. *Urban Studies*, 53(13), 2779-2795. <https://doi.org/10.1177/0042098015607801>
- Mbatia, T. W. (2016) Social-Political Analysis of Urban Green spaces In Nairobi: Perspectives on The (Re)Production and (Re)Construction of Spatial Injustice in the Consumption of Public Nature Reserves in The City: A Critical Inquiry into the Historical and Contemporary Production of Urban Space In Kenya [Doctoral dissertation, Université Paris Diderot - Paris 7]. HAL Theses. <https://theses.hal.science/tel-01957518>

- Meso, J., (2013) Space Contestation in the Riparian Zone of Nairobi CBD, Ngara Section (Thesis).
https://www.academia.edu/4219098/Space_Contestation_in_the_Riparian_Zone_of_Nairobi_CBD_Ngara_Section
- Mulwa, R. (2020) When Urban Green Spaces Meet Infrastructure Development in Kenya: A Case of the Nairobi Expressway. *East African Law Journal: Special Issue on the Impacts of the Nairobi Expressway on the Rights of People*. School of Law, University of Nairobi
- Mwaura, M., & Lawhon, M. (2024) Infrastructure in formation: the politics and practices of making progress with infrastructure. *Urban Geography*.
<https://doi.org/10.1080/02723638.2024.2387992>
- Myers, G. (2008) Peri-Urban Land Reform, Political-Economic Reform, and Urban Political Ecology in Zanzibar. *Urban Geography*, 29, 264-288
- Myers, G (2011) (I)n(f)ormal cities. In *African Cities: Alternative Visions of Urban Theory and Practice*. London; New York: Zed Books
- Nairobi City County (2024) Nairobi Joins Groundbreaking Breathe Cities Initiative in Fight Against Pollution. <https://nairobi.go.ke/nairobi-joins-groundbreaking-breathe-cities-initiative-in-fight-against-air-pollution-2/>
- Nairobi City County and the Japanese International Cooperation Agency (JICA) (2014) The project on Integrated Urban Development Master Plan for the City of Nairobi (NIUPLAN) in the Republic of Kenya (Final Report)
- Ndebele-Murisa MR., Mubaya CP., Pretorius L., Mamombe R., Iiping K., Nchito W., et al. (2020) City-to-city learning and knowledge exchange for climate resilience in southern Africa. *PLoS ONE 15(1)*: e0227915. <https://doi.org/10.1371/journal.pone.0227915>
- Nikuze, A., Sliuzas, R., Flacke, J., & van Maarseveen, M. (2019) Livelihood impacts of displacement and resettlement on informal households: A case study from Kigali, Rwanda. *Habitat International*, 86, 38-47.
<https://doi.org/10.1016/j.habitatint.2019.02.006>
- Njoroge, P., Ambole A., Githira D., & Outa G., (2020) Steering Energy Transitions through Landscape Governance: Case of Mathare Informal Settlement, Nairobi, Kenya. *Land 9(6)*, 206; <https://doi.org/10.3390/land9060206>

- O'Loughlin, B., (2021) Making People 'Surplus Population' in Southern Africa. In M. Arsel, A. Dasgupta, & S. Storm (Eds.), *Reclaiming Development Studies: Essays for Ashwani Saitth* (pp. 113–130). Chapter, Anthem Press.
- Ochieng C. (2007) Affordability of Low-Income Housing in Pumwani-Majengo, Nairobi, Kenya. *International Journal of Architectural Research: Archnet-IJAR*
- Opanda C. (September 2024) Evictions Loom for Kenyans Living Near Nairobi River. <https://www.kenyans.co.ke/news/104483-evictions-loom-kenyans-living-near-nairobi-river>
- Opanga V. (2025) Negotiating Green Urbanism: Colonial Legacies, Governance Contradictions, and Resistance in Nairobi's Informal Settlements. *Urban Political Ecology* 1–22. DOI: 10.1177/30497515251360893
- Opanga V and Müller-Mahn D (forthcoming) Cartel economies and urban governance: The interplay of performative politics, social embeddedness, and land control in Nairobi's informal settlements.
- Ouma, S. (2024) Kenya's flood evictions may violate the law – scholar. *The Conversation*. <https://theconversation.com/kenyas-flood-evictions-may-violate-the-law-scholar-229919>
- Owen, C. (2016) *Lands of Leisure: Recreation, Space, and the Struggle For Urban Kenya, 1900-2000*. PhD Thesis. Michigan State University
- Parker, C. (2020) Tent City: Patterns of Informality and the Partitioning of Sacramento. *International Journal of Urban and Regional Research* <https://doi.org/10.1111/1468-2427.12846>
- Republic of Kenya (2010) *The Constitution of Kenya*. Nairobi: National Council for Law Reporting with the Authority of the Attorney General. Article 67(2)(e)
- Rizzo, A. (2020) Megaprojects and the limits of 'green resilience' in the global South: Two cases from Malaysia and Qatar. *Urban Studies*, 57(7), 1520-1535. <https://doi.org/10.1177/0042098018812009>
- Rupprecht, C. and Byrne J., (2014). Informal urban Green space: A Typology and Trilingual Systematic Review of its Role for Urban Residents and Trends in the Literature. *Urban Forestry & Urban Greening*, 13, (4)

- Scharrer, T. (2018) Ambiguous citizens: Kenyan Somalis and the question of belonging. *Journal of Eastern African Studies*, 12(3), 494–513. <https://doi.org/10.1080/17531055.2018.1483864>
- Shizha, E. (2019) Transnationalism and Ethnic Enclaves Among Immigrants: Resistance to Canadianization? In *Interrogating Models of Diversity within a Multicultural Environment* https://doi.org/10.1007/978-3-030-03913-4_7
- Simone, A. (2010) *City Life from Jakarta to Dakar: Movements at the Crossroads*. Routledge. <https://doi.org/10.4324/9780203892497>
- Swyngedouw E. (1996) The city as a hybrid: On nature, society and cyborg urbanisation. *Capitalism Nature Socialism*, 7(2), 65-80. <https://doi.org/10.1080/10455759609358679>
- The Nation (2022) Mission15B#JazaMiti: Kenya’s President launches 15-billion tree campaign. <https://nation.africa/kenya/brand-book/mission15b-jazamiti-kenya-s-president-launches-15-billion-tree-campaign-4063614>
- Titz, A. and Chiotha, S. (2019) Pathways for sustainable and inclusive cities in Southern and Eastern Africa through urban green infrastructure. *Sustainability*, 11(10), p.2729 <https://doi.org/10.3390/su11102729>
- Wachsmuth, D. & Angelo, H. (2018) Green cities in the age of global urbanism: Urban political ecology, urban metabolism, and global climate change. *Annals of the American Association of Geographers*, 108(2), 446-459 <https://doi.org/10.1080/24694452.2017.1417819>
- Wakhungu, M., Saleem, M., Sameer D., K’Oyoo, A., Opondo, R., Mulligan, J., Fraser, A., Anjum, G., Anwar, N. (2024) Double Disaster: Flood fallout and state eviction in Nairobi & Karachi. Institute of Development Studies. <https://www.ids.ac.uk/opinions/double-disaster-flood-fallout-and-state-eviction-in-nairobi-karachi/>
- Whittaker, H. (2012) The socioeconomic dynamics of the shifta conflict in Kenya, c. 1963-8. *Journal of African History*, 53(3), 391–408 <http://bura.brunel.ac.uk/handle/2438/7797>
- World Bank (2017) *Greening Africa’s Cities: Enhancing the relationship between urbanisation, environmental assets and ecosystem services*. Washington, DC, US

5.3. Negotiating Green Urbanism: Colonial Legacies, Governance Contradictions, and Resistance In Nairobi's Informal Settlements¹⁸

Valentine Opanga

Centre for Development Research

Abstract

Green urbanism is increasingly promoted as a pathway to sustainable and inclusive cities, yet its implementation in informal settlements remains highly contested in development policy and academic debates. This article examines how green urbanism is imagined, politicised, and contested within two informal settlements in Nairobi: Korogocho and Pumwani-Majengo. Drawing on 45 semi-structured interviews, six focus group discussions, and a review of policy documents, the study employs a mixed-methods approach rooted in Feminist Urban Political Ecology, Postcolonial Urbanism, and Travelling Models. Instead of assuming a unified global sustainability narrative, we demonstrate how international greening agendas are selectively interpreted, reworked, or resisted. Findings reveal that state-led greening initiatives, often aligned with global frameworks, can reinforce spatial inequality, displace low-income residents, and obscure colonial-era land injustices. Simultaneously, grassroots actors engage in context-specific greening practices such as urban farming and dumpsite reclamation, driven by survival and care, highlighting forms of environmental agency that challenge dominant models. This article advances debates in urban political ecology by offering a situated, empirically grounded analysis of how global green urbanism agendas are locally interpreted, reworked, and resisted within Nairobi's informal settlements. It demonstrates how grassroots actors in these spaces produce hybrid forms of urban sustainability that simultaneously challenge top-down technocratic planning and disrupt idealised, depoliticised narratives of community greening, foregrounding the everyday politics of survival, care, and justice.

Keywords: *green urbanism, feminist urban political ecology, informal settlements, land dispossession, colonial legacies, travelling models, postcolonialism*

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Introduction

Green urbanism is globally promoted as a pathway to sustainable and inclusive cities, yet its implementation in informal settlements¹⁹, a key feature of cities in the Global South, remains highly contested. What appears as a unified agenda is, in practice, fragmented and uneven, particularly within informal settlements, where its meaning and outcome vary sharply. As a framework for creating environmentally sustainable, resilient, and liveable cities (Anzilotti & Appavoo, 2025; Lehmann, 2010), its application in rapidly urbanising cities of the Global South is uneven. Within informal settlements, land tenure insecurity, policy contradictions, and socio-political exclusions fundamentally shape urban greening efforts (Kamjou et al., 2024; Muhoza & Zhou, 2024).

Green urbanism is a conceptual model for zero-emission and zero-waste urban design, seeking to transform and reengineer existing cities and regenerate the post-industrial city centre. It promotes the development of socially and environmentally sustainable cities (Lehmann, 2010). In this article, I focus on the urban greening aspects of green urbanism in Nairobi, Kenya. While the term ‘green urbanism’ is not commonly used in Kenya’s policy or activist discourses, this article employs it as an analytical entry point. It refers to both state-led interventions and grassroots environmental practices. This conceptual stretching is deliberate: it enables the analysis of both institutional and everyday greening efforts within Nairobi’s informal settlements. It allows for a critical engagement with how global sustainability ideas are vernacularised in context.

Transnational narratives of urban greening, though often framed around biodiversity conservation, carbon sequestration, and climate resilience, reflect competing priorities that often reinforce inequality. These narratives often prioritise formal urban zones and fail to address social inequalities in informal contexts. Global frameworks such as the New Agenda (NUA) and the Global Green New Deal advocate for equitable access to green infrastructure, yet they overlook the governance challenges, land conflicts, and power struggles that define urban greening in informal settlements (African Union, 2020; Kamjou et al., 2024; Sverdlik et al., 2025). An inclusive model for these contexts would: (i) recognise informal, community-led greening efforts as legitimate planning tools; (ii) implement co-governance mechanisms that

¹⁹ Informal settlements are typically characterised by high tenure insecurity, lack of proper infrastructure and services, precarious security, and safety – including exposure to environmental and health hazards – and socio-economic marginalisation (UNHCR Emergency Handbook).

actively involve residents; and (iii) develop land tenure protections to prevent green gentrification²⁰ and displacement (Kim & Yang, 2023).

These measures are essential for rethinking urban greening, yet in Nairobi, their practical application remains limited. For instance, research on urban greening has focused on affluent neighbourhoods and formal planning zones, neglecting the unique dynamics within informal settlements (Makworo & Mireri, 2011; Myers, 2016). Although recent studies have examined the availability of green spaces in informal settlements and residents' willingness to pay for them (Odhengo et al., 2024), they often fail to capture the everyday struggles of residents and the complex negotiations underpinning green urbanism. Moreover, research on green gentrification in the Global South remains underdeveloped, despite evidence that state-led greening initiatives can serve as mechanisms for land dispossession and spatial exclusion (Opanga & Guma, forthcoming).

Gendered exclusions further compound these spatial inequalities. Green urbanism in Pumwani-Majengo reinforces existing inequalities, as women, key to maintaining community waterpoints, are often excluded or exploited without consent, especially during the privatisation of green spaces. Similarly, youth-led environmental initiatives are dismissed as informal or unviable due to class bias. Their essential labour goes unrecognised in formal planning (Opanga & Guma, forthcoming). These dynamics reveal how supposedly neutral green urbanism is shaped by intersecting histories of class and gender oppression.

International frameworks promote urban sustainability through green corridors, parks, and rooftop gardens, yet these ideals frequently clash with the realities of urban poverty and exclusion. Global agendas such as Sustainable Development Goal (SDG) #11 and initiatives like the Bonn Challenge advocate for accessible green spaces for marginalised populations, but in practice, these objectives are not fully realised in informal settlements. Similarly, regional commitments such as the African Forest Landscape Restoration Initiative (AFR100) aim to promote urban resilience through green spaces, though their uneven implementation often leaves informal settlements excluded from these benefits (GoK, 2022; WWF, 2024).

²⁰ Green gentrification, as defined by Gould and Lewis (2016), refers to a process 'which is facilitated in large part by the creation or restoration of an environmental amenity', rather than cases where existing gentrification leads to greening. In informal settlements of African cities, this occurs through state-led or donor-driven environmental projects – such as green space development, climate adaptation, or infrastructure upgrades – which, despite aiming to improve living conditions, often drive land commodification and displacement. Unlike in formalised urban areas, green gentrification here is shaped by histories of land tenure insecurity, rapid urbanisation, and contested rights to the city, exacerbating socio-spatial inequalities.

In Kenya, national initiatives like the Jaza Miti campaign and policies such as the Nairobi Integrated Urban Development Master Plan (NIUPLAN) advocate for climate resilience and environmental conservation, yet green urbanism remains concentrated in middle- and upper-income areas (Kelbert, 2016; Sverdlik et al., 2025). The Nairobi Climate Action Plan (CAP) (2020–2050) promotes formal interventions such as afforestation, urban beautification, infrastructure retrofitting, and a Food Systems Strategy to protect ecological zones, reduce erosion, improve air quality, and enhance urban resilience. Yet these top-down approaches often overlook informal greening practices rooted in survival, care, and political agency.

In Nairobi's informal settlements, systemic neglect, land tenure insecurity, and high density create significant institutional, political, and social barriers (Bassett, 2020). Public green spaces are vulnerable to encroachment and are often repurposed for housing or economic activities. Consequently, while green spaces are promoted as instruments of resilience and inclusion, they can trigger green gentrification, displacing low-income residents under the guise of ecological improvement (Kamjou et al., 2024; Opanga & Guma, forthcoming; Temper et al., 2020). Governance fragmentation, economic interests, and colonial-era urban planning legacies further restrict land access in Nairobi (Njoh, 2009; Otiso, 2005).

Recent scholarship emphasises that sustainability agendas are not passively received but actively contested, reinterpreted, and resisted. Monte-Mór and Limonad (2023) call for a rethinking of spatial justice that integrates environmental and social concerns in the face of planetary threats. However, dominant greening models, shaped by frameworks such as SDG 11 and AFR100, privilege technocratic and aesthetic approaches rooted in formal planning, often marginalising informal settlements. These models frequently erase Indigenous ecological practices and overlook the gendered and racialised labour sustaining urban environments (Elmhirst, 2015; Nightingale, 2011). In Nairobi, Kimari (2023) demonstrates how such frameworks pathologise areas like Mathare as sites of 'bad nature', legitimising evictions under environmental pretexts.

Parallel dynamics are evident elsewhere: Gururani (2023) shows how restoration projects in India reproduce exclusions by abstracting ecological relations from agrarian and caste-based contexts. Infrastructure critiques reveal how green urbanism, when aligned with the 'modern infrastructure ideal', dismisses decentralised, labour-intensive, community-led efforts as unscalable (Lawhon et al., 2023). These studies underscore that sustainability is a contested political terrain shaped through negotiation and subversion. In Nairobi, residents creatively adapt global greening logics, forming hybrid practices that merge survival, care, and resistance.

This article builds on such insights to argue that while international greening models claim to promote equity, they often reinforce exclusion but are also reworked from below by residents in informal settlements, shaping alternative environmental futures (Gururani, 2023; Kimari, 2023; Lawhon et al., 2023; Monte-Mór & Limonad, 2023; Nightingale, 2011).

Through a comparative case study of Korogocho and Pumwani-Majengo, this article examines the interplay of political narratives and power struggles in shaping green urbanism. The analysis also considers how global green initiatives are reinterpreted, adapted, or resisted within these communities, highlighting the enduring impact of colonial legacies, policy contradictions, and historical land injustices. The remainder of the article is structured as follows: the methodology details the research design and data collection; the literature review contextualises urban greening in the Global South; the conceptual framework outlines the theoretical underpinnings; a historical overview of green urbanism in informal settlements is provided; and the results and conclusions synthesise the findings.

Materials and methods

This article compares Korogocho and Pumwani-Majengo to explore governance, community-led environmental responses, and ecological outcomes. These sites were chosen for their distinct socio-political histories, ongoing environmental challenges, and strategic location along the Nairobi River riparian zone – an area marked by land-use conflict and regulatory ambiguity. Key variables of comparison include governance structures, land tenure, evictions, stakeholder interests, and the contrasting environmental outcomes produced through both state-led and grassroots greening efforts.

A mixed-methods approach, combining policy analysis, GIS spatial assessment, and qualitative fieldwork to examine the dynamics of urban greening in informal settlements, was employed. Secondary data included policy documents, news archives, journal articles, and reports from NGOs and government agencies. Primary data was collected through an exploratory case study design focused on the middle section of the Nairobi River, which experiences acute environmental pressure. Fieldwork was conducted across two phases (June 2023–January 2024 and June–August 2024) using adaptive sampling. Participants included government officials (n = 7), NGO representatives (n = 5), private developers (n = 7), and informal settlement residents (n = 40).

Data collection methods included six focus group discussions (with youth, women, elders, and displaced residents) and six life histories focused on eviction experiences. Semi-structured interviews explored policy implementation, land conflicts, and greening projects. Policy

documents were thematically coded to identify contradictions between formal urban greening frameworks and grassroots realities. All data were analysed using Atlas Ti software.

Green urbanism dynamics in the Global South

Urban greening is increasingly referenced within international development agendas; however, its definition and implementation vary significantly across different contexts. As Rizzo et al. (2020), Weisser and Müller-Mahn (2014), and Roy (2012) argue, the global ‘green turn’ is fractured, territorialised, and strategic- ally deployed. Its progress is unevenly distributed worldwide, creating stark contrasts between the Global North and the Global South. In New York and Berlin, for instance, robust governance systems, policy-driven initiatives, and strong institutional frameworks have fostered a more equitable distribution of green spaces (Bille et al., 2023; Lehmann, 2010). These cities, often characterised by well-established urban planning systems, benefit from significant investment in green infrastructure, ensuring that their green spaces are more accessible and equitably distributed among residents.

On the other hand, cities in the Global South face significant challenges, including governance weaknesses, rapid urbanisation, and underinvestment in green infrastructure. For instance, studies show that 49.6% of urban vegetation is browning,²¹ while only 40.75% is greening, with a particular concentration of green infrastructure deficits in African cities, which are urbanising at a rate of 3.5% annually (African Development Bank, 2012; Li et al., 2025). Much of this urban growth occurs in informal settlements, where the combination of high tenure insecurity, inadequate infrastructure, and socio-economic marginalisation hinders the expansion of green spaces. These settlements are often excluded from formal green urbanism policies, further exacerbating disparities (Anderson et al., 2023).

The uneven distribution of green spaces is further complicated by the complex relationship between formal governance and informal practices. Informality in urban settlements should be perceived as a dynamic continuum that coexists with and complements formal systems. It refers to practices and spaces that function outside the established legal and planning frameworks yet play a crucial role in urban life by filling gaps left by formal systems. These informal spaces are flexible and adaptive, responding to local socio-economic, political, and environmental contexts. This understanding underscores the complexity of urbanisation, particularly in the Global South, where informal practices often evolve to meet the immediate needs of marginalised populations (Banks et al., 2019; Ngwenya & Cirolia, 2020; Roy, 2012).

²¹ describes the decline or degradation of urban vegetation, where green cover either dries out, dies off, or is replaced by non-vegetative land uses, signalling environmental degradation

Political and economic forces, particularly capitalist agendas, often shape urban greening initiatives, prioritising economic growth over equity and sustainability (Rossi & Wang, 2020). In Kenya, for example, overlapping urban greening laws have led to conflicting policies regarding riparian land use (Odote, 2019). Similarly, in Jakarta, Indonesia (Fluhrer et al., 2020) and San José, Costa Rica, institutional fragmentation has hindered green infrastructure planning systems, leaving informal settlements unaddressed (Fluhrer et al., 2020).

Climatic conditions add another layer of complexity, extreme heat and arid conditions limit vegetation growth in many developing countries. Research has shown that climate conditions account for up to 75% of the disparities in green space distribution, with precipitation alone contributing 65.2% to these differences (Li et al., 2025). Wealthier nations in the Global North with higher Human Development Index scores can allocate more resources to urban greening projects. This luxury is often unavailable to rapidly urbanising regions in the Global South. Despite these challenges, informal settlements in the Global South have demonstrated significant resilience and innovation in the face of adversity.

Grassroots initiatives, such as urban farming, tree planting, and riverbank restoration, reflect a strong sense of community agency and a collective effort to reclaim and improve local environments, even in the absence of formal institutional support (Roy, 2005; Simone, 2004). However, these initiatives remain fragmented and often lack the necessary resources to scale up. Moreover, competing political interests frequently undermine the impact of grassroots efforts, creating a significant gap in understanding how these communities navigate and adapt to pressures such as green gentrification and broader socio-political dynamics (Gould and Lewis, 2016).

While existing literature on urban greening has extensively explored the environmental benefits and technical aspects of green infrastructure, it has neglected the political and social dimensions of these processes. Research on green urbanism tends to focus on the well-coordinated policies and funding mechanisms prevalent in the Global North, where urban green spaces benefit from robust institutional support. In contrast, the challenges faced by the Global South, marked by rapid and often unplanned urban growth and the expansion of informal settlements, remain underexplored. In many cities in the Global South, green spaces are concentrated in wealthier areas, leaving informal settlements underserved and deepening socio-economic disparities (Mensah, 2015; Muhoza and Zhou, 2024).

Urban greening initiatives are frequently driven by capitalist priorities that emphasise economic growth over environmental justice, often at the expense of marginalised communities (Rossi

and Wang, 2020). The cases of Barcelona and Nairobi exemplify how such projects can reinforce land dispossession and social inequities (Anguelovski et al., 2018; Bulkeley et al., 2014; Holifield et al., 2009). In Nairobi, governance fragmentation, highlighted by contradictions between national and county planning frameworks, intensifies these challenges, a pattern echoed in other cities across the Global South (Mensah, 2015; Patel et al., 2017; Patterson et al., 2017). Critical gaps remain in the literature regarding how informal settlements resist exclusionary green policies.

Existing studies have focused on ecological benefits, technical infrastructure, and top-down governance frameworks, overlooking the importance of grassroots resistance and the role of governance in shaping green urbanism. This article addresses these gaps by examining green urbanism in Korogocho and Pumwani-Majengo through the lenses of Feminist Urban Political Ecology (FUPE), Postcolonial Urbanism, and the Travelling Concepts Framework. A combination of these frameworks critiques class-based exclusions, situates green gentrification within historical colonial land policies and explores how global sustainability frameworks like SDG 11 and AFR100 are locally reinterpreted, resisted and adapted in informal settlements.

Towards a Conceptual Framework for Green Urbanism in Informal Settlements

This paper employs three interrelated theoretical frameworks i) Feminist Urban Political Ecology (FUPE), ii) the concept of travelling models and iii) Postcolonial Urbanism, to critically analyse urban greening in Nairobi's informal settlements. While FUPE critiques the class-based and gendered exclusions in urban greening policies, Postcolonial Urbanism situates these exclusions within the historical legacies of land dispossession and racialized urban planning. Meanwhile, the Travelling Models framework reveals how global sustainability narratives are selectively adapted and manipulated by state and private actors to justify evictions.

First, FUPE emphasises how everyday acts of care and resistance endure despite the invisibility of informal settlements in formal planning processes. Postcolonial Urbanism and the Travelling Concepts Framework further reveal how colonial land governance and global greening agendas, such as SDG 11 and AFR100, are reinterpreted through residents' practices of adaptation, resistance, and care (Kimari, 2023; Monte-Mór & Limonad, 2023). Building on situated Urban Political Ecology (UPE) from the Global South, the paper challenges Eurocentric assumptions about infrastructure, governance, and ecological citizenship (Lawhon, Ernstson & Silver, 2014). It interrogates how greening intersects with fractured governance, racialised labour, and spatial exclusion (Gururani, 2020; Bathla & Gururani, 2022; Monte-Mór, 2007). While

critiques of top-down greening highlight its technocratic and symbolic limitations (Rizzo et al., 2020; Nightingale, 2023), the paper also considers how marginal or tokenistic interventions can be locally re-signified as meaningful tools of survival and agency (Kimari, 2019; Nightingale, 2011).

Recent scholarship underscores how green urbanism in the Global South is shaped by colonial legacies, socio-political exclusions, and fragmented governance (Rizzo et al., 2020; Roy, 2012; Monte-Mór & Limonad, 2023). In Nairobi, state-led greening projects have justified mass evictions in informal settlements along riparian zones, while community practices like urban farming and dumpsite reclamation remain marginalised in policy (Kimari, 2023). Feminist and postcolonial urban political ecologies expose how environmental knowledge, labour, and space are racialised, gendered, and historically structured (Elmhirst, 2015; Lawhon et al., 2023). This paper critiques the performativity of state greening efforts without dismissing their potential entirely, acknowledging that even limited interventions can be reworked from below into critical urban-natural innovations (Kimari, 2019; Nightingale, 2011; Lawhon et al., 2023).

Postcolonial urbanism highlights how colonial planning entrenched spatial inequalities by reserving green spaces for European settlers and excluding Indigenous African communities—a legacy still evident today in cities like Nairobi (Njoh, 2007; Miraftab, 2012). Affluent areas retain formal green spaces, while informal settlements, such as Korogocho and Pumwani-Majengo, remain marginalised (Kimari, 2016). Contemporary greening efforts continue to reflect colonial land governance, denying low-income residents access to green spaces and enabling land expropriation through state-led projects (Khayesi & Wegulo, 2022; Baffoe & Roy, 2022). The Nairobi River Restoration Project exemplifies this dynamic by framing informal settlements as environmental threats and legitimising mass evictions in May 2024—echoing colonial dispossession strategies (Odote, 2019; Miraftab, 2012).

Urban greening is thus a contested space shaped by tensions between global mandates and local informal practices (Elias et al., 2021; Elmhirst, 2015; Prouse & Arefin, 2024; Rocheleau et al., 1996; Cornea, 2019). In Nairobi, these tensions are seen in the displacement of women engaged in informal ecological labour like waterpoint management and gardening, whose roles are overlooked in formal planning (Vigil, 2024; Sundberg, 2017; Elmhirst, 2015). While state-led projects like the Nairobi River Restoration Program are often critiqued as symbolic, they produce mixed outcomes, displacing vulnerable groups while also enabling limited infrastructure improvements and awareness. These hybrid results underscore how state actions

are locally interpreted, resisted, or appropriated, producing both intended and unintended consequences.

Thirdly, the concept of travelling models (Said, 1994; Weisser & Mueller-Mahn, 2017; Baffoe & Roy, 2022) examines how global sustainability policies interact with local resistance and adaptation in informal settlements. It reveals the contradictions of internationally driven green urbanism, where policies like Sustainable Development Goal number 11 are resisted, transformed, or repurposed by local communities. This repurposing gives rise to a hybrid space in which imported models coexist uneasily with Indigenous greening practices, those grounded in local survival strategies and communal land care rather than institutional mandates. Lastly, Kimari's work on outlaw urbanism enriches this reading by illustrating how grassroots actors in Nairobi's outlaw spaces mobilise ecological labour not only for material benefit but also as a mode of resistance, memory, and community reclamation.

Greening strategies in Nairobi's informal settlements are not uniformly shaped by global frameworks; they reflect a hybrid terrain where externally imposed models such as SDG 11 and AFR100 coexist uneasily with Indigenous, community-driven practices rooted in survival, care, and land stewardship (WBGU, 2021). While some initiatives adapt global discourses, for instance, the repurposing of AFR100's afforestation goals into micro-forests and urban farms by youth groups in Korogocho, others emerge entirely from within communities and challenge top-down assumptions about innovation and sustainability (Zain et al., 2022; Callon, 1984). These localised forms of environmental agency, including dumpsite reclamation and women-led ecological care, often remain invisible within formal planning frameworks but play a critical role in shaping urban nature (Baffoe & Roy, 2022). As shown in Table 11, this paper distinguishes between 'travelling' models driven by international and state actors, and 'indigenous' innovations rooted in local survival logics.

While FUPE foregrounds the intersectional, gendered, and classed exclusions that shape both participation in and the impacts of local greening efforts, Postcolonial Urbanism situates these inequalities within deeper colonial legacies of land dispossession and spatial segregation. Travelling Models help trace how globally circulating green urbanism policies, such as those embedded in CAP, are selectively adapted, resisted, or reworked on the ground. Taken together, they allow us to unpack how Nairobi's formal green planning, such as the Nairobi Climate Action Plan, interacts with, and often overlooks, the survivalist, justice-oriented greening efforts of residents in outlawed spaces. This approach foregrounds not only the material and

symbolic labour of greening from below but also the political contestations over whose visions of urban nature are legitimized, resourced, and made visible.

Table 11: Indigenous and Travelling urban greening models and their Drivers

Type	Origin	Examples	Drivers
Travelling (Adapted)	Global/ External	AFR100 riparian reforestation, SDG-aligned urban greening, green corridors	Government agencies, NGOs, international policy frameworks
Indigenous (Innovated)	Local/ Community-born	Dumpsite reclamation, informal urban farming, community-led micro-forests	Local residents, youth groups, women's groups, survival logics

Source: Author, 2025

This hybridity reveals the disconnect between global sustainability narratives and the lived realities of informal settlements. Global frameworks, though presented under a unified banner, differ significantly in scope, tools, and political intent, making it essential to treat them as context dependent. Moreover, their failure to account for conditions such as land tenure insecurity undermines their effectiveness in marginalised urban spaces (Baffoe & Roy, 2022). Dominant greening models tend to be technocratic and exclusionary, whereas inclusive models centre informality, co-governance, and the ecological labour of women and youth as integral to sustainable urban futures. Residents of Pumwani-Majengo and Korogocho actively reinterpret and resist top-down green urbanism by asserting alternative ecological practices rooted in justice, inclusion, and everyday survival.

Background

Nairobi’s urban landscape is shaped by colonial planning legacies, postcolonial governance failures, and rapid informal urbanisation, resulting in unequal distribution of green spaces. While affluent areas enjoy well-maintained parks and tree-lined streets, informal settlements suffer from environmental neglect and fragmented governance, reinforcing socio-political inequalities (Otiso, 2005). Despite Kenya’s commitment to sustainability through initiatives like Vision 2030, the Jaza Miti campaign, and SDG 11, green urbanism in Nairobi remains a contested process. Critical debates focus on land tenure insecurity, socio-economic disparities, and policy contradictions that complicate efforts to expand urban green spaces in these

marginalized areas (Njoh, 2009; Myers, 2016). Urban planning continues to favour elite districts, leaving settlements with limited environmental infrastructure and scant public investment (Shariff, 2021; Makworo & Mireri, 2011).

Although Nairobi's historical development has shaped the deep-rooted social and spatial inequalities seen today, contemporary discussions tend to focus more on current regulatory obstacles and conflicts over urban greening policies, rather than engaging with these historical causes directly. Pumwani-Majengo, depicted in Figure 1, was designated as Nairobi's only legal African settlement and is strategically located on a low-lying, swampy plain near the Nairobi River. This placement was intended to segregate African workers from European populations, but over time, rapid urban migration and neglect transformed the area into a slum-like environment with diminishing green spaces (Njoh 2009; Otiso 2005).

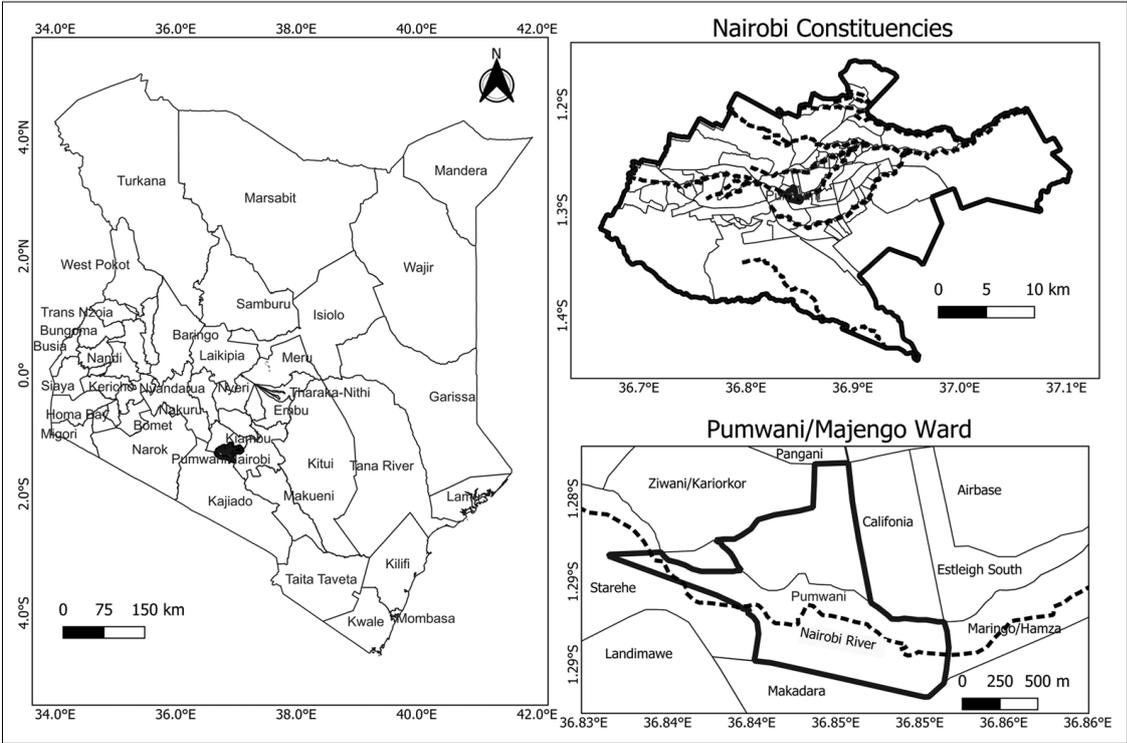
In contrast, Korogocho, shown in Figure 2 (Source: Author, 2025), emerged in the 1970s as a quarry site and later became an informal settlement following the government's relocation of squatters from areas near the Nairobi Central Business District. Located near the Dandora Dumpsite, Nairobi's largest waste disposal site (Population Matters, 2024), Korogocho remains emblematic of the environmental and infrastructural deficits that afflict informal settlements. Both settlements have been excluded from mainstream urban greening initiatives—a reality that continues to reinforce environmental inequalities (Anderson et al., 2023). Since the COVID-19 pandemic, the government has made efforts to include these areas in greening projects, yet implementation remains fraught with controversy and sporadic enforcement.

Kenya's green urbanism has evolved through cyclical, state-led public works programs aimed at tackling youth unemployment, environmental degradation, and urban renewal in Nairobi's informal settlements. Early efforts like the 2009 Kazi Kwa Vijana (KKV) program²² under President Kibaki engaged unemployed youth in environmental conservation and waste management but was undermined by weak oversight, politicisation, and inconsistent participation, resulting in minimal infrastructure improvements (Bassett, 2020). Building on KKV, the 2014 revamped National Youth Service (NYS) integrated green infrastructure and slum upgrading into a national agenda, employing thousands of youths. Yet, corruption, elite capture, and disconnection from local governance limited its legitimacy and long-term impact (Bassett, 2020; Otiso, 2005).

²² <https://yipe.wordpress.com/wp-content/uploads/2009/11/kkv-manual.pdf>

The 2020 Kazi Mtaani program²³ introduced amid the COVID-19 crisis, marked a shift by directly engaging communities through cash-for-work activities, such as river desilting and tree planting. Although more inclusive and contextually grounded, it still faced funding constraints, political interference, and doubts about sustainability post-emergency funding (Sverdlik et al., 2025). These programs collectively reveal a pattern: while periodically mobilising environmental action, they fail to institutionalise meaningful local participation or secure lasting greening outcomes. Their reactive, crisis-driven nature highlights the state’s structural failure to adopt a proactive, inclusive approach to sustainable green urbanism in marginalised informal settlements.

Debates over urban greening in Nairobi are deeply entwined with the city’s complex and often contradictory regulatory framework governing riparian land use. A patchwork of laws, including the Environmental Management and Coordination Act (EMCA) 2006, the Urban Areas and Cities Act (2011), and the Physical and Land Use Planning Act (2019), prescribe varying riparian buffer zones, ranging from 6 to 100 meters, and employ inconsistent measurement criteria. These legal ambiguities create significant loopholes that enable land grabbing and facilitate the uneven enforcement of environmental regulations, allowing private developers and political elites to appropriate green spaces, often at the expense of residents in informal settlements (Odote, 2019; Mensah, 2015; Mwachane, 2020; Muhoza & Zhou, 2024).



²³ See <https://youth.go.ke/kazi-mtaani/>

Figure 17: A map of Pumwani-Majengo informal settlement.

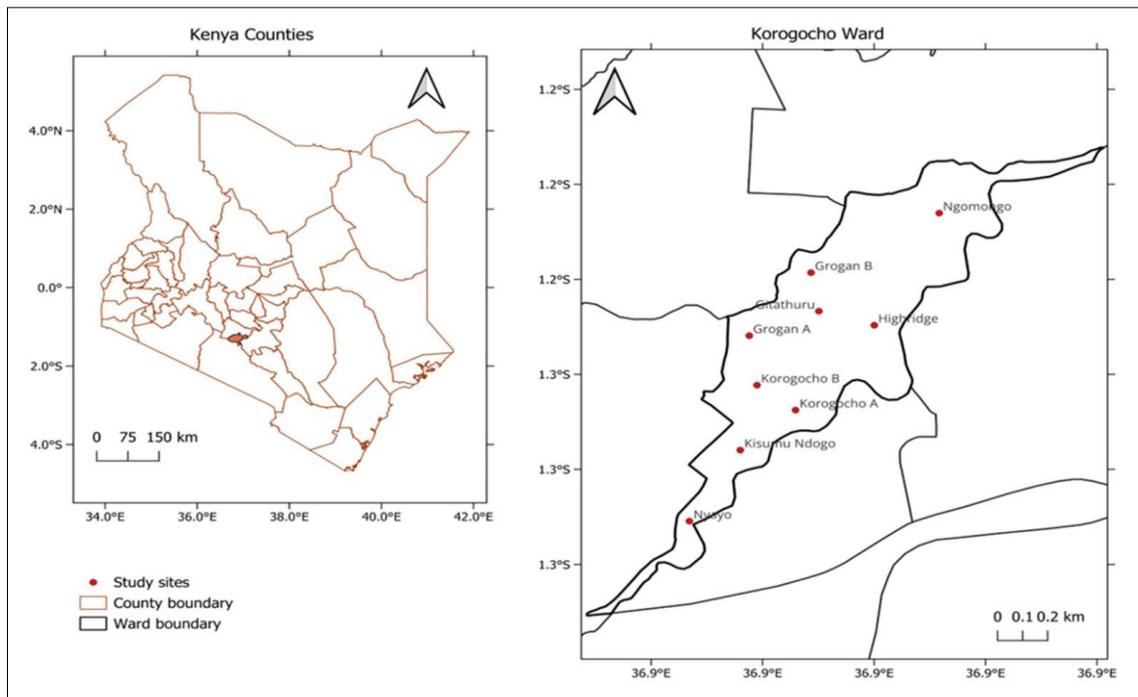


Figure 18: A map of Korogocho informal settlement

Source: Author (2025).

Compounding these issues are persistent multi-scalar tensions between national and county governments. Overlapping mandates and political rivalries, particularly in riparian land regulation and green infrastructure planning, undermine policy coherence and impede effective governance (Odote, 2019; Patel et al., 2017). In Nairobi, these intergovernmental frictions are evident in the contradictory implementation of urban greening agendas, which reflect deeper struggles over territorial authority and urban land control.

The intersection of urban greening and land dispossession has sparked concerns about green gentrification, where efforts to enhance environmental sustainability inadvertently drive real estate speculation and the displacement of low-income residents (Opanga & Guma, forthcoming). Comparisons with other Global South cities underscore this debate: in Cape Town, urban greening initiatives in historically marginalised areas have accelerated property price increases, pricing out long-term residents (Venter et al., 2020); in Lagos, waterfront greening projects have resulted in mass evictions along the Lagos Lagoon, raising serious questions about environmental justice (Adegun et al., 2024). In Nairobi, informal settlements, which house over 60% of the city's population (UN-Habitat, 2007), are characterised by high population densities, land tenure insecurity, and inadequate infrastructure. Attempts to integrate these areas into urban greening initiatives are inherently problematic, underscoring the need for

differentiated approaches that recognise and address the unique challenges of informal urban spaces. These factors exacerbate socio-spatial inequalities as urban planning frameworks are implemented in a fragmented manner (Odote, 2019).

Amid these challenges, informal settlements have emerged as vibrant sites of grassroots greening activism. Community-led initiatives in Korogocho and Pumwani-Majengo illustrate how residents reclaim and repurpose urban spaces through activities such as tree planting, urban farming, and riverbank restoration. These bottom-up strategies reflect a broader trend observed in São Paulo, Kumasi, and Cape Town, where community-led greening efforts emerge in response to institutional neglect (Celentano et al., 2020). For example, similar initiatives in São Paulo have transformed abandoned lands into urban gardens, simultaneously improving food security and environmental sustainability (McDougall et al., 2018). Nairobi's urban governance framework, dominated by technocratic, top-down models, has historically marginalised these communities, limiting their participation in decision-making and policy implementation (Bassett, 2020; Jiménez-Aceituno et al., 2019).

Urban greening in Nairobi's informal settlements is a political process shaped by conflicting visions of sustainability. Dominant greening initiatives, often led by the state and NGOs, adhere to global frameworks such as SDG 11, AFR100, and the Bonn Challenge, which promote standardised metrics like canopy cover, carbon sequestration, and riparian buffers (Gururani, 2023; Nightingale, 2011). These frameworks favour formal aesthetics and technocratic planning while overlooking the spatial, legal, and social realities of informality (Monte-Mór and Limonad, 2023).

In contrast, community-driven greening emerges through everyday acts of necessity and care. Women-managed waterpoint spaces in Pumwani-Majengo, youth-led micro-forests in Korogocho, and farming on reclaimed dumpsites demonstrate alternative models of land stewardship that centre survival, social cohesion, and ecological functionality (Elmhirst, 2015; Kimari, 2023). These grassroots practices contest dominant definitions of 'green' by advancing more relational, embedded, and socially responsive forms of urban sustainability (Lawhon et al., 2014, 2023).

These ideological tensions are illustrated in cases like the 2024 mass evictions from riparian zones, justified under the guise of environmental compliance (Wakhungu et al., 2024). Such interventions echo colonial logics of spatial exclusion, reinforcing critiques that greening often serves elite agendas rather than equitable transformation (Gururani, 2023; Monte-Mór, 2007). However, informal settlements are not passive recipients; they reinterpret global mandates to

suit local needs. For instance, AFR100's reforestation targets are transformed into micro-forest projects on marginal land (Sverdlik et al., 2025). These practices reveal urban greening as a negotiated and contested field shaped by historical marginalisation and everyday resilience (Elmhirst, 2015; Gururani, 2023; Lawhon et al., 2014).

Negotiating green urbanism in Pumwani-Majengo and Korogocho

Green urbanism has become an issue in Nairobi's informal settlements. In the following section, we explore how it is shaped by colonial legacies, competing interests among government, NGOs, youth activists, private developers, and local communities, and policy paralysis, leading to spatial inequalities, exclusion, and the commodification of green spaces in Pumwani-Majengo and Korogocho.

The colonial roots of green urbanism in Korogocho and Pumwani-Majengo

Green urbanism in Nairobi is deeply entwined with colonial legacies that still shape land use, environmental access, and eviction patterns. During colonial rule (1899–1963), green spaces were set aside for Europeans, while African workers lived in crowded, poorly resourced areas. Despite modern interventions such as slum upgrading and conservation projects, spatial segregation, land dispossession, and governance fragmentation persist. Today, affluent neighbourhoods enjoy well-maintained green infrastructure, yet informal settlements like Pumwani-Majengo and Korogocho remain neglected and vulnerable to displacement.

A long-term Pumwani-Majengo resident stated,

We have now lived on this land for over four generations, yet today we are being displaced under the guise of urban renewal. (Life history interview, resident, Pumwani-Majengo, December 2023)

Land speculation further compounds the crisis. Legal loopholes enable powerful interests to displace long-term residents. A community leader observed,

Those claiming the land are not even the original owners but land grabbers ... Some people have lived here for more than 40 years, but are still evicted. (Interview, Women Group Chairperson, Pumwani-Majengo, December 2023)

Korogocho's history also reflects this enduring marginalisation. Originally a quarry site, it later became a refuge for displaced populations relocated from central areas like Globe Cinema. One resident recounted,

The government, through its planning policies, did not want people living close to town. Those living near the Globe Cinema were sent here. They built houses with whatever material they could find. (Life History Interview, Resident, Korogocho, August 2023)

Post-independence policies prioritised economic growth over addressing colonial injustices. This fostered ambiguous land tenure and private land accumulation. ‘Slum upgrading’ programs, initiated under figures like Tom Mboya, focused on housing improvements while neglecting the integration of green spaces (Interview, Resident, Pumwani-Majengo, July 2024). Additionally, from the 1970s onwards, land privatisation and political allocations exacerbated the scarcity of green spaces. Politically connected elites captured environmentally significant lands such as the riparian lands of the Nairobi River (Life History Interview, Resident, Pumwani-Majengo, July 2024).

These continuities illustrate how colonial legacies persist in modern urban governance, reinforcing spatial inequalities and marginalising informal settlements under the banner of green urbanism. These empirical observations align with global scholarship on postcolonial urban inequalities, which emphasises the persistence of colonial land policies in shaping contemporary urban landscapes (Ng’weno, 2018; Shariff, 2021). Studies of African cities reveal that independence did not dismantle colonial spatial hierarchies but instead adapted them to serve new elite interests (Bille et al., 2023; Zain et al., 2022). These insights expand the field of postcolonial urbanism by showing how green urbanism in Nairobi is not merely a sustainability initiative but a continuation of historical land struggles. This approach critiques the postcolonial discourse, which often assumes that independence resolved colonial injustices. Nairobi exemplifies how global sustainability ideals are localised without addressing the deep-seated land inequalities that persist.

Green urbanism from below in Korogocho and Pumwani Majengo

In Korogocho, a youth group has reclaimed a former dumpsite and crime zone along the Nairobi River, transforming it into a public park. This greening work emerged from a deliberate community response to violence, criminalisation, and environmental neglect. As one member noted,

When we clean the river and plant trees, we’re also cleaning our name. (Interview, Youth group member, Korogocho, November 2023)

Additionally, the conversion of a dumping site into a community park, an initiative of young men and women, many with histories shaped by gang violence and police brutality, engages in ecological labour to assert their right to safety and belonging. They have integrated over 350

women, formerly involved in prostitution, into leadership and vocational training. This shows that gender justice is inseparable from environmental justice; their greening efforts challenge both material degradation and social criminalisation, reframing urban space through collective care and social transformation. The group's actions resist both physical degradation and the social stigmatisation of their settlement. Drawing on knowledge of riparian laws and personal experiences, it has successfully blocked elite land grabs. Their ecological labour offers a community-led alternative to top-down green urbanism.

Similarly, in Pumwani-Majengo, a self-help group comprising women, youth, and people with disabilities engages in river cleanup, tree planting, and recycled materials to prevent flooding of the river. In the absence of formal services and state neglect, their work stabilises the environment while also advancing inclusion and livelihood. They assert self-reliance and frame their efforts as an extension of Wangari Maathai's²⁴ environmental legacy. For example, when land speculators attempted to encroach on a reclaimed dumpsite, they organised riots to defend it (Interview, Youth group member, Pumwani-Majengo, January 2024). Thus, greening helps them assert their right to green spaces in a city that frequently denies their presence.

While both Korogocho and Pumwani-Majengo exemplify grassroots greening as a form of resistance, their distinct configurations of outlaw space reveal important differences: Korogocho's initiatives are shaped by post-conflict masculinised rehabilitation and strategic legal literacy, while Pumwani-Majengo foregrounds intergenerational care work and gender-inclusive ecological stewardship. Together, they offer complementary models of how marginalised communities navigate exclusion and assert environmental rights. These practices challenge elite-driven redevelopment and exclusionary environmental governance by centring the needs and voices of those sidelined in formal sustainability agendas. In both settlements, greening becomes a political strategy, asserting community presence, defending land, and reshaping the meaning of sustainability from below.

These cases exemplify what Lawhon et al. (2014) describe as situated urban political ecologies, emerging from the lived experiences of residents in outlawed spaces who resist technocratic and state-centric models. Their efforts reflect an alternative environmental rationality grounded in care, survival, refusal, and historical memory. They also illustrate the vernacularisation of global greening norms, which are selectively reinterpreted through Nairobi's complex socio-political terrain. Drawing on Kimari's (2022) notion of outlaw urban-ism, these spaces are not

²⁴ A Kenyan social, environmental, and political activist who devoted her life to restoring degraded forests and urban environments <https://www.nobelprize.org/prizes/peace/2004/maathai/biographical/>.

merely informal; they are criminalised and structurally excluded by planning and legal regimes yet paradoxically serve as vital sites where new ecological futures are being imagined and enacted. It is in these outlaw spaces, often seen as ungovernable or undeserving, that residents build ecologies of endurance, reassert rights to nature, and contest the exclusionary logics of Nairobi's green urbanism.

Imagination versus reality in Korogocho and Pumwani-Majengo

In government-led initiatives, green urbanism is promoted as a path to ecological conservation and urban renewal. However, in Korogocho and Pumwani-Majengo, the vision sharply contrasts with reality. Top-down approaches have often led to forced evictions and the displacement of low-income communities under the guise of environmental restoration. In Pumwani-Majengo, one resident explained that evictions are disguised as environmental conservation (Interview, Resident, Pumwani-Majengo, January 2024). This rhetoric masks a harsh reality where residents face sudden removal with little legal recourse. In Korogocho, the situation is even more severe. A resident recalled that the government had given them 48 hours to vacate their homes, which were destroyed by the military trucks the next day (Interview, Resident, Korogocho, June 2024). Such militarised evictions not only displace families but also reinforce deep power imbalances. Private business interests further complicate the picture.

Green urbanism projects are increasingly used to facilitate land privatisation. Private developers and politically connected actors increasingly seek to acquire prime land under green agendas (Interview, Government Official, January 2024). Additionally, in both informal settlements, informal power brokers, including local officials, often exploit regulatory grey zones to profit from the informal economy and land access. These practices epitomise a broader pattern of environmental dispossession.

Moreover, land and water resources are frequently commodified through informal deals and elite capture, with women and vulnerable groups disproportionately affected. NGOs and civil society envision green urbanism as a tool for social justice, yet many community members view their interventions with scepticism. A resident in Pumwani-Majengo remarked:

...NGOs operate based on their own agendas, not necessarily in the interest of the general population. (Interview, Resident, Pumwani-Majengo, December 2023)

A youth leader in Korogocho added:

...most of these programs become a cash cow for NGOs. Once they get what they want, they are no longer interested in sustainability. (Interview, Youth Group Leader, Korogocho, October 2023)

Despite these challenges, youth activists and grassroots groups are championing a bottom-up green urbanism. Their initiatives, urban farming and converting dumpsites into green spaces, offer hope for economic empowerment and environmental justice. However, financial constraints and exclusion from decision making persist.

Many youths have greening ideas, but they don't have the money. (FGD, Participant 5, Korogocho, October 2023)

A participant in Pumwani-Majengo urged greater inclusion:

I have never been involved in any of the activities, so involve us so that we can participate as well. (FGD, Participant 11, Pumwani-Majengo, July 2024)

Green urbanism in Nairobi's informal settlements reveals a critical disjuncture between inclusive global sustainability rhetoric and exclusionary on-the-ground implementation. In Korogocho and Pumwani-Majengo, youth-led green spaces represent hybrid greening practices that are subversive and strategic, reclaiming degraded land while tactically aligning with official narratives to gain visibility and access to resources (Elmhirst, 2015; Kimari, 2023). These practices resist binary framings of co-optation versus resistance, instead operating within a grey zone that challenges exclusion while leveraging the symbolic capital of sustainability agendas (Lawhon et al., 2014; Bathla & Gururani, 2022). Such efforts often rely on invisibilised gendered and classed labour, which remains unrecognised within dominant environmental discourses (Nightingale 2011; Elmhirst 2015).

Urban greening has been co-opted by private developers for profit, hence green gentrification, and the displacement of low-income residents, particularly affecting women and marginalised groups (Shariff, 2021; Muhoza & Zhou, 2024; Sundberg, 2017). This disconnect between global ideals and local realities aligns with insights from Feminist Urban Political Ecology (Rocheleau et al., 1996; Cornea, 2019), which foregrounds power, labour, and spatial justice. Moreover, it demonstrates that sustainability agendas are reshaped by local political economies rather than universally applied (Weisser & Müller-Mahn; Prouse & Arefin, 2024), challenging assumptions about the equity of global greening frameworks.

Performativity of Green Urbanism in Informal settlements

Green urbanism in Nairobi's informal settlements has a highly performative character²⁵; serving as a symbolic tool for political legitimacy rather than advancing true environmental justice.

²⁵ connotes that green initiatives often serve as political or symbolic tools rather than addressing environmental or community needs (Opanga & Müller-Mahn, forthcoming).

Government and elite stakeholders use greening initiatives to attract media attention, consolidate land control, and craft an image of conservation, while grassroots communities face exclusion and dispossession. A resident from Korogocho captured this disconnect:

Media houses and politicians use our green space transformation activities to enhance their image... We get nothing but empty promises (Interview, Resident, Korogocho, June 2023).

This sentiment reflects the symbolic nature of green projects that prioritise optics over tangible benefits. Field observations further reveal that circa 400,000 residents were forcibly evicted between May and July 2024 under the pretext of riparian land reclamation, while affluent estates on riparian zones remained intact (Wakhungu et al, 2024). Such data expose a double standard in environmental governance, privileging elite interests and reinforcing exclusionary practices. Additionally, participation in these initiatives also remains illusory. Intended ‘participatory mechanisms’ are often inaccessible to residents. As one environmental lawyer critiqued,

When you tell people in informal settlements to write memoranda and submit via email, how many of those people have email or even the resources to visit a cybercafé? (Interview, Environmental Lawyer, September 2023).

This bureaucratic barrier not only limits meaningful engagement but also echoes global trends in tokenistic public participation. Private business interests add another layer to the performativity. A government official noted,

Businesspeople, ironically, solar panel guys and even politicians, all want this land because it is prime... (Interview, Government Official, January 2024).

In Pumwani-Majengo, one community member explained,

Washerwomen are persuaded by land grabbers to move water points, making way for new buildings. (Interview, Community Member, Pumwani-Majengo, June 2024)

These quotes underscore the gap between performative promises and the lived reality of community exclusion. Similar trends are evident elsewhere: in Lagos, waterfront greening projects displaced over 30,000 residents (Adegun et al., 2024), and in Cape Town, renewal programs drove property value hikes that marginalised long-term residents (Venter et al., 2020). By contrast, grassroots initiatives in São Paulo, such as urban farming, demonstrate how local efforts can reclaim green spaces (McDougall et al., 2018). In Nairobi, the County Integrated Development Plan conflicts with the national Medium-Term Framework; this creates

regulatory loopholes that enable elite capture of environmental initiatives (Odote, 2019; Patel et al., 2017; Valencia et al., 2021; Patterson et al., 2017).

These dynamics enrich theoretical frameworks, contributing to Feminist Urban Political Ecology by deepening gendered and intersectional inequalities, to postcolonial urbanism by exposing persistent legacies of land dispossession, and to the concept of travelling models by showing that global sustainability agendas are reinterpreted through local governance failures, resulting in exclusionary green policies (Kelbert, 2016). While many state greening projects prioritise visibility and political branding, their symbolic dimensions sometimes intersect with or enable material improvements, albeit unevenly and often unintentionally.

Discrepancies in Law Enforcement

Weak enforcement mechanisms undermine existing legal protections, particularly in relation to land governance. Although relevant laws exist, their implementation remains inconsistent, enabling land grabbing and regulatory evasion. Moreover, governance conflicts complicate local accountability, as some land disputes are shaped by interests that operate beyond the county level and fall under national political influence (Interview, Resident, Korogocho, August 2023).

This reflects broader governance challenges, where weak institutions facilitate elite capture of public resources, perpetuating inequality, and exclusion. Additionally, land tenure policies designed to secure informal settlers' rights are often manipulated by slum landlords and land cartels²⁶, leading to further displacement. As an NGO representative explained:

Land cartels, often disguised as slum landlords, exploit the regularisation process to displace the original settlers (Interview, NGO Representative, June 2024).

This aligns with global trends where formalisation efforts, rather than protecting vulnerable communities, fuel land speculation and elite control, exacerbating housing insecurity. Moreover, government officials and politicians exploit legal ambiguities to allocate riparian land, parks, and open spaces to political loyalists. A Pumwani resident described how public land was systematically privatised:

²⁶ Land cartels are networks of influential, well-connected individuals who operate from behind a ghostlike facade, concealing their active involvement in urban land governance. Though they may seem non-existent, they wield immense power by leveraging both legitimate and illegitimate resources to manipulate land allocation, infrastructure, and economic activities in informal settlements. This spectral nature blurs the boundaries between formal legal frameworks and informal norms, deepening tensions between legality and legitimacy in a hybrid governance system (Opanga & Müller-Mahn, forthcoming).

The regime at the time saw the allocation of riparian land along the Nairobi River to political loyalists (Life History Interview, Resident, Pumwani-Majengo, July 2024).

This analysis differentiates between the legal and policy frameworks that promote urban greening—such as EMCA, NIUPLAN, and AFR100—and their material execution, which in practice is shaped by local political interests, selective enforcement, and elite capture. Our findings thus extend critiques in urban political ecology by empirically illustrating how even well-intentioned environmental policies can be distorted through fragmented governance and patronage politics. This persistent lack of legal enforcement creates uncertainty for residents, reinforcing the precarious status of informal settlements and weakening efforts toward equitable urban sustainability.

Despite Kenya's robust legal frameworks on land tenure and environmental protection, weak enforcement paves the way for land grabbing and corruption (Odote, 2019). Politically connected elites exploit legal loopholes to manipulate land policies, displacing vulnerable communities while accumulating valuable urban property, a pattern consistent with global empirical observations of elite capture of public resources under the guise of sustainability (Temper et al., 2020). Similar selective enforcement practices observed in African and Latin American cities reveal how global sustainability models, when transplanted to local contexts, are reshaped by entrenched power dynamics, challenging the efficacy of travelling models (Bille et al., 2023). Exposing the intersection of gendered and socio-economic inequities with institutional weaknesses enriches Feminist Urban Political Ecology and postcolonial urbanism discourses, illustrating how historical legacies and persistent power asymmetries continue to undermine equitable urban development.

Conclusions

This article examined how global and national visions of urban greening are negotiated in practice within two informal settlements in Nairobi, Korogocho and Pumwani-Majengo. The objective was to highlight the tension between global sustainability aspirations and the lived realities of marginalised communities and to reveal how historical and structural inequalities, rooted in colonial-era land dispossession, and entrenched socio-political power struggles, shape urban greening practices. In doing so, the article sought to interrogate why green urbanism, despite its promise of inclusivity and sustainability, benefits affluent areas while informal settlements remain sidelined.

Empirical observations in Korogocho and Pumwani-Majengo reveal that, first, colonial-era urban planning has left a lasting imprint on land distribution, perpetuating spatial inequalities

that persist despite post-independence land reforms and slum upgrading initiatives. Second, the top-down nature of green urbanism initiatives, driven by political and economic interests, often leads to the appropriation of land for commercial gain, further deepening disparities. Third, although NGOs and grassroots actors leverage green urbanism as a tool for social justice and empowerment, their efforts are frequently constrained by financial dependencies, political suppression, and ongoing land conflicts.

Finally, power dynamics between national and county governments contribute to policy paralysis, impeding the effective implementation of urban greening projects in these informal settlements. This study contributes to debates on green urbanism by offering a situated analysis of how colonial legacies and socio-political struggles shape green initiatives in Nairobi's informal settlements. It demonstrates that sustainability projects, when implemented through exclusionary frameworks, can reinforce existing inequalities. Building on Global South UPE perspectives, the study shows that Nairobi's informal settlements are not peripheral to sustainability but central to its contestation and negotiation, echoing Monte-Mor's concept of the 'extended urban fabric'. These findings affirm calls for a grounded urban political ecology that engages with informality, uneven enforcement, and racialised spatialities, as argued by Lawhon et al. (2014) and Gururani (2023).

Lastly, despite exclusionary policies, residents of informal settlements actively contest top-down green urbanism, engaging in community-driven sustainability efforts that challenge elite narratives. However, these initiatives are undermined by financial precarity, weak institutional support, and policy contradictions. Our findings point to the need for urban greening strategies that are co-produced with local communities, historically conscious, and sensitive to the lived realities of informality. We further challenge the assumption that greening ideas are solely externally derived by showing how community-born innovations coexist with adapted global models, creating a hybrid green urbanism shaped by both resistance and invention. A deeper engagement with intersectionality, examining how gender, race, and class are encoded into Nairobi's green urbanism, reveals that without confronting these foundational inequities, sustainability projects risk reinforcing the very exclusions they seek to address.

Notes

- i. Informal settlements are typically characterised by high tenure insecurity, lack of proper infrastructure and services, precarious security, and safety – including exposure to environmental and health hazards – and socio-economic marginalisation (UNHCR Emergency Handbook).

- ii. Green gentrification, as defined by Gould and Lewis (2016), refers to a process ‘which is facilitated in large part by the creation or restoration of an environmental amenity’, rather than cases where existing gentrification leads to greening. In informal settlements of African cities, this occurs through state-led or donor-driven environmental projects – such as green space development, climate adaptation, or infrastructure upgrades – which, despite aiming to improve living conditions, often drive land commodification and displacement. Unlike in formalised urban areas, green gentrification here is shaped by histories of land tenure insecurity, rapid urbanisation, and contested rights to the city, exacerbating socio-spatial inequalities.
- iii. describes the decline or degradation of urban vegetation, where green cover either dries out, dies off, or is replaced by non-vegetative land uses, signalling environmental degradation
- iv. <https://yipe.wordpress.com/wp-content/uploads/2009/11/kkv-manual.pdf>
- v. See <https://youth.go.ke/kazi-mtaani/>
- vi. A Kenyan social, environmental, and political activist who devoted her life to restoring degraded forests and urban environments <https://www.nobelprize.org/prizes/peace/2004/maathai/biographical/>.
- vii. connotes that green initiatives often serve as political or symbolic tools rather than addressing environmental or community needs (Opanga & Müller-Mahn, 2025).
- viii. Land cartels are networks of influential, well-connected individuals who operate from behind a ghostlike facade, concealing their active involvement in urban land governance. Though they may seem non-existent, they wield immense power by leveraging both legitimate and illegitimate resources to manipulate land allocation, infrastructure, and economic activities in informal settlements. This spectral nature blurs the boundaries between formal legal frameworks and informal norms, deepening tensions between legality and legitimacy in a hybrid governance system (Opanga & Müller-Mahn, 2025).

References

- Adegun OB, Olanrewaju OS, Elias P, et al. (2024) Green infrastructure and well-being nexus within slums: A Lagos case. *Cities & Health*: 1–13. Available from: <https://doi.org/10.1080/23748834.2024.2403908>

- Africa Development Bank (2012) Urbanization in Africa. Africa Development Bank [Internet]. Available from: <https://blogs.afdb.org/fr/inclusive-growth/urbanization-africa-191>
- African Union (2020) A Harmonized Implementation Framework for the New Urban Agenda in Africa. Addis Ababa, Ethiopia: African Union.
- Anderson B, Prieto Curiel R and Patiño Quinchía J (2023) City shapes and climate change in Africa. *West African Papers* (40): 36–45. DOI: 10.1787/a944a930-en.
- Anguelovski I, Connolly JJT and Brand A (2018) New scholarly pathways on green gentrification: What does the urban ‘green turn’ mean and where is it going? *Progress in Human Geography* 43(6): 1064–1086.
- Anzilotti E and Appavoo J (2025) How African cities can develop to become green, resilient, and inclusive. *UrbanShift* [Internet]. 2025 Mar 3. Available from: <https://bit.ly/4io89dh>
- Baffoe G and Roy S (2022) Colonial legacies and contemporary urban planning practices in Dhaka, Bangladesh. *Journal Urban Plan* 38(1): 173–196.
- Banks N, Lombard M and Mitlin D (2019) Urban informality as a site of critical analysis. *Journal of Development Studies* 56(2): 223–238.
- Bassett E (2020) Reform and resistance: The political economy of land and planning reform in Kenya. *Urban Studies* 57(6): 1164–1183.
- Bathla N and Gururani S (2022) Reforestation as exclusion: Green regimes in postcolonial urban peripheries. *Environment and Planning E: Nature and Space* 5(3): 1370–1391.
- Bille RA, Jensen KE and Buitenwerf R (2023) Global patterns in urban green space are strongly linked to human development and population density. *Urban For Urban Green* 86: 127980.
- Bulkeley H, Castán Broto V and Maassen A (2014) Low-carbon transitions and the reconfiguration of urban infrastructure. *Urban Studies* 51(7): 1471–1486.
- Callon M (1984) Some elements of a sociology of translation: Domestication of the scallops and the fishermen of St Brieuc Bay. *Sociological Review* 32(1): 196–233.
- Celentano G, Salcedo Villanueva J and Habert G (2020) Supply chain mapping and stakeholders’ assessment towards the sustainable development goals: The case of the construction sector in the informal settlement of Mathare, Nairobi. *Sustainable Cities and Society* 54: 100227.

- Cornea N (2019) Urban political ecology. Oxford Bibliographies Online. Available from: <https://doi.org/10.1093/obo/9780199874002-0203>
- Elias M, Joshi D and Meinzen-Dick R (2021) Restoration for whom, by whom? A feminist political ecology of restoration. *Ecological restoration* 39(1-2): 3–15.
- Elmhirst R (2015) Feminist political ecology. ResearchGate. Available from: <https://www.researchgate.net/publication/283026428>
- Fluhrer T, Chapa F and Hack J (2020) A methodology for assessing the implementation potential for retrofitted and multifunctional urban green infrastructure in public areas. *Sustainability* 13(1): 384.
- Gould K and Lewis T (2016) *Green Gentrification: Urban Sustainability and the Struggle for Environmental Justice*. Routledge. Available from: <https://doi.org/10.4324/9781315687322>
- Government of Kenya (2022) National program for accelerated forestry and rangelands restoration launch speech. Available from: <https://www.president.go.ke/wp-content/uploads/National-Program-for-Accelarated-Forestry-and-Rangelands-Restoration.pdf>
- Gururani S (2023) Situating suburban ecologies in the Global South. In Kaika M, Keil R, Mandler T, et al. (eds) *Turning Up the Heat: Urban Political Ecology for a Climate Emergency*. Manchester: Manchester University Press. DOI: 10.7765/9781526168016.00018.
- Holifield R, Porter M and Walker G (2009) Introduction spaces of environmental justice: Frameworks for critical engagement. *Antipode* 41(4): 591–612.
- Jiménez-Aceituno A, Peterson GD, Norström A, et al. (2019) Local lens for SDG implementation: Lessons from bottom-up approaches in Africa. *Sustainability Science* 14(5): 729–743.
- Kamjou E, Scott M and Lennon M (2024) A bottom-up perspective on green infrastructure in informal settlements. *Urban For Urban Green* 94: 1–11. DOI: 10.1016/j.ufug.2024.128231.
- Kelbert T (2016) *Encounters at the water point: An ethnography of the traveling model of community-based water management and its application to rural water supply in Namibia*. Available from: <https://d-nb.info/1161531637/34>

- Khayesi M and Wegulo F (2022) Planning cultures. In: Palgrave Handbook of Development in Africa. Springer. Available from: <https://doi.org/10.1007/978-3-031-06089>
- Kim Y and Yang HJ (2023) Rethinking Cheonggye stream restoration project: Is urban greening strategy socially inclusive? *Land Use Policy* 131: 1–9. DOI: 10.1016/j.landusepol.2023.106742.
- Kimari W (2016) We do not want any more masters: ruins, planning and the “messy labours” of the urban poor. *Mambo!* XIV(5): 1–5. Available from: <https://hal.science/hal-01461496>.
- Kimari W (2019) The story of a pump: Life, death and afterlives within an urban planning of ‘divide and rule’ in Nairobi, Kenya. *Urban Geography* 42(3): 1–20.
- Kimari W (2022) Colour Ni Green’: Ecological futures in Nairobi outlaw style. *International Journal of Urban and Regional Research*. Available from: <https://doi.org/10.56949/2MHV3674>
- Kimari W (2023) 8 Nairobi’s bad natures. In: Kaika M, Keil R, Mandler T, et al. (eds) *Turning up the Heat: Urban Political Ecology for a Climate Emergency*. Manchester: Manchester University Press, 159–168. <https://doi.org/10.7765/9781526168016.00017>
- Lawhon M, Ernstson H and Silver J (2014) Provincializing urban political ecology: Towards a situated UPE through African urbanism. *Antipode* 46(2): 497–516.
- Lawhon M, Makina A, Nakyagaba G (2023) Infrastructure beyond the modern ideal: Thinking through heterogeneity, serendipity, and autonomy in African cities. In: Kaika M, Keil R, Mandler T, et al. (eds) *Turning up the Heat: Urban Political Ecology for a Climate Emergency*. Manchester: Manchester University Press, 186–204.
- Lehmann S (2010) Green urbanism: Formulating a series of holistic principles. *S.A.P.I.E.N.S* 3(2): 8–20.
- Li G, Cao Y, Fang C, et al. (2025) Global urban greening and its implication for urban heat mitigation. *Proceedings of the National Academy of Sciences of the United States of America* 122(4): e2417179122.
- Makworo M and Mireri C (2011) Public open spaces in Nairobi City, Kenya, under threat. *Journal of Environmental Planning and Management* 54(8): 1107–1123.
- McDougall R, Kristiansen P and Rader R (2018) Small-scale urban agriculture results in high yields but requires judicious management of inputs to achieve sustainability.

- Proceedings of the National Academy of Sciences of the United States of America 115(47): 129–134.
- Mensah C (2015) Sustaining urban green spaces in Africa: A case study of Kumasi Metropolis, Ghana. PhD thesis. University of Birmingham. Available from: <https://etheses.bham.ac.uk/id/eprint/6122/1/AdjeiMensah15PhD.pdf>
- Miraftab F (2012) Colonial present: Legacies of the past in contemporary urban practices in Cape Town, South Africa. *Journal of Planning History* 11(3): 183–197.
- Monte-Mór RL (2007) Cidade e campo, urbano e rural: o substantivo e o adjetivo. In: Feldman S and Fernandes A (eds) *O urbano e o regional no Brasil contemporâneo*. Salvador: EDUFBA, 93–114.
- Monte-Mor RL and Limonad E (2023) Towards the urban natural. In: *Turning Up the Heat*. DOI: 10.7765/9781526168016.00011.
- Muhoza JP and Zhou W (2024) Urban green spaces in Africa: A bibliometric analysis. *Environments* 11(4): 68.
- Mwathane I (2020) Multiple laws on riparian land are causing confusion. *The Nation* [Internet]. Available from: <https://nation.africa/kenya/blogs-opinion/opinion/multiple-laws-on-riparian-land-are-causing-confusion-63652>
- Myers G (2016) *Urban Environments in Africa: A Critical Analysis of Environmental Politics*. Bristol, UK: Policy Press. Available from: <https://doi.org/10.1332/policypress/9781447322917.003.0001>
- Nairobi City County Government (2020) *Nairobi Climate Action Plan 2020–2050*. Nairobi: Nairobi City County Government. Available from: <https://nairobi.go.ke/download/nairobi-city-county-climate-action-plan-2020-2050/>
- Ng’weno B (2018) Growing old in a new city. *City* 22(1): 26–42.
- Ngwenya N and Cirolia LR (2020) Conflicts between and within: The ‘conflicting rationalities’ of informal occupation in South Africa. *Planning Theory & Practice* 22(5): 691–706.
- Nightingale AJ (2011) Bounding difference: Intersectionality and the material production of gender, caste, class and environment in Nepal. *Geoforum* 42(2): 153–162.
- Njoh AJ (2007) *Planning Power: Town Planning and Social Control in Colonial Africa*. United Kingdom: Routledge. ISBN: 9781138978539.

- Njoh AJ (2009) Urban planning as a tool of power and social control in colonial Africa. *Planning Perspectives* 24(3): 301–317.
- Odhengo P, Lutta A, Osano P, et al. (2024) Urban green spaces in rapidly urbanizing cities: A socio-economic valuation of Nairobi City, Kenya. *Cities* 155: 1–12. DOI: 10.1016/j.cities.2024.105430.
- Odote C (2019) Protecting Uhuru Park as a Public Open Space: Options and Implications. Thesis, University of Nairobi, Faculty of Law Nairobi, Kenya.
- Opanga V and Guma P (forthcoming) Contestations over space: Urban greening and the making of Somali enclaves in Nairobi's Pumwani-Majengo. [Manuscript submitted for publication].
- Opanga V and Müller-Mahn D (forthcoming) Cartel economies and urban governance: The interplay of performative politics, social embeddedness, and land control in Nairobi's informal settlements. [Manuscript submitted for publication].
- Otiso KM (2005) Colonial urbanization and urban management in Kenya. In: Salm S and Falola T (eds) *African Urban Spaces in Historical Perspective*. New York: University of Rochester Press, 73–108.
- Patel Z, Greyling S, Simon D, et al. (2017) Local responses to global sustainability agendas: Learning from experimenting with the urban sustainable development goal in Cape Town. *Sustainability Science* 9(8): 785.
- Patterson J, Schulz K, Vervoort J, et al. (2017) Exploring the governance and politics of transformations towards sustainability. *Environmental Innovation and Societal Transitions* 24: 1–16.
- Population Matters (2024) Urbanisation challenges in Kenya's Nairobi: A tangled web of issues. *Population Matters* [Internet]. 2024 Jan 5. Available from: <https://populationmatters.org/news/2024/01/urbanisation-challenges-in-kenyas-nairobi-a-tangled-web-of-issues/>
- Prouse C and Arefin MR (2024) Feminist urban political ecology. In: Peake L, Datta A and Adeniyi-Ogunyankin G (eds). *Handbook on Gender and Cities*. UK: Edward Elgar Publishing, 206–215. DOI: 10.4337/9781786436139.
- Rizzo A (2020) Megaprojects and the limits of 'green resilience' in the Global South: Two cases from Malaysia and Qatar. *Urban Studies* 57: 1520–1535. <https://www.jstor.org/stable/26959523>.

- Rocheleau D, Thomas-Slayter B and Wangari E (1996) *Feminist Political Ecology*. London and New York: Routledge.
- Rossi U and Wang J (2020) Urban entrepreneurialism 2.0 or the becoming south of the urban world. *Environment and Planning A: Economy and Space* 52(3): 483–489.
- Roy A (2005) Urban informality: Toward an epistemology of planning. *Journal of the American Planning Association* 71(2): 147–158.
- Roy A (2012) Urban informality: The production of space and practice of planning 2012. In: Crane R and Weber R (eds) *The Oxford Handbook of Urban Planning*. Oxford: Oxford University Press, 691–705. DOI: 10.1093/oxfordhb/9780195374995.013.0033.
- Said E (1994) Traveling theory reconsidered. In: Polhemus R and Henkle R (eds) *Critical Reconstructions*. Redwood City: Stanford University Press, 251–265.
- Shariff Y (2021) Modern movement houses in the colonial capital city of Nairobi. *Docomomo Doc Issues* 6(4): 80–83.
- Simone A (2004) People as infrastructure: Intersecting fragments in Johannesburg. *Public Culture* 16(3): 407–429.
- Sundberg J (2017) *Feminist political ecology*. Wiley Blackwell Encyclopedia of Geography. Available from: <https://doi.org/10.1002/9781118786352.wbieg0804>
- Sverdlik, A., Gichuiya, L.N., Glück, Z., et al. (2025) Nairobi: City report. ACRC Working Paper 2025-24. African Cities Research Consortium, The University of Manchester. ISBN: 978-1-915163-23-3.
- Temper L, Avila S, Bene D, et al. (2020) Movements shaping climate futures: A systematic mapping of protests against fossil fuel and low-carbon energy projects. *Environmental Research Letters* 15: 1–24. DOI: 10.1088/1748-9326/abc197.
- United Nations Human Settlements Programme (UN-Habitat) (2007) *History of Urbanization and Proliferation of Slums in Kenya*. Nairobi, Kenya: Twenty-First Session of the Governing Council.
- Valencia SC, Simon D, Croese S, et al. (2021) Urban climate resilience and its link to global sustainability agendas. In: Brears R (ed.) *The Palgrave Handbook of Climate Resilient Societies*. Palgrave Macmillan, 1–28. DOI: 10.1007/978-3-030-32811-5_131-1.
- Venter ZS, Shackleton CM, Van Staden F, et al. (2020) Green apartheid: Urban green infrastructure remains unequally distributed across income and race geographies in

- South Africa. *Landscape and Urban Planning* 203: 1–12. DOI: 10.1016/j.landurbplan.2020.103889.
- Vigil S (2024) Towards a feminist political ecology of migration in a changing climate. DOI: 10.1016/j.geoforum.2024.104076.
- Wakhungu M, Saleem M, Sameer D, et al. (2024) Double disaster: Flood fallout and state eviction in Nairobi & Karachi. Institute of Development Studies. Available at: <https://www.ids.ac.uk/opinions/double-disaster-flood-fallout-and-state-eviction-in-nairobi-karachi/> (Accessed: 15 October 2024)
- WBGU (2021) German Advisory Council on Global Change: Rethinking Land in the Anthropocene: From Separation to Integration. Berlin: WBGU.
- Weisser F and Müller-Mahn D (2014) Translating the ‘adaptation to climate change’ paradigm: The politics of a travelling idea in Africa. *Geographical Journal* 180(2): 1–9.
- World Wildlife Fund (WWF) (2024) Forest Landscape Restoration in Africa Initiative FY24 Annual Report. Gland, Switzerland: WWF. Available from: https://wwfafrika.awsassets.panda.org/downloads/flr-in-africa-initiative-fy24-report_1.pdf.
- Zain A, Pribadi DO and Indraprahasta G (2022) Revisiting the green city concept in the tropical and Global South cities context: The case of Indonesia. *Frontiers in Environmental Science* 10: 787204

5.4. Urban Invisibles: Feminist Perspectives on Marginalisation and Resistance In Nairobi and Addis Ababa Through the Lens of Embodied Research Practices²⁷

Authors: Annapia Debarry^{1a}, Valentine Opanga²

¹Department of Geography, University of Bonn, a.debarry@uni-bonn.de

²Center for Development Research, University of Bonn

^a Corresponding author

Abstract

This paper explores the embodied and politically charged nature of urban research through feminist and decolonial lenses, focusing on the invisibility of marginalised populations in Nairobi and Addis Ababa. Drawing on ethnographic fieldwork in Nairobi and Addis Ababa, we demonstrate that the vulnerabilities and emotions inherent to research not only shape data collection but also illuminate the mechanisms that render certain populations systematically excluded. Through the concept of *Urban Invisibles*, we analyse how marginalised communities resist and adapt to exclusionary practices, highlighting collective strategies for survival and empowerment. We also reflect on the epistemic invisibilization inherent in research processes, stressing the need for feminist methodologies that confront these power structures. We compare how urban planning, resource struggles, and political discourses invisibilised marginalised communities in both cities and propose that embracing “dirty” fieldwork is essential for ethical and transformative knowledge production. Our approach not only documents exclusion but also resists it by foregrounding the interplay between lived experiences, resistance strategies, and the politics of presence.

Keywords: Embodied Research, Feminist Practice, Urban Invisibles, Invisibilization, Reflexive Fieldwork, Nairobi, Addis Ababa

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Introduction

Invisibilization is a multifaceted process that operates on spatial, institutional, and epistemological levels (Herzog, 2020). Within contexts of urban transformation and renewal, marginalized groups become spatially and institutionally excluded from public services, pushing them further to the periphery and erasing their lived experiences, historical presence, agency, and everyday practices (Margier, 2021; Sharma, 2023). On an epistemic level, invisibilization unfolds through power relations that determine whose knowledge is recognized and valued, erasing embodied experiences and emotions as dominant norms *sanitize* knowledge in line with (neo)positivist paradigms that prioritize detachment and objectivity (Haraway, 1988; Law, 2004).

Our research in Nairobi and Addis Ababa revealed multiple forms of invisibilization, both empirically and epistemologically, which became enmeshed within and inseparable from the research process and analysis. Empirically, we exposed persistent social and spatial inequalities that determine which populations are included in urban development and which remain unseen. Simultaneously, the research process confronted us with systemic violence, extreme poverty, and structural injustices, evoking a range of embodied experiences and emotions that remained largely invisible in our analysis, as our academic socialisation had internalised sanitised modes of knowledge production.

Grounded in these observations, this paper interrogates invisibilization through the notion of *Urban Invisibles*, building on the binary of “clean” versus “dirty” research, thereby challenging dominant modes of knowledge production through a feminist and decolonial-rooted research practice. By “clean,” we refer to dominant academic conventions rooted in (neo)positivist paradigms that prioritise detachment, objectivity, and methodological order. In contrast, we invoke “dirt” as a metaphor for the epistemic and methodological messiness that sanitized frameworks seek to expel and link our work to previous and emerging scholarly engagements with impure, messy, and embodied discursive and representational practices that challenge conventional academic representation (Barbour, 2018; Douglas, 2003; Owen et al., 2022; Pickerill, 2024; Shafique, 2025).

We co-analyse our research in Nairobi and Addis Ababa, both situated within contexts of rapid urban growth and neoliberal urban planning, to trace spatial, institutional, and epistemic forms of urban invisibilization. Employing qualitative and ethnographic methodologies to explore these issues, Annapia’s research in Addis Ababa examines the urban food system through a feminist political ecology lens. It focuses on informal urban farming, marketing practices, and

the political dimensions of greening initiatives that exacerbate gendered and classed marginalisation. Meanwhile, Valentine's work in Nairobi explores the political ecology of urban green spaces in informal settlements and investigates land governance, socio-spatial inequalities, and grassroots resistance to inequitable urban greening.

Through this, we advocate for a post-positivist, socially engaged research practice rooted in commitments to social justice, one that uncovers the struggles of those marginalized by urban transformation while acknowledging researchers' subjectivities and positionalities, and moves feminist practice from a tool for reflection (Folkes, 2023) to an active engagement that visibilises power relations and embraces emotional, vulnerable, and embodied ways of knowing (Billo & Hiemstra, 2013; Boer Cueva et al., 2024; LaRocco et al., 2020; Sultana, 2007). Tracing this conceptual and empirical trajectory, we begin by grounding our analysis in scholarship on dirty and embodied research to develop our notion of *Urban Invisibles*. We then examine urban invisibilization empirically through spatial and institutional mechanisms on the ground in Nairobi and Addis Ababa before turning to its epistemological dimensions.

Disrupting Urban Research: Making Research 'Dirty' through Embodied Knowledge

Invisibilization refers to the active social, political, and epistemic processes through which certain individuals, groups, or experiences are rendered unseen, unheard, or disregarded within society and knowledge production. It goes beyond mere absence, functioning as an outcome of power inequalities that systematically ignore or erase marginalised populations. Critical urban research, rooted in a commitment to social justice, calls for making these populations *visible*. We argue that this requires engaging in "other" forms of urban knowledge-making, and seek to disrupt dominant epistemologies to enable more situated and ethical engagement with the dynamics of invisibilization.

This aligns with recent departures from traditional urban research towards pluriversal movements that prioritise diverse epistemologies, ontologies, and practices (Bathla, 2024) and offers alternatives to dominant narratives and advocates for reframing research approaches through exploring processes of unlearning and relearning the urban (Bathla, 2024; Streule, 2024). This is particularly urgent in contexts marked by ongoing colonial continuities and violence (Radcliffe, 2017), where the conditions for being *seen* are obstructed for those living at the peripheries (Spivak, 1994).

In light of this, researchers have embraced "dirt," representing what is overlooked but integral to urban realities and knowledge production (Connell, 2020; Recio & Shafique, 2022). Driving inspiration from Shafique's (2025) recent call for decolonial urban knowledge production, we

invoke *dirt* as a generative, if deliberately provocative, concept that opens space for embodying alternative epistemologies, extending Shafique’s intervention by integrating feminist approaches. Its disruptive potential draws attention to how ideas of cleanliness and hygiene have been mobilised as tools of (neo)colonial othering, historically used to delegitimise and invisibilise marginalised groups (Cornea et al., 2017; Jack et al., 2020).

Broadening this notion, we frame *dirty research* as a disruption to (neo)positivist paradigms that prioritise detachment, objectivity, and methodological order, position researchers as “omnipotent experts” (England, 1994, p. 242) and disregard personal experience and emotion (McDowell, 1992; Rose, 1997). In contrast, dirt is not merely a physical residue, but a metaphor for the epistemic and methodological messiness that dominant frameworks seek to expel. Building on Douglas’s (2003) conception of dirt as “matter out of place” and feminist epistemologies of situated knowledge (Haraway, 1988), we conceptualise dirty research as an active refusal of sanitised detachment. It acknowledges that ethical and transformative knowledge often emerges through discomfort, tension, and unpredictability—particularly in fieldwork with marginalised communities in urban informal settlements, who are frequently rendered “out of place” within dominant urban imaginaries.

While sanitised modes of knowledge production erase researcher vulnerability, we embrace our vulnerabilities by acknowledging the limits of knowledge and the complexity of others’ lives (Page, 2017). We view this vulnerability not as regression, but as a feminist practice that embraces situated knowledge, challenges dominant epistemic frameworks, and confronts the uncertainties of urban life. In this sense, *dirty research* is inherently embodied, rejecting universality and embracing a “radical unknowability” (Simone & Castán Broto, 2022) grounded in principles of partiality (Haraway, 1988).

Our embodied and feminist research practice shaped how we understood invisibilization on the ground in Addis Ababa and Nairobi. Attuned to power relations and vulnerability within the so-called “Invisible Majority,” we rejected homogenous framings of marginalised communities by recognising the internal differences, hierarchies, and uneven experiences that exist within them. This situated and nuanced approach reflects the ethos of *dirty research*, which embraces emotional engagement, rejects methodological detachment, and confronts internal complexity rather than smoothing it over. We elaborate on these dynamics in the following chapter.

Invisible Majority: Understanding Mechanisms of Invisibilization in Nairobi and Addis Ababa

Spatial and Institutional Dynamics of Invisibilization

Our research revealed stark evidence of spatial and institutional invisibilization that excludes communities from urban governance and marginalises them in discourse. In Addis Ababa, for instance, government representatives, particularly from high level offices, during interviews denied or downplayed the existence of urban farmers despite historical records and ongoing activities. Relatedly, in Nairobi's central business district (CBD), vulnerable groups are rarely seen or accommodated:

“When you visit Nairobi's CBD, can you spot children, pregnant women, persons with disabilities, or elderly individuals? The stark reality is that you hardly see them... the authorities often overlook the needs of these other groups” (Interview, September 2023).

Another form of invisibilization is seen in the marginalisation of informal settlements, which are excluded from planning documents and labelled “illegal” despite being undeniable urban realities. This mechanism of spatial control is further underscored by the concealment of redevelopment plans and withholding of information. One female informal settler on a riverbank in central Addis Ababa explained:

“They [government representatives] are going around asking and investigating. [...] We're in a state of uncertainty. They haven't told us it will be demolished on a specific day. It is about development, so there is rumour about demolition to make way for it, but it hasn't happened yet” (Interview, November 2024).

Visibility in such areas depends on external interventions and shifting political ideologies about urban futures. In Nairobi, a youth leader from Korogocho highlighted the fragility of support structures, noting that recognition relies more on political goodwill than on long-term structural change:

“We reached out to the wife of the Deputy President, who has supported our feeding program, providing beans, rice, and oil. However, the current funding is temporary, and we hope to find a more sustainable source in the future” (Interview, June 2024).

A corresponding example from Addis Ababa is a government-supported community gardening initiative that was abruptly halted when the gardens were demolished for river beautification, despite significant contributions from local farmers. Initially promoted during the COVID-19

pandemic to enhance food security in low-income areas, the initiative quickly lost support due to broader neoliberal city development plans.

As cities expand, struggles over critical urban resources like land, water, and infrastructure intensify due to population pressure, competing interests, and differing political visions. Our research found that land tenure serves as a key tool for city governments to sustain the invisibilization of residents by designating certain communities as informal or dissolving legal housing structures for poorer populations. Without formal land rights, these residents remain vulnerable to eviction and resettlement, with authorities and developers justifying repossession under urban renewal projects. In Addis Ababa, for instance, the government is replacing affordable housing with new projects on the city's outskirts and turning legal housing in central areas into vacant land for neoliberal development, pushing communities to the margins. Community-led activities remain invisible and are disrupted by displacement, as demonstrated by a women-led garden in Kebena. Living in government housing set for demolition, one woman said:

“We do not know when and where we will be relocated. Maybe our neighbors will be placed across the city. Even if I like the new house, our garden will be demolished as well. And even if they leave the garden, we won't be able to travel here to grow food for our families and neighbors, or milk our cows” (Interview, December 2024).

Legal ambiguity as a mechanism of invisibilization fuels land grabbing, speculation, and informal transactions, as seen in both research contexts. An example from Nairobi is the displacement of public water points, vital for female washer vendors, to make way for new developments, as described by a community member from Majengo:

“Public land, including water points used by washerwomen, is being privatized. Women are persuaded by land grabbers to move water points, making way for new buildings, while officials are bribed to facilitate the process” (Interview, June 2024).

Furthermore, land cartels exploit the lack of clear legal frameworks to facilitate land transfers using fraudulent documents. As one resident in Pumwani area observed:

“[...] Due to corruption [...] cartels have been grabbing land using false documents, leases, and title deeds. A lot of plots of land have been transferred in this manner to third persons. Valuation is not done by the government but by private individuals” (Interview, July 2024).

An example from Addis Ababa shows how urban farmers are increasingly invisibilised due to contested land tenure. Inherited farmland, legalized by previous governments, is being questioned. While farmers receive small compensation, land is fenced off until prices rise and sold to private investors. Farmers in the Jemo area, where real estate development has surged, highlighted this issue. One of them said:

“The government said the land was needed, so they paid us a small compensation and took it. Now the land is just being held [fenced]” (Interview, November 2024).

Invisibilization also occurs through the exclusion of marginalized communities from essential state services like infrastructure and water access. This forces reliance on informal networks, which are prone to bribery, disruption, and uncertainty, where access is often tied to social status. In Nairobi’s informal settlements, state neglect enables water cartels to control supply, inflating costs and limiting availability. In Addis Ababa, we documented how costly and restricted access to clean water from public wells forces residents in informal settlements to use self-built ponds for home gardens, essential for family sustenance and women’s income, which leads to health risks, as a female home garden owner expressed:

“There are [health] concerns, but you convince yourself, and you use it. Even if you wash the produce with clean water, you still convince yourself” (Interview, May 2022).

State interventions often deepen inequities. In Pumwani-Majengo in Nairobi, community-led water kiosks offer alternatives but are frequently shut down as “illegal.” This paradox, where the state denies services yet criminalises local solutions, enforces invisibilization through selective governance and legal exclusion.

Resisting Invisibilization: Collective Strategies and Adaptation

Despite the exclusion and invisibilization of marginalised groups in Nairobi and Addis Ababa, we observed strong resistance and adaptation. In Nairobi’s informal settlements, community-based organisations have emerged as critical actors, offering women alternative economic opportunities through carpentry, tailoring, and interior design. These spaces not only provide income but also foster collective agency, self-expression, and a sense of belonging. Similarly, in Pumwani-Majengo, grassroots groups have transformed degraded and neglected spaces along the Nairobi River into community-managed green areas that incorporate hydroponic farms, tree planting, and social gathering areas. However, these efforts often struggle with sustainability due to their reliance on self-organisation, as a community youth leader explained during an interview:

“We take green space governance into our own hands. Many self-organized community parks, urban farming initiatives, and tree-planting projects exist without government support.”

Resistance also manifests in more subtle forms. For instance, in Addis Ababa, community garden initiatives persist on vacant lands, and farming practices shift from vegetable cultivation to small-scale livestock rearing even after demolitions, pushing back against state-led development agendas and articulating a quiet yet powerful claim to the “right to farming land.” Moreover, invisibility itself becomes a tactic of resistance in the city, as urban farming continues to flourish through informal networks of harvesters, distributors, and vendors who operate outside of state regulation. One example is street vendors who maintain invisibility by avoiding the use of official ID badges required for sellers. While such tactics do not obscure the precarious living and working conditions faced by marginalized communities, invisibility here acts as a buffer that offers a degree of protection and autonomy within hostile urban environments, as exemplified by a group of female sellers who explained:

“No, we don’t [wear ID badges]. If the law enforcement sees them, they displace us. The government doesn’t know us. We’re poor... and if they see us, it gets worse.”

Manifestations of Epistemic (In)Visibilization

Epistemic invisibilization takes various forms, as knowledge production is embedded within situated local contexts where broader power structures, such as the state, operate and where positionalities, emotions, and subjectivities shift and entangle. Dirty research refers not simply to physically challenging fieldwork, but to an epistemological and ethical stance that embraces vulnerability and affective entanglements inherent in working with marginalized communities. It refuses to conceal the emotional labor and power asymmetries of fieldwork, in contrast to “clean” research that reproduces hierarchies by upholding ideals of neutrality and methodological order. Navigating these “politics of presence” (Shafique, 2025, p. 10) requires confronting the risk of reproducing inequalities, exacerbating state-led urban violence, or causing harm to others and ourselves. When we engage with the “dirty” side of our research, emotionality becomes a way to connect, practice solidarity, confront urban violence, and help visibilize those rendered invisible, as our own experiences show.

Navigating the “Politics of Presence” in Nairobi and Addis Ababa

Reflecting on our research, epistemic invisibilization operating through state power often emerged in interactions with high-ranking respondents, such as government representatives, who downplayed our topics as irrelevant or dismissed qualitative and ethnographic methods as

“not scientific enough.” In Addis Ababa, for example, survey-based research was repeatedly encouraged as the preferred approach instead. Our identity as female doctoral researchers also shaped these experiences, as we were excluded from male-dominated discussions where our leadership was ignored and our knowledge silenced, which was only disrupted when we stood up to assert our presence. Here, power is exercised to control knowledge production, yet through our research, we learned to adapt by withholding certain information and thus strategically “staying invisible.”

The “politics of presence” also became strikingly visible in our community-based research, particularly through gendered power imbalances, exposing how epistemic invisibilization is reproduced at the micro level and showing that oppression is enacted not only from the top down but also through everyday interactions. In Addis Ababa, researching through a gender lens made it possible to highlight women who are often rendered invisible within their own communities by creating space for their expressions. Conducting interviews with these women, often in spontaneous “in-between” situations, frequently involved encounters with men who interfered — either through their mere presence, denying us privacy, or by actively disrupting the interview and questioning the women’s accounts.

Relatedly, in Nairobi, female respondents were often excluded from green space governance discussions, requiring intentional strategies to ensure their participation. This connects to the spirit of “empathetic allyship” within dirty research, which centers the oppressed (Williams & Drew, 2020). Similarly, our data collection not only provided opportunities for we researchers to learn about conditions of marginalisation and resistance, but also to engage marginalised groups in collective imagination, expressing care and hope for their communities. These moments — often unplanned, emotionally charged, and situated outside of conventional data frames — illustrate what we identify as *radical empathy through the in-betweens*. Capturing subtle yet profound concerns for safety and dignity, participants in focus group discussions (FGD) remarked:

“I would recommend the creation of a field for football because most people in my area, including girls, love playing football” (FGD, January 2024).

Another respondent expanded:

“If I held a leadership position, I would involve the youth in cleaning up the river, involve them in planting vegetables, and the street children, I would grant them access to free education and build homes that they can stay in” (FGD, November 2024).

Finally, a child noted:

“I would set up a secure play area for children, free of stones that might pose a risk to their toes” (Focus Group Discussion, November 2024).

These affective exchanges are not peripheral anecdotes but examples of the emotional, relational “dirt” that clean research often excludes. However, “empathetic allyship” also involves navigating risks, as visibilization can result in harmful exposure. In Addis Ababa, to avoid police surveillance, interviews with resettled farmers often required changing the time or location for safety. Likewise, interviewing small-scale street vendors meant ensuring they remained alert to law enforcement officers who might evict them.

Confronting Urban Violence: Politics of Emotional Field Work

In our research, we are *confronting* different forms of violence, which are often “out of sight” (Nixon, 2011) as they target invisibilised marginal population groups. We use *confronting* in a double sense: witnessing violence and using our research to challenge oppressive systems. We have observed countless instances of urban violence—from the everyday impacts of poverty, precariousness, and environmental hazards to deep-seated political tensions—as well as violence linked directly to urban transformation efforts, such as house and field demolitions. These experiences not only deeply shaped our research, often leaving us in discomfort, “messy overthinking,” and emotional overload, but also produced both connections and disconnections with the “invisibilised.”

In our research, for instance, it was not only structured interviews or observations that revealed exclusionary dynamics. Emotional and interpersonal encounters—sharing moments of laughter, discomfort, or frustration—also made visible the everyday effects of invisibilization. These “in-between” moments, which often fall outside of formal research categories, were central to understanding how people navigate marginalisation. In Nairobi, for example, an informal conversation after a focus group, where a participant offered safety advice and shared a personal story of eviction, provided critical context that formal methods would have missed. These exchanges demonstrate how emotions and affect can serve as forms of insight, revealing aspects of urban life that are often rendered invisible by institutional narratives.

Practising radical empathy with marginalised communities, particularly through such “in-betweens”—moments of laughter, sadness, or shared silence—creates emotional bonds where privilege often obstructs them. These connections not only humanise the research encounter while also channelling our emotions in a politically meaningful way, reinforcing the ethical imperative of *dirty research*. Embodied research becomes dirty research when it recognises that knowledge is always situated, emotional, and shaped by power relations. Rather than seeing

these factors as obstacles, we treat them as essential to ethical and feminist research. Dirty research not only documents the lives of marginalised communities but also challenges the very structures that render them invisible. It offers a way to engage with the political and emotional complexities of fieldwork while remaining accountable to those with whom we conduct research.

Yet, while we place solidarity and empathy at the core of our research practice, we must embrace its limitations to prevent it from turning into “romanticised saviourism.” The principles of partiality and situatedness of knowledge, along with our vulnerabilities, guide us in navigating these critical issues. As Page (2017, p. 18) reminds us, researching from a position of vulnerability involves acknowledging not only the limits of knowing and the limitations in understanding and narrating the lives of others. Adding to this, we must acknowledge that even when we recognize our emotional vulnerabilities, privilege and power continue to shape our relationships as researchers with marginalized communities, especially as we are often unable to drive structural change — even though such change is frequently expected from us by those we work with.

Acknowledging these tensions reveals not only the politics of emotional fieldwork and the ethics of “dirty” research but also demonstrates how power and privilege operate within non-linear and situated contexts. Illustrating this, we often find ourselves in precarious positions as researchers, for instance through funding insecurities. As women, patriarchal mechanisms connect us to broader global gendered structures, albeit in differentiated ways. Yet, despite these shared vulnerabilities, we are usually perceived as powerful within the local contexts, as seen in Nairobi, where being called “*Boss yangu*” (*my boss*) highlights perceived power in the community, or in Addis Ababa, where we were advised against visiting impoverished areas by higher officials, reflecting the intersection of poverty stigmatization and privilege. Simultaneously, making our emotionality and vulnerability visible can negatively expose us, as these traits can be dismissed as weaknesses or used to silence our research, requiring us to adapt our roles depending on the context. Ultimately, access to our emotions remains within our control, allowing us to re-channel power by choosing when to reveal or withhold them.

Conclusion

In this paper, we critically examined urban invisibilization in Nairobi and Addis Ababa. We call for broadening and embodying *dirty research* (Shafique, 2025) as a critical lens through which to rethink both urban life and urban research. This call aligns with pluriversal approaches in urban scholarship that disrupt conventional research paradigms, acknowledge the limitations

and partiality of knowledge production, and reflect multiform urban living (Simone & Castán-Broto, 2022). Through our notion of *Urban Invisibles*, we explored conditions of invisibilization both empirically and epistemologically. While *clean* and *sanitised modes of research may promise objectivity, their disavowal of emotion, positionality, and complexity often renders* injustice invisible. By contrast, *dirty* research foregrounds these elements as necessary for ethical and situated scholarship. In embracing the “mess”—whether in disrupted interviews, emotional overwhelm, or unstable field conditions—we argue that researchers can more responsibly document and resist the structures that sustain marginalisation.

A key contribution of this study is a shift from simply making the invisible visible to dismantling the structures that necessitate invisibilization in the first place. Traditional frameworks often assume that rendering marginalised populations visible is inherently empowering (Bjarnesen and Turner, 2018), yet our findings suggest that visibility remains contingent and conditional, often serving external interests. Our explorations offer pathways for resisting invisibilization, not merely by documenting exclusion but by actively *confronting* the structures that sustain it, ultimately contributing to a radical feminist urbanism that does not just seek inclusion but demands justice.

References

- Barbour, K., 2018. Embodied Ways of Knowing: Revisiting Feminist Epistemology, in: Mansfield, L., Caudwell, J., Wheaton, B., Watson, B. (Eds.), *The Palgrave Handbook of Feminism and Sport, Leisure and Physical Education*. Palgrave Macmillan UK, London, pp. 209–226. https://doi.org/10.1057/978-1-137-53318-0_14
- Bathla, N. (Ed.), 2024. *Researching Otherwise: Pluriversal Methodologies for Landscape and Urban Studies*. gta Verlag, Zürich.
- Billo, E., Hiemstra, N., 2013. Mediating messiness: expanding ideas of flexibility, reflexivity, and embodiment in fieldwork. *Gender, Place & Culture* 20, 313–328. <https://doi.org/10.1080/0966369X.2012.674929>
- Bjarnesen, J., Turner, S., 2018. Introduction: the production of invisibility in African displacements, in: Bjarnesen, J., Turner, S. (Eds.), *Invisibility in African Displacements. From Structural Marginalization to Strategies of Avoidance, Africa Now*. Zed Books, London, pp. 1–15.

- Boer Cueva, A.R., Giri, K., Hamilton, C., Shepherd, L.J., 2024. A Decolonial Feminist Politics of Fieldwork: Centering Community, Reflexivity, and Loving Accountability. *International Studies Review* 26, viae003. <https://doi.org/10.1093/isr/viae003>
- Connell, R., 2020. *Southern Theory: The global dynamics of knowledge in social science*. Routledge, London. <https://doi.org/10.4324/9781003117346>
- Cornea, N., Véron, R., Zimmer, A., 2017. Clean city politics: An urban political ecology of solid waste in West Bengal, India. *Environ Plan A* 49, 728–744. <https://doi.org/10.1177/0308518X16682028>
- Douglas, M., 2003. *Purity and Danger: An Analysis of Concepts of Pollution and Taboo*. Routledge, London. <https://doi.org/10.4324/9780203361832>
- England, K.V.L., 1994. Getting Personal: Reflexivity, Positionality, and Feminist Research. *The Professional Geographer* 46, 80–89. <https://doi.org/10.1111/j.0033-0124.1994.00080.x>
- Folkes, L., 2023. Moving beyond ‘shopping list’ positionality: Using kitchen table reflexivity and in/visible tools to develop reflexive qualitative research. *Qualitative Research* 23, 1301–1318. <https://doi.org/10.1177/14687941221098922>
- Haraway, D., 1988. *Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective*.
- Herzog, B., 2020. *Invisibilization of Suffering: The Moral Grammar of Disrespect*. Palgrave Macmillan, Cham. https://doi.org/10.1007/978-3-030-28448-0_2
- Jack, T., Anantharaman, M., Browne, A.L., 2020. ‘Without cleanliness we can’t lead the life, no?’ Cleanliness practices, (in)accessible infrastructures, social (im)mobility and (un)sustainable consumption in Mysore, India. *Social & Cultural Geography* 1–22. <https://doi.org/10.1080/14649365.2020.1820561>
- LaRocco, A.A., Shinn, J.E., Madise, K., 2020. Reflections on Positionalities in Social Science Fieldwork in Northern Botswana: A Call for Decolonizing Research. *Politics & Gender* 16, 845–873. <https://doi.org/10.1017/S1743923X19000059>
- Law, J., 2004. *After Method: Mess in Social Science Research*. Routledge, London, New York.
- Margier, A., 2021. The compassionate invisibilization of homelessness: where revanchist and supportive city policies meet. *Urban Geography* 44, 178–197. <https://doi.org/10.1080/02723638.2021.1970915>

- McDowell, L., 1992. Doing Gender: Feminism, Feminists and Research Methods in Human Geography. *Transactions of the Institute of British Geographers* 17, 399–416. <https://doi.org/10.2307/622707>
- Nixon, R., 2011. *Slow Violence and the Environmentalism of the Poor*. Harvard University Press. <https://doi.org/10.2307/j.ctt2jbsgw>
- Owen, J., Walker, A., Ince, A., 2022. Editorial: Uncomfortable geographies. *Emotion, Space and Society* 42, 100871. <https://doi.org/10.1016/j.emospa.2022.100871>
- Page, T., 2017. Vulnerable Writing as a Feminist Methodological Practice. *Feminist Review* 115, 13–29. <https://doi.org/10.1057/s41305-017-0028-0>
- Pickerill, J., 2024. Unsettling Geography: Enacting the Politics of Indigenous Ontologies. *agoriad* 1, 1–16. <https://doi.org/10.18573/agoriad.16>
- Radcliffe, S.A., 2017. Decolonising geographical knowledges. *Transactions of the Institute of British Geographers* 42, 329–333. <https://doi.org/10.1111/tran.12195>
- Recio, R.B., and Shafique, T., 2022. Reimagining (informal) housing futures in uncertain times. *International Journal of Housing Policy* 22, 106–118. <https://doi.org/10.1080/19491247.2021.2019883>
- Rose, G., 1997. Situating knowledges: positionality, reflexivities and other tactics. *Progress in Human Geography* 21, 305–320. <https://doi.org/10.1191/030913297673302122>
- Shafique, T., 2025. Dirty research: a call towards decolonial urban knowledge production. *City* 1–14. <https://doi.org/10.1080/13604813.2024.2447687>
- Sharma, S., 2023. Geographies of Exclusion: Reproducing Dispossession and Erasure within a Waste Picker Organization in Mumbai. *International Journal of Urban and Regional Research* 47, 861–875. <https://doi.org/10.1111/1468-2427.13204>
- Simone, A., Castán Broto, V., 2022. Radical unknowability: an essay on solidarities and multiform urban life. *City*.
- Spivak, G.C., 1994. Can the Subaltern Speak?, in: Williams, P., Chrisman, L. (Eds.), *Colonial Discourse and Postcolonial Theory. A Reader*. Columbia University Press, New York, pp. 66–111.
- Streule, M., 2024. Ghosts, ruins, monsters: urban geography in times of crisis. *Geographica Helvetica* 79, 241–246. <https://doi.org/10.5194/gh-79-241-2024>

Sultana, F., 2007. Reflexivity, Positionality and Participatory Ethics: Negotiating Fieldwork Dilemmas in International Research. *ACME: An International Journal for Critical Geographies* 6, 374–385.

Williams, S., Drew, G., 2020. ‘Co-creating meeting spaces’: Feminist ethnographic fieldwork in Bangladesh. *Gender, Place & Culture* 27, 831–853.
<https://doi.org/10.1080/0966369X.2019.1657070>

6. SUMMARY AND CONTRIBUTIONS

This thesis examines how green space governance in Nairobi's informal settlements reveals deeper conflicts over land, authority, and community belonging. Using political ecology, feminist, and postcolonial theories, along with a mixed-methods approach, this study demonstrates that green spaces are not neutral areas but contested sites where state actors, cartels, and residents negotiate control and survival. The papers collectively demonstrate how cartels establish themselves as de facto land and green space authorities; how greening initiatives often result in displacement and social division; how global sustainability goals are reinterpreted or challenged to produce hybrid and context-specific practices of green urbanism; and how feminist, embodied research methods can uncover and resist the invisibilisation of marginalised groups. Taken together, they argue that urban greening in vulnerable settings is inherently political, both reinforcing inequality and creating opportunities for community-led ecological futures.

This thesis makes three contributions: first, it introduces innovative frameworks, such as vernacular governance, outlaw greening, infrastructures of belonging, and urban invisibles, which broaden analytical vocabularies for studying urban nature in the Global South. Furthermore, it offers detailed, context-specific evidence from Nairobi's informal settlements showing the link between ecological care and exclusion. Additionally, it provides policy-relevant insights, emphasising how community-led initiatives can influence the development of more equitable models of green governance. Overall, these contributions demonstrate why this study offers something original and valuable to both academic research and practical application.

Summary of findings

Green Space Making

The primary aim of this paper was to analyse how land cartels influence governance structures, political narratives, and social networks to control land in Nairobi's informal settlements, with a particular focus on Korogocho. It also investigates their impact on urban greening and green space governance. The paper suggests that these land cartels act as de facto shadow governments, exploiting gaps in formal governance to manage land tenure, displacements, and resource distribution. Legal ambiguities surrounding riparian land ownership enable land cartels to effectively determine who can access, use, or trade these green spaces, despite the government's public support for sustainability and urban greening. In reality, however, green

spaces are increasingly privatised, serving elite interests and further marginalising residents of informal settlements.

This paper employs a Critical Urban Political Ecology (CUPE) framework to reconceptualise cartels not as anomalies but as fundamentally embedded actors within Nairobi's urban metabolism. Methodologically, the study integrated a systematic literature review, 45 semi-structured interviews, six focus group discussions, participatory mapping, and prolonged field observation. The data highlighted the complex relationships among cartels, government officials, and community legitimacy, resulting in hybrid yet socially embedded governance systems that challenge traditional binaries of legality and illegality.

Key findings show that in Korogocho, cartels control land transactions, influence policy enforcement, and regulate access to riparian areas, acting as intermediaries between the local community and formal authorities. The paper also reveals that the absence of clear and enforceable green space policies has allowed cartels to repurpose land under the pretence of urban greening, facilitating land grabs and displacement. This issue is worsened by the increase in privatised green projects along the Nairobi River riparian corridor, which exclude residents of informal settlements and deepen socio-economic segregation. Additionally, performative politics by government officials, characterised by public statements with little follow-up, further worsen the situation, enabling both cartels and private developers to exploit urban greening initiatives for financial gain.

Governing Everyday Green Spaces

The main aim of this paper was to examine how urban green spaces in informal settlements are disputed and taken over amidst competing socio-political and economic interests, using Pumwani-Majengo as a case study. The paper investigated how land commodification, privatisation, and spatial exclusion influence urban greening in Nairobi, arguing that this process is neither neutral nor universally beneficial. Instead, urban greening is closely tied to historical land inequalities, elite-led urban planning, and political conflicts. Although often seen as sustainability initiatives, many greening projects have actually reinforced land commodification and spatial exclusion, often displacing low-income residents. For example, the Nairobi River riparian corridor has become a highly contested area involving state agencies, private developers, informal cartels, and local communities, reflecting wider struggles over urban land governance.

The paper was grounded in the Situated Urban Political Ecology (UPE) framework, with particular focus on how green space transformations lead to uneven socio-spatial outcomes. I

used a mixed-methods approach, combining interviews, expert consultations, ethnographic observation, archival sources, and spatial/remote sensing analyses. The empirical data, centred in Pumwani-Majengo, demonstrated how greening projects triggered displacement and enclaving, fragmenting neighbourhood solidarities while favouring elite newcomers.

Key findings show that historic patterns of spatial exclusion, developed during the colonial period through the intentional use of green and open spaces to separate European enclaves from African settlements, have continued into the post-independence period. During this time, such spaces are often privatised or repurposed under the pretext of sustainability and urban development. Furthermore, governance of the Nairobi River's green spaces remains highly politicised; state-led greening projects, aimed at enhancing urban resilience, frequently lead to land dispossession, eviction of residents from informal settlements, and the privatisation of public land.

The research further shows that the processes of 'greening' and 'ungreening' serve as tools for socio-economic control, with wealthier neighbourhoods benefiting from well-maintained green infrastructure. Meanwhile, informal settlements are often forcibly displaced under the guise of environmental restoration. The active involvement of the Somali business community in real estate development continues to transform green spaces and informal settlements into commercial enclaves, thereby intensifying existing socio-economic inequalities. Ultimately, the paper concludes that urban greening in Nairobi is a contested, exclusionary, and politicised process that questions the idea of green spaces as inherently public goods.

Green Space Futures

This paper aimed to investigate how colonial legacies, governance contradictions, and resistance from marginalised communities influence urban greening policies in Nairobi's informal settlements. It examined how state-led greening projects, often promoted as initiatives for environmental restoration and urban resilience, contribute to forced evictions, land dispossession, and broader socioeconomic exclusion. At the same time, grassroots movements develop alternative models of urban greening.

This paper engages with Feminist Urban Political Ecology, Postcolonial Urbanism, and Travelling Models to explore how global sustainability agendas are reinterpreted in Nairobi's settlements. The methodology remains mixed, combining policy document analysis, 45 semi-structured interviews, and six focus group discussions. This dataset highlights both state-driven green urbanism, which often reinforces colonial legacies and leads to dispossession, and

grassroots practices such as urban farming and dumpsite reclamation, which express alternative, care-centred ecological futures.

The main argument is that urban greening in Nairobi is a highly contested process where elite-driven sustainability policies lead to green gentrification, displacing residents of informal settlements under the pretence of ecological enhancement. Instead of fostering inclusive and accessible green spaces, these government-led initiatives often favour private developers and established power structures. Legal ambiguities around riparian land governance, combined with superficial public participation in decision-making, further worsen spatial exclusion and perpetuate these inequalities.

Key findings from the paper highlight several crucial dynamics at play. State-led greening initiatives, although presented as efforts to restore ecological balance, have led to forced evictions along the Nairobi River, where reclaimed land is often leased to private developers instead of being converted into public green spaces. This phenomenon of green gentrification emphasises how urban greening policies can unintentionally sustain displacement and socio-economic exclusion.

Furthermore, governance contradictions, stemming from unclear legal frameworks and limited inclusion of residents from informal settlements in policymaking, create loopholes that allow both state agencies and private developers to encroach on green spaces while marginalising the communities that depend on them. Despite these challenges, grassroots resistance remains powerful; community-led initiatives such as urban farming, self-organised environmental restoration projects, and alternative governance structures showcase the resilience and agency of informal settlement residents. These movements actively reclaim and redefine urban green spaces, challenging the dominant, exclusionary practices imposed by state and corporate actors.

Methodological and Epistemological Reflections

This paper explores how urban exclusion and invisibilisation operate in Nairobi and Addis Ababa, with particular focus on marginalised groups such as women, children, the elderly, and people with disabilities. It examines the politics of invisibility in urban governance, land tenure, and environmental policies, using feminist and decolonial approaches to challenge dominant knowledge production and research practices. The authors argue that invisibilisation is an active political and social process occurring at spatial, institutional, and epistemic levels. It is not merely the absence of visibility but a deliberate mechanism that systematically excludes marginalised populations from urban planning, environmental governance, and public discourse.

This paper employed a feminist and decolonial epistemological framework to critically examine methods, positionality, and knowledge production. Empirically, it relied on ethnographic fieldwork, embodied methods, and reflexive analysis in Nairobi and Addis Ababa. The data were gathered from participant observation, narrative interviews, and autoethnographic reflection, demonstrating how marginalised groups resist invisibilisation through everyday strategies, while also illustrating how researchers themselves are implicated in reproducing or challenging epistemic erasures.

Key findings reveal that urban planning in both cities excludes informal settlements from mainstream governance, reinforcing land tenure insecurity, forced evictions, and environmental neglect. Legal ambiguities make residents of informal settlements vulnerable to displacement as land cartels, private developers, and corrupt officials exploit loopholes to privatise public spaces. Epistemic invisibilisation further marginalises these communities by erasing their lived experiences from research and policy discourses, contributing to a phenomenon of ‘research fatigue’ where communities are repeatedly studied without tangible benefits.

Despite these systemic challenges, grassroots organisations and community-based initiatives, ranging from the creation of community-led green spaces and hydroponic farming projects to informal governance networks, demonstrate active resistance by reclaiming access to land and vital resources. Ultimately, the paper shifts the focus from merely making marginalised communities visible to questioning and dismantling the structural forces that produce and sustain their invisibility. It advocates for feminist and decolonial research approaches that embrace emotional engagement, reflexivity, and positionality as essential to ethical knowledge production, arguing that true urban justice requires not only inclusion but a fundamental transformation of exclusionary systems.

Taken together, these four papers illustrate an iterative methodological progression: from mapping cartelised governance, to exploring socio-spatial contestations of green space, to interrogating colonial and global policy legacies, and finally reflecting on the embodied and epistemic dimensions of urban research itself. Each paper highlights a different conceptual entry point, but all are rooted in political ecology and feminist commitments to centring marginalised voices in the governance of green space.

Contributions to Research

This thesis aimed to bridge the gaps between political ecology, feminist urban studies, and land governance, providing an intersectional framework that enhances our understanding of urban greening in African cities. It makes significant contributions across methodology, theory, and

literature by examining the political ecology and urban governance of green spaces in African cities through the lenses of green space making, everyday green spaces, and green space futures. Its interdisciplinary approach not only deepens our understanding of urban greening initiatives but also challenges existing frameworks in urban studies.

In terms of methodology, the thesis advances by combining feminist and decolonial approaches to study urban greening, building on Shafique's (2025) call for "dirty research" as a decolonial methodology that embraces epistemic messiness, vulnerability, and radical empathy in urban knowledge production. For green space creation, it employed situated and embodied research methods to investigate how informal power networks and land cartels influence the commodification of green spaces. This approach emphasised the lived experiences of marginalised communities, offering insights into how elite interests interfere with their access to green spaces. When examining everyday green spaces, the research used ethnographic fieldwork and participatory techniques. Interviews and community engagement activities documented how residents negotiated and resisted top-down greening policies through practices like urban farming, tree planting, and local environmental restoration.

Storytelling enabled participants to share historical memories, current realities, and future aspirations concerning the river's transformation. This method provided deeper understanding of local environmental knowledge, contested spaces, and evolving socio-political dynamics, complementing traditional qualitative approaches such as interviews, focus group discussions, and policy analysis. It extends Simone and Castán-Broto's (2022) focus on "radical unknowability" in urban life by incorporating feminist epistemologies of situated knowledge (Haraway, 1988) to highlight emotional and embodied dimensions often erased in "clean" research paradigms. Ultimately, the framework suggests future applications to green spaces through reflexive methodologies. Reflecting critically on the researcher's positionality and emphasising community planning models challenges traditional urban planning paradigms that often overlook grassroots perspectives, thus building on Page's (2017) concept of vulnerable writing as a feminist practice that recognises the limits of knowledge and confronts power asymmetries in fieldwork.

The theoretical contributions of this thesis are equally substantial. In the field of green space creation, the thesis extends Urban Political Ecology (UPE) by demonstrating the role of informal governance structures, such as land cartels, in the appropriation and transformation of urban green spaces. It relies on the concepts of land tenure to explain how processes of commodification contribute to socio-spatial inequalities. This builds on Kimari and Parish's

(2020) analysis of hybrid governance in Nairobi's informal settlements while contradicting De Soto's (2000) formalisation thesis by showing how cartels function as embedded, legitimate actors rather than mere aberrations in urban metabolism (Swyngedouw, 2004). Focusing on everyday green spaces, the research adds to Situated Urban Political Ecology (SUPE) by illustrating how residents in informal settlements actively resist and adapt to state-led initiatives.

Furthermore, the thesis redefines informality not as failure but as governance. Cartels and other 'illegal' actors emerge as co-constructors of urban order, visible, durable, and often more locally legitimate than formal institutions. These findings prompt urban theory to look beyond legal-illegal binaries and focus on how authority is shaped through relationships and spatial contexts. This perspective is enriched by the concepts of environmental justice and community resilience, which highlight communities' struggles against exclusionary urban policies. Here, it extends Roy's (2005) critique of informality as a form of urbanism by integrating CUPE frameworks (Angelo & Wachsmuth, 2013; Tzaninis et al., 2020) to theorise cartels as relational intermediaries within contested ecologies.

For future green spaces, the thesis incorporates Feminist Urban Political Ecology (FUPE) and Postcolonial Urbanism to critique the ongoing effects of colonial-era land dispossession and gendered exclusions. Furthermore, the Travelling Concepts framework illustrates how state and private actors selectively deploy global sustainability narratives to justify displacement and reinforce existing socio-spatial hierarchies, thereby challenging optimistic views of greening in the New Urban Agenda (Croese et al., 2021) and building on Rademacher's (2020) analysis of performative environmentalism as a means for elite capture.

This thesis literature, contributing to the existing knowledge base by enhancing the understanding of green space development. It builds on debates surrounding informal governance and land tenure insecurity by illustrating how land cartels in Nairobi operate as de facto authorities. It demonstrates that, despite formal legal protections, corruption and elite capture undermine effective land governance, thereby increasing urban inequality. demonstrating that green initiatives, often promoted as environmental benefits, can lead to gentrification and displacement. This critique of the commodification of green spaces provides deeper insight into the socio-economic dynamics involved.

This research examines who benefits from urban greening and who is displaced as a result. It critiques technocratic urban resilience plans, advocating for a justice-oriented urban ecology that values history, community, and embodied memory over mere canopy coverage or climate

targets. This challenges Lehmann's (2010) rural-focused approach to African greening initiatives by centring on urban informal settlements, while expanding Angelovski et al's (2023) concept of green gentrification to include postcolonial legacies in Nairobi (Kimari, 2017; Myers, 2015).

Additionally, regarding future green spaces, the thesis engages with debates about epistemic invisibilisation and knowledge creation, highlighting how governance failures and privatisation not only physically marginalise communities but also silence their narratives and environmental practices. The work calls for a re-evaluation of urban greening policies to foster co-governance and inclusive sustainability, challenging existing knowledge hierarchies in urban studies, and building upon Herzog's (2020) moral grammar of invisibilization and Bjarnesen and Turner's (2018) work on strategic invisibility as resistance, while extending these ideas to urban African contexts through decolonial perspectives (Connell, 2020; Shafique, 2025).

Areas for Future Research

Deepening the Analysis of Power Dynamics

It is important to highlight that the interaction between state institutions and informal networks is not simply about one dominating the other; rather, it involves a dynamic negotiation where boundaries are adaptable. For example, state agencies may publicly support green initiatives to promote their sustainability narrative, but their unclear legal frameworks often unintentionally provide cover for elite actors and cartels. This duality offers opportunities for both collusion and resistance, highlighting that policy reform should focus not only on regulatory clarity but also on addressing the underlying power imbalances that allow informal networks to thrive.

The Multifaceted Role of Urban Greening

Urban greening projects often promise environmental benefits and an improved quality of life. However, research indicates that when these initiatives are incorporated into existing power systems, they can exacerbate social inequalities. For example, transforming green spaces into private facilities for a select few often displaces vulnerable populations and accelerates land commodification. This key insight encourages urban planners to reassess project success criteria, emphasising inclusivity and fairness in access rather than merely environmental or aesthetic gains.

Community Resistance and Adaptive Practices

The thesis emphasises that grassroots initiatives are not just acts of survival; they are also creative responses to an exclusionary system. Community-led projects, such as urban farming

and environmental restoration, are vital because they offer models of resilience rooted in local needs and knowledge. However, while these initiatives demonstrate potential, they often encounter obstacles like limited resources, political marginalisation, and sometimes even co-optation. Future research should examine more thoroughly the factors that influence whether community resistance can develop into lasting change. This may include comparative case studies of neighbourhoods where grassroots movements have successfully influenced policy outcomes compared to those where they have been ignored.

Historical Legacies and Pathways to Transformation

The thesis's link between contemporary urban planning and colonial-era legacies provides a compelling narrative for understanding current inequalities. Recognising that historical patterns of spatial exclusion still influence modern urban development encourages a critical re-evaluation of present policies. Addressing these legacies could involve applying principles of reparative justice to urban planning, such as participatory budgeting, land restitution, or community land trusts. These methods might help counteract the deeply rooted patterns of dispossession that have shaped both past and present urban landscapes.

Alternative Governance Models

Finally, exploring alternative frameworks such as co-governance and participatory planning fosters important discussions on transforming urban greening initiatives. Feminist Urban Political Ecology (FUPE) and decolonial perspectives provide strong foundations for rethinking urban policy, promoting a governance model where marginalised communities are not just consulted but actively involved in decision-making. However, implementing these models requires overcoming significant institutional inertia and deeply rooted power interests. Further research into successful examples of co-governance can reveal best practices and identify the structural reforms necessary to expand these approaches.

References²⁸

- Achola, M. A. (2002). Colonial policy and urban health: The case of colonial Nairobi. *Azania: Archaeological Research in Africa*, 36-37(1), 119-137.
<https://doi.org/10.1080/00672700109511700>
- Ackerly, B., & True, J. (2008). Reflexivity in practice: Power and ethics in feminist research on international relations. *International Studies Review*, 10(4), 693–707.
<https://doi.org/10.1111/j.1468-2486.2008.00826.x>

²⁸ These references belong to the Introduction and the Summary and Contributions sections.

- Aduloju, O. T., Anofi, A. O., Atolagbe, A. A., & Adeyemi, A. A. (2025). Space-time estimation of built-up landscape of Ilorin Metropolis, Nigeria. *Papers in Applied Geography*, 1–15. <https://doi.org/10.1080/23754931.2025.1234567>
- Åkerblad, L., Seppänen-Järvelä, R., & Haapakoski, K. (2020). Integrative strategies in mixed methods research. *Journal of Mixed Methods Research*, 15(1), 61–87. <https://doi.org/10.1177/1558689820957125>
- Amutabi, M. N. (2012). The politics of land and housing in Nairobi: A historical perspective. In M. N. Amutabi & M. Ndeto (Eds.), *Deconstructing poverty for sustainable development in Africa* (pp. 1–18). CEDRED Publications.
- Angelo, H., & Wachsmuth, D. (2015). Urbanizing urban political ecology: A critique of methodological cityism. *International Journal of Urban and Regional Research*, 39(1), 16–27. <https://doi.org/10.1111/1468-2427.12105>
- Anguelovski, I. (2016). The green gentrification debate: A critical review. *International Journal of Urban and Regional Research*, 40(3), 512–528. <https://doi.org/10.1111/1468-2427.12385>
- Anguelovski, I. (2023). (In)justice in urban greening and green gentrification. In S. Villamayor-Tomas & R. Muradian (Eds.), *The Barcelona School of Ecological Economics and Political Ecology* (Vol. 8, pp. 305–324). Springer. https://doi.org/10.1007/978-3-031-22566-6_20
- Anguelovski, I., Argüelles, L., Baró, F., Cole, H. V. S., García-Lamarca, M., Loveless, S., Pérez del Pulgar, C., Shokry, G., & Triguero-Mas, M. (2023). Grassroots mobilization for a just, green urban future: Building community infrastructure against green gentrification in Barcelona. *Urban Geography*, 44(5), 793–816. <https://doi.org/10.1080/07352166.2023.2180381>
- Anguelovski, I., Connolly, J., Masip, L., & Pearsall, H. (2019). Assessing green gentrification in historically disenfranchised neighborhoods. *Urban Affairs Review*, 55(1), 75–110. <https://doi.org/10.1177/1078087417735289>
- Anyamba, T. (2011). Informal urbanism in Nairobi. *Built Environment*, 37(1), 57–77. <https://doi.org/10.2148/benv.37.1.57>
- Anzilotti, E., & Appavoo, J. (2025). How African cities can develop to become green, resilient, and inclusive. UrbanShift. <https://www.shiftcities.org/post/how-african-cities-can-develop-to-become-green-resilient-and-inclusive>
- ArchDaily. (2023). The urban remnants of colonial planning in Africa: Dar es Salaam and Nairobi. <https://www.archdaily.com/968716/the-urban-remnants-of-colonial-planning-in-africa-dar-es-salaam-and-nairobi>
- Ayala, L. S. (2012). Interviewing techniques for migrant minority groups. In C. Vargas-Silva (Ed.), *Handbook of research methods in migration* (pp. 117–136). Edward Elgar Publishing. <https://doi.org/10.4337/9781781005231.00013>

- Balakrishnan, A. K., Otieno, S., Dzombo, M., & Nandikove, P. (2024). Socio-ecological impacts of extreme weather events in two informal settlements in Nairobi, Kenya. *Frontiers in Public Health*, 12, 1347293. <https://doi.org/10.3389/fpubh.2024.1347293>
- Bjarnesen, J., & Turner, S. (2018). Introduction: The production of invisibility in African displacements. In J. Bjarnesen & S. Turner (Eds.), *Invisibility in African displacements. From structural marginalization to strategies of avoidance* (pp. 1–15). Zed Books.
- Boniburini, I. (2015). Production of hegemony and production of space in Nairobi. *Territoire en mouvement Revue de géographie et aménagement*, 27-28. <https://doi.org/10.4000/tem.3110>
- Bührs, T., Chatfield, D., Lee, S. J., Cowley, J., Kitzinger, J., Dempsey, O., & Maslen, S. (2024). Reciprocity-based reasons for benefiting research participants: Most fail, the most plausible is problematic. *Bioethics*, 38(4), 284-291. <https://doi.org/10.1111/bioe.13183>
- Butler, J. (2010). Performative agency. *Journal of Cultural Economy*, 3(2), 147–161. <https://doi.org/10.1080/17530350.2010.494117>
- Cairns, R., Onyango, J., Stirling, A., & Johnstone, P. (2022). Imagining urban transformation in Kenya. *Environmental Science & Policy*, 130, 1–11. <https://doi.org/10.1016/j.envsci.2022.01.002>
- Chirisa, I. (2021). Repositioning urban planning for African sustainable futures. In M. Addaney & P. Cobbinah (Eds.), *Sustainable urban futures in Africa* (pp. 191–201). Routledge.
- Chulek, M. (2019). Negotiating the mtaa: Spatial belonging and everyday practices in Nairobi's settlements. *African Studies*, 78(3), 345–364. <https://doi.org/10.1080/00020184.2019.1645147>
- Cobbinah, P. B., & Nyame, V. (2021). A city on the edge: The political ecology of urban green space. *Environment and Urbanization*, 33(2), 413–435. <https://doi.org/10.1177/095624782110198>
- Commonwealth Sustainable Cities. (2021). Participatory, scaled-up informal settlement upgrading in Nairobi, Kenya – Planning for climate change and rapid urbanisation. <https://commonwealthsustainablecities.org/africa/informal-settlement-redevelopment-in-nairobi-kenya/>
- Connell, R. (2020). *Southern theory: The global dynamics of knowledge in social science*. Routledge. <https://doi.org/10.4324/9781003117346>
- County Government of Nairobi (CGN). (2018). Consolidated reports and financial statements for the FY 2017-2018. Nairobi: County Government of Nairobi. <https://nairobi.go.ke/download/consolidated-reports-financial-statements-fy-2017-2018/>
- County Government of Nairobi. (2023). *Nairobi County Integrated Development Plan*. Nairobi, Kenya.

- Croese, S., Cirolia, L. R., & Graham, M. (2021). Towards (in)formal hybrid governance regimes in Africa? Exploring the potential of the 'New Urban Agenda'. *Area Development and Policy*, 6(1), 1–17. <https://doi.org/10.1080/23792949.2020.1779476> (Note: Closest match; thesis cites 2021, but may refer to this or similar).
- Croese, S., Robinson, J., & Raimundo, I. M. (2021). Co-producing the New Urban Agenda in Southern Africa: The quest for policy consensus and practice transformation. *Urban Studies*, 58(5), 895–911. <https://doi.org/10.1177/0042098020936123>
- de Soto, H. (2000). *The mystery of capital: Why capitalism triumphs in the West and fails everywhere else*. Basic Books.
- Del Tredici, P. (2010). Spontaneous urban vegetation: Reflections of change in a globalized world. *Nature and Culture*, 5(3), 299–315. <https://doi.org/10.3167/nc.2010.050303>
- du Toit, M. J., Cilliers, S. S., Davoren, E., & Shackleton, C. M. (2021). The effect of landscape history on the urban ecology of the Global South. In C. M. Shackleton, S. S. Cilliers, E. Davoren, & M. J. du Toit (Eds.), *Urban ecology in the Global South* (pp. 52–81). Springer. https://doi.org/10.1007/978-3-030-67650-6_3
- Elmhirst, R. (2015). Feminist political ecology. In T. Perreault, G. Bridge, & J. McCarthy (Eds.), *The Routledge handbook of political ecology* (pp. 519–530). Routledge. <https://doi.org/10.4324/9781315759289-48>
- Elwood, S., & Lawson, V. (2017). Feminist engagement with urban political geography. *Progress in Human Geography*, 41(5), 579–596. <https://doi.org/10.1177/0309132516649451>
- Frontiers. (2022). Community adaptation strategies in Nairobi informal settlements: Lessons from Korogocho, Nairobi-Kenya. *Frontiers in Sustainable Cities*, 4, 932046. <https://doi.org/10.3389/frsc.2022.932046>
- Given, L. M. (Ed.). (2008). *The SAGE encyclopedia of qualitative research methods*. Sage Publications.
- Global Center on Adaptation. (2022). Residents driving the upgrade of informal settlements in Kenya. <https://adaptationportal.gca.org/llahub/stories/2fb81926-1c81-469d-8252-369e171ce89f>
- Goro, B. A., & Mwasi, B. N. (2018). Determining per capita value of urban green spaces provision: A case of Eldoret Town, Kenya. *Africa Environmental Review Journal*, 2(2), 12–21. <https://doi.org/10.2200/aerj.v2i2.121>
- Government of Kenya. (2022). *National program for accelerated forestry and rangelands restoration: Launch speech*. <https://www.president.go.ke/wp-content/uploads/National-Program-for-Accelerated-Forestry-and-Rangelands-Restoration.pdf>
- Government of the Republic of Kenya (GoK). (2021). *Range management and pastoralism strategy 2021-2031*. Nairobi: Ministry of Agriculture, Livestock, Fisheries and Cooperatives.

- Hake, A. (1977). *African metropolis: Nairobi's self-help city*. London: Chatto & Windus for Sussex University Press.
- Haraway, D. (1988). Situated knowledges: The science question in feminism and the privilege of partial perspective. *Feminist Studies*, 14(3), 575–599.
- Herzog, B. (2020). *Invisibilization of suffering: The moral grammar of disrespect*. Palgrave Macmillan. https://doi.org/10.1007/978-3-030-28448-0_2
- Heynen, N., Kaika, M., & Swyngedouw, E. (Eds.). (2006). *In the nature of cities: Urban political ecology and the politics of urban metabolism*. Routledge.
- Huchzermeyer, M. (2011). *Cities with 'slums': From informal settlement eradication to a right to the city in Africa*. UCT Press.
- Jacobs, K. (2006). Discourse analysis and its utility for urban policy research. *Urban Policy and Research*, 24(1), 39–52. <https://doi.org/10.1080/08111140600590817>
- Jimmy, C. M. (2024). Entangled rationalities: Planning responses to informal housing practices within middle-income neighbourhoods in Nairobi City, Kenya. *Planning Theory & Practice*, 25(3), 299-320. <https://doi.org/10.1080/14649357.2024.2393572>
- Kabisch, N., & Haase, D. (2014). Green justice or just green? Provision of urban green spaces in Berlin, Germany. *Landscape and Urban Planning*, 122, 129–139. <https://doi.org/10.1016/j.landurbplan.2013.11.016>
- K'Akumu, O. A., & Oyugi, M. O. (2007). Land use management challenges for the city of Nairobi. *Urban Forum*, 18(1), 94-113. <https://doi.org/10.1007/BF02681232>
- Kamjou, E., Scott, M., & Lennon, M. (2024). Green infrastructure inequalities in informal settlements. *Habitat International*, 147, 103058. <https://doi.org/10.1016/j.habitatint.2024.103058>
- Kimari, W. (2017). *Nai-rob-me Nai-beg-me Nai-shanty: Historicizing space-subjectivity connections in Nairobi from its ruins* (Doctoral dissertation, York University). YorkSpace. <https://yorkspace.library.yorku.ca>
- Kimari, W. (2018). Activists, care work, and the 'cry of the ghetto' in Nairobi, Kenya. *Palgrave Communications*, 4(1), 25. <https://doi.org/10.1057/s41599-018-0078-8>
- Kimari, W. (2022). Outlaw urbanism: Infrastructures of illegality in Nairobi. *Antipode*, 54(3), 715–737. <https://doi.org/10.1111/anti.12792>
- Kimari, W., & Parish, J. (2020). “Shining a light” on the violence of informal city-building: Entanglement in Nairobi's “grey spaces”. *Urban Studies*, 57(9), 1803–1819. <https://doi.org/10.1177/0042098019894392>
- KIPPRA. (2024). Strengthening the upgrading programmes of informal settlements in Nairobi. <https://kippra.or.ke/strengthening-the-upgrading-programmes-of-informal-settlements-in-nairobi/>
- Klopp, J. M. (2000). Pilfering the public: The problem of land grabbing in contemporary Kenya. *Africa Today*, 47(1), 7–26. <https://doi.org/10.1353/at.2000.0016>

- Knieling, J., & Othengrafen, F. (Eds.). (2009). *Planning cultures in Europe: Decoding cultural phenomena in urban and regional planning*. Farnham: Ashgate Publishing.
- Lawhon, M., Ernstson, H., & Silver, J. (2014). Provincializing urban political ecology: Towards a situated UPE through African urbanism. *Antipode*, 46(2), 497–516. <https://doi.org/10.1111/anti.12051>
- Lehmann, S. (2010). Green urbanism: Formulating a series of holistic principles. *S.A.P.I.E.N.S.*, 3(2). <https://journals.openedition.org/sapiens/1057>
- Low, S. M., Taplin, D., & Scheld, S. (2005). *Rethinking urban parks: Public space and cultural diversity*. Austin: University of Texas Press.
- Mbatia, T. W. (2016). *Social-political analysis of urban greenspaces in Nairobi: Perspectives on the (re)production and (re)construction of spatial injustice in the consumption of public greenspaces* (Doctoral dissertation). HAL Science. <https://theses.hal.science>
- Meagher, K. (2012). The strength of weak states? Non-state security forces and hybrid governance in Africa. *Development and Change*, 43(5), 1073–1101. <https://doi.org/10.1111/j.1467-7660.2012.01794.x>
- Mgele, V. O. (2012). *Evaluation of slum upgrading and redevelopment in promoting sustainable urban human settlements: A case study of Pumwani-Majengo housing project, Nairobi County* (Master's thesis, Kenyatta University). Kenyatta University Institutional Repository. <http://ir-library.ku.ac.ke>
- Miraza M. 2017. A comparison of greenspace loss and urban expansion over time in London and Nairobi. KCL Blog. Available from <https://blogs.kcl.ac.uk/eoes/2017/03/23/a-comparison-of-greenspace-loss-and-urban-expansion-over-time-in-london-and-nairobi/>
- Monte-Mór R.L. (2007) Cidade e campo, urbano e rural: o substantivo e o adjetivo. In: Feldman S and Fernandes A (eds) O urbano e o regional no Brasil contemporâneo. Salvador: EDUFBA, 93–114
- Monte-Mór, R. L. (2017). Beyond the right to the city: Between the rural and the urban. *International Journal of Urban and Regional Research*, 41(6), 1010-1027. <https://doi.org/10.1111/1468-2427.12585>
- Muhoza, J. P., & Zhou, W. (2024). Urban green spaces in Africa: A bibliometric analysis. *Environments*, 11(4), 68. <https://doi.org/10.3390/environments11040068>
- Mulligan, J., Bukachi, V., Clause, J. C., Jewell, R., Kirimi, F., & Odbert, C. (2019). Hybrid infrastructures, hybrid governance: New evidence from Nairobi (Kenya) on green-blue-grey infrastructure in informal settlements. *Anthropocene*, 29, 100227. <https://doi.org/10.1016/j.ancene.2019.100227>
- Muthigani, E. M. (2024). Social and economic impact of innovative housing construction technologies in slum upgrading programmes: Case of Mathare Valley, Nairobi. <https://ir.jkuat.ac.ke>

- Muungano wa Wanavijiji. (2024, July 20). The stark contrast in Nairobi's urban development: A tale of inequality. <https://www.muungano.net/browseblogs/2024/7/20/the-stark-contrast-in-nairobis-urban-development-a-tale-of-inequality>
- Mwathane, I. (2020). Measures towards development of appropriate land governance in Kenya. *African Journal on Land Policy and Geospatial Sciences*, 3(2), 1-15. <https://doi.org/10.48346/IMIST.PRSM/ajlp-gs.v3i2.20832>
- Myers, G. (2015). A world-class city-region? Envisioning the Nairobi of 2030. *American Behavioral Scientist*, 59(3), 328–346. <https://doi.org/10.1177/0002764214550303>
- Myers, G. (2016). The experts. In *Urban environments in Africa* (pp. 27–58). Policy Press.
- Myers, G. (2021). *Rethinking urbanism: Lessons from postcolonialism and the Global South*. Bristol University Press.
- Nagar, R. (2014). *Muddying the waters: Coauthoring feminisms across scholarship and activism*. Urbana: University of Illinois Press.
- Naibei, P. N. (2018). *Dynamics of urban land space contestation and their implications on utilization of public green spaces: A case of Michuki Memorial Park, Nairobi City County* (Master's thesis, University of Nairobi). eRepository. <http://erepository.uonbi.ac.ke>
- Nairobi City County Government. (2021). *County annual development plan (CADP) 2021/2022*. Nairobi, Kenya.
- Nairobi City County. (2018). *Nairobi City County spatial plan 2018-2022*. Nairobi, Kenya.
- Nightingale, A. J. (2011). Bounding difference: Intersectionality and the material production of gender, caste, class and environment in Nepal. *Geoforum*, 42(2), 153–162. <https://doi.org/10.1016/j.geoforum.2010.03.004>
- Njonjo, K. S. (2013). Exploring Kenya's inequalities: A case study of urban development in Nairobi. In M. O. Oyugi & O. A. K'Akumu (Eds.), *Land use management challenges for the city of Nairobi* (pp. 1–17). Urban Forum.
- Njue, N., Odhengo, P., Obudho, R., & Osanjo, L. (2021). Urban green spaces in the wake of Covid-19 pandemic: Reflections from Nairobi, Kenya. *GeoJournal*, 87(6), 10539–10550. <https://doi.org/10.1007/s10708-021-10540-0>
- O'Reilly, K. (2009). Sampling. In *SAGE research methods* (pp. 194–201). SAGE Publications. <https://doi.org/10.4135/9781446268308.n33>
- Obala, L. M. (2012). *The relationship between urban land conflicts and inequity: The case of Nairobi* (Doctoral dissertation, University of Nairobi). eRepository. <http://erepository.uonbi.ac.ke>
- Obudho, R. A., & Aduwo, G. O. (1992). The nature of the urbanization process and urbanism in the city of Nairobi, Kenya. *African Urban Quarterly*, 7(1-2), 50-62.
- Odhengo, P., Lutta, A. I., Osano, P., & Opiyo, R. (2024). Urban green spaces in rapidly urbanizing cities: A socio-economic valuation of Nairobi City, Kenya. *Cities*, 155, 105430. <https://doi.org/10.1016/j.cities.2024.105430>

- Odote, C., & Kameri-Mbote, P. (Eds.). (2019). *Environmental governance in Kenya: Implementing the constitutional framework*. Nairobi: University of Nairobi Faculty of Law.
- OECD. (2020). *Africa's urbanisation dynamics 2020: Africapolis, mapping a new urban geography*. Paris: OECD Publishing. <https://doi.org/10.1787/b6bccb81-en>
- Oja Da Silva, M. (2023). *Grassroots initiatives for urban sustainability transition: A case study of urban farming projects in informal settlements in Nairobi, Kenya* (Master's thesis). DiVA Portal. <https://www.diva-portal.org>
- Onyango, J. O., et al. (2022). Community adaptation strategies in Nairobi informal settlements: Lessons from Korogocho, Nairobi-Kenya. *Frontiers in Sustainable Cities*, 4, 932046. <https://doi.org/10.3389/frsc.2022.932046>
- Opanga, V., & Guma, P. (forthcoming). Contestations over space: Urban greening and the making of Somali enclaves in Nairobi's Pumwani-Majengo. [Manuscript submitted for publication].
- Opanga, V., & Müller-Mahn, D. (forthcoming). Cartel economies and urban governance: The interplay of performative politics, social embeddedness, and land control in Nairobi's informal settlements. [Manuscript submitted for publication].
- Opiyo, R. (2022). Urban greening and social justice in African cities: A critical review. *Journal of Urban Affairs*, 43(5), 678–693. <https://doi.org/10.1080/07352166.2020.1760182>
- Oranga, B. A. (2022, March). Urban invisibles: Poverty and inequality in Africa's rapidly growing cities. *Friedrich-Ebert-Stiftung Kenya Office*. <https://kenya.fes.de/e/urban-invisibles>
- Owuor, M. O., & Mwiturubani, D. A. (2022). Correlation between flooding and settlement planning in Nairobi. *Journal of Water and Climate Change*, 13(2), 456–468. <https://doi.org/10.2166/wcc.2021.123>
- Owuor, S. (2018). HCP report no. 6: The urban food system of Nairobi, Kenya. Ottawa: International Development Research Centre. <https://idl-bnc-idrc.dspacedirect.org/handle/10625/57049>
- Owuor, S., Brown, A., Crush, J., Frayne, B., & Wagner, J. (2017). No. 06: The urban food system of Nairobi, Kenya. Retrieved from <https://scholars.wlu.ca>
- Page, T. (2017). Vulnerable writing as a feminist methodological practice. *Feminist Review*, 115, 13–29. <https://doi.org/10.1057/s41305-017-0028-0>
- Population Matters (2024, January 5). Urbanisation challenges in Kenya's Nairobi: A tangled web of issues. Population Matters. Retrieved from <https://populationmatters.org/news/2024/01/urbanisation-challenges-in-kenyas-nairobi-a-tangled-web-of-issues/>
- Rademacher, A. (2018). *Building green: Environmental architects and the struggle for sustainability in Mumbai*. University of California Press. <https://doi.org/10.1525/9780520968721>

- Rademacher, A. (2020). *Reigning the river: Urban ecologies and political transformation in Kathmandu*. Duke University Press.
- Rai, S. (2015). Performative politics and the possibility of change. *Political Studies*, 63(1), 40–54. <https://doi.org/10.1111/1467-9248.12180>
- Ridolfi, E., Myers, G., & Pieterse, E. (2017). Land governance and green grabbing in African cities. *Journal of Peasant Studies*, 44(3), 482–501. <https://doi.org/10.1080/03066150.2016.1260080>
- Rigon, A. (2016). Collective or individual titles? Conflict over tenure regularisation in a Kenyan informal settlement. *Urban Studies*, 53(9), 1838-1854. <https://doi.org/10.1177/0042098015583783>
- Ringwald, B., Taegtmeier, M., Mwania, V., Muia, M., Otiso, L., Mathu, D., Steege, R., & McCollum, R. (2023). Power and poverty: A participatory study on the complexities of HIV and intimate partner violence in an informal urban settlement in Nairobi, Kenya. *Social Science & Medicine*, 336, 116247. <https://doi.org/10.1016/j.socscimed.2023.116247>
- Robbins, P. (2012). *Political ecology: A critical introduction* (2nd ed.). Wiley-Blackwell.
- Rose, G. (2014). Visual culture, photography and the urban: An interpretive framework. *Space and Culture India*, 2(3), 4–17. <https://doi.org/10.20896/saci.v2i3.92>
- Rossi, U., & Wang, J. (2020). Urban entrepreneurialism 2.0 or the becoming south of the urban world. *Environment and Planning A: Economy and Space*, 52(3), 483-489. <https://doi.org/10.1177/0308518X19899428>
- Routledge, P. (2002). Travelling east as Walter Kurtz: Identity, performance, and collaboration in Goa, India. *Environment and Planning D: Society and Space*, 20(4), 477–498. <https://doi.org/10.1068/d180>
- Roy, A. (2005). Urban informality: Toward an epistemology of planning. *Journal of the American Planning Association*, 71(2), 147–158. <https://doi.org/10.1080/01944360508976689>
- Roy, A. (2005). Urban informality: Toward an epistemology of planning. *Journal of the American Planning Association*, 71(2), 147–158. <https://doi.org/10.1080/01944360508976689>
- Rupprecht, C. D., & Byrne, J. A. (2014). Informal urban greenspace: A typology and trilingual systematic review of its role for urban residents and trends in the literature. *Urban Forestry & Urban Greening*, 13(4), 597–611. <https://doi.org/10.1016/j.ufug.2014.09.002>
- Sanyal, B. (2005). *Comparative planning cultures*. Routledge.
- Schroeder, H. (2021). The vernacularisation of global greening norms in African cities. *Urban Studies*, 58(12), 2437–2454. <https://doi.org/10.1177/0042098020968220>
- Shackleton, C. M., Cilliers, S. S., Davoren, E., & du Toit, M. J. (2021). The need for an urban ecology of the Global South. In C. M. Shackleton, S. S. Cilliers, E. Davoren, & M. J.

- du Toit (Eds.), *Urban ecology in the Global South* (pp. 1–29). Springer.
https://doi.org/10.1007/978-3-030-67650-6_1
- Shafique, T. (2025). Dirty research: A call towards decolonial urban knowledge production. *City*, 1–14. <https://doi.org/10.1080/13604813.2024.2447687>
- Shikangalah, R. N., & Mapani, B. (2021). Governance of urban green infrastructure in informal settlements of Windhoek, Namibia. *Sustainability*, 13(16), 8937.
<https://doi.org/10.3390/su13168937>
- Simone, A. M. (2004). *For the city yet to come: Changing African life in four cities*. Duke University Press.
- Simone, A., & Castán Broto, V. (2022). Radical unknowability: An essay on solidarities and multiform urban life. *City*, 26(3), 481–493.
- Slingerland, G., Kooijman, J., Lukosch, S., Comes, T., & Brazier, F. (2021). The power of stories: A framework to orchestrate reflection in urban storytelling to form stronger communities. *Community Development*, 54(1), 18–37.
<https://doi.org/10.1080/15575330.2021.1998169>
- Stake, R. E. (1995). *The art of case study research*. Thousand Oaks, CA: Sage Publications.
- Sverdlik, A., Nkatha Gichuiya, L., Glück, Z., & Myers, G. (2025). Nairobi: City report. *SSRN*.
<https://papers.ssrn.com>
- Swyngedouw, E. (2004). *Social power and the urbanization of water: Flows of power*. Oxford University Press.
- Swyngedouw, E., & Kaika, M. (2000). The environment of the city... or the urbanization of nature. In G. Bridge & S. Watson (Eds.), *A companion to the city* (pp. 567–580). Oxford: Blackwell Publishers.
- Swyngedouw, E., & Kaika, M. (2014). Urban political ecology: Great promises, deadlock... and new beginnings? *Documents d'Anàlisi Geogràfica*, 60(3), 459–481.
<https://doi.org/10.5565/rev/dag.155>
- Symon, G., Cassell, C., & Maitlis, S. (2012). Narrative analysis. In *SAGE research methods* (pp. 492–511). SAGE Publications. <https://doi.org/10.4135/9781526435620.n27>
- Tehlova, A. (2020). Communities in Nairobi compete to contribute to public space. *Project for Public Spaces*. <https://www.pps.org/article/communities-in-nairobi-compete-to-contribute-to-public-space>
- Teo, T. (2010). What is epistemological violence in the empirical social sciences? *Social and Personality Psychology Compass*, 4(5), 295–303. <https://doi.org/10.1111/j.1751-9004.2010.00265.x>
- The Conversation. (2021, April 26). The fascinating history of how residents named their informal settlements in Nairobi. <https://theconversation.com/the-fascinating-history-of-how-residents-named-their-informal-settlements-in-nairobi-159080>
- Thieme, T. (2024). *Hustle urbanism: Making life work in Nairobi*. Minneapolis: University of Minnesota Press.

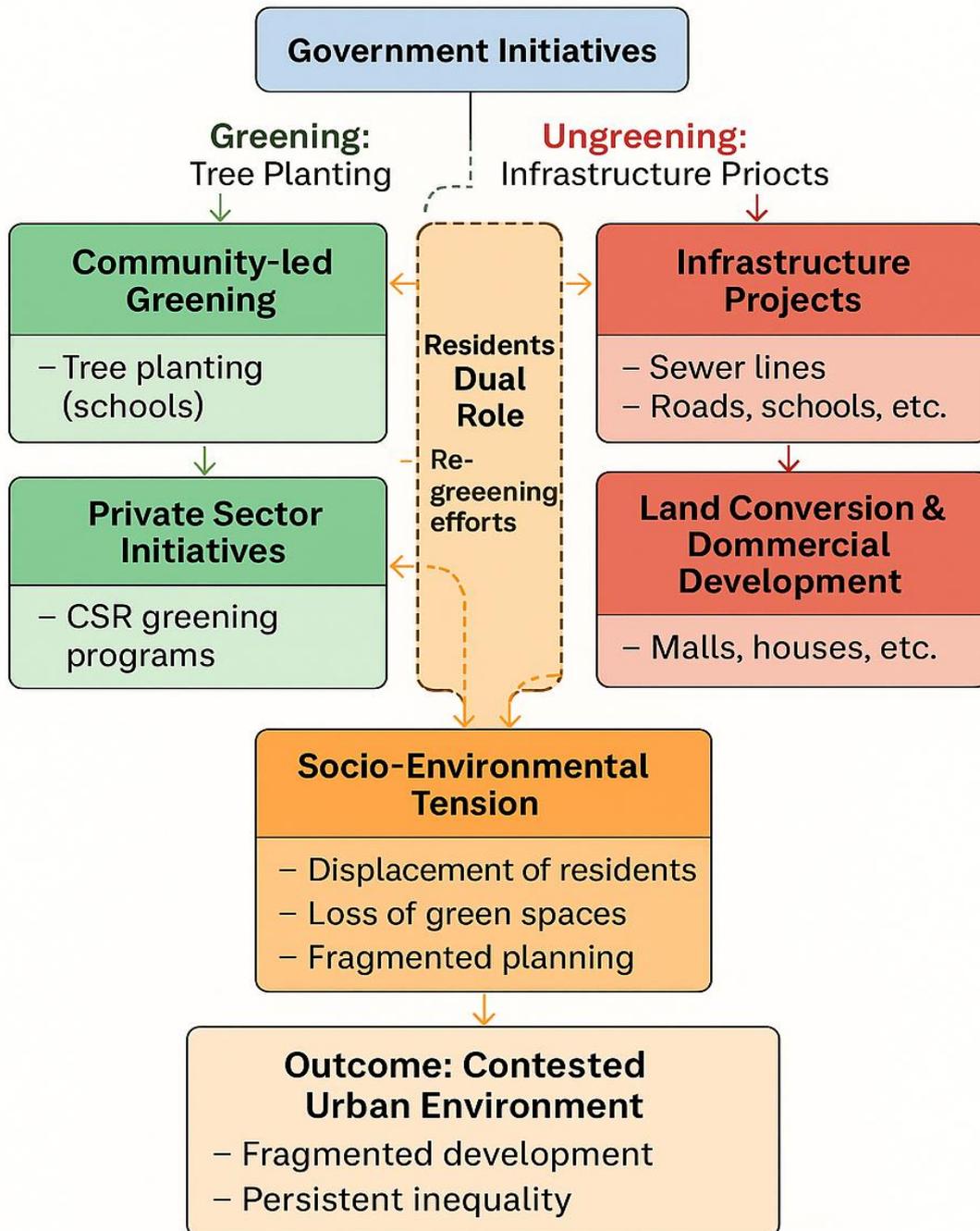
- Tracy, S. J. (2018). A phronetic iterative approach to data analysis in qualitative research. *Journal of Qualitative Research*, 19(2), 61–76. <https://doi.org/10.22284/qr.2018.19.2.61>
- Tzaninis, Y., Mandler, T., Kaika, M., & Keil, R. (2021). Moving urban political ecology beyond the 'urbanization of nature'. *Progress in Human Geography*, 45(2), 229–252. <https://doi.org/10.1177/0309132520904480>
- Tzaninis, Y., Mandler, T., Kaika, M., & Nikolaidou, A. (2020). From urban sustainability to eco-gentrification: Challenging the political economy of green urbanism. *Urban Geography*, 41(5), 703–724. <https://doi.org/10.1080/02723638.2020.1739411>
- UN-Habitat. (2020). *Nairobi City County: Public space inventory and assessment*. <https://unhabitat.org/nairobi-city-county-public-space-inventory-and-assessment>
- United Nations. (2024). Sustainable cities and communities. In *The sustainable development goals report 2024*. United Nations.
- van Noorloos, F., & Kloosterboer, M. (2018). Africa's new cities: The contested future of urbanisation. *Urban Studies*, 55(6), 1223-1241. <https://doi.org/10.1177/0042098017700574>
- Wahome P (2022) Statehood, sovereignty and identities: Exploring policing in Kenya's informal settlements of Mathare and Kaptombwo. PhD Thesis, University of Edinburgh, UK.
- Wangui, W. M. (2018). Toponymy and the spatial politics of power on the urban landscape of Nairobi, Kenya [Doctoral dissertation, University of Tsukuba]. Tsukuba Repository. <https://tsukuba.repo.nii.ac.jp/records/4945>
- Wanjiru-Mwita, M., & Komollo, F. O. (2024). Colonial impositions, postcolonial dilemmas and contemporary dynamics of place naming in Nairobi, Kenya. In *Contested heritage in Europe and beyond* (pp. 1–15). Taylor & Francis. <https://taylorfrancis.com>
- WIEGO. (2019). *Counting the world's informal workers: A global snapshot*. <https://www.wiego.org/wp-content/uploads/2019/09/WIEGO-Global-Statistics-Snapshot-Pamphlet-English-2019.pdf>
- World Bank. (2023). *World Bank annual report 2023: A new era in development*. Washington, DC: World Bank Group.
- World Health Organization. (2019). *Health and sustainable development: Urban green spaces*. World Health Organization.
- Yin, R. K. (1994). *Case study research: Design and methods* (2nd ed.). Sage Publications.

APPENDICES

Appendix 1: Supplementary material

Supplementary material for Paper 1

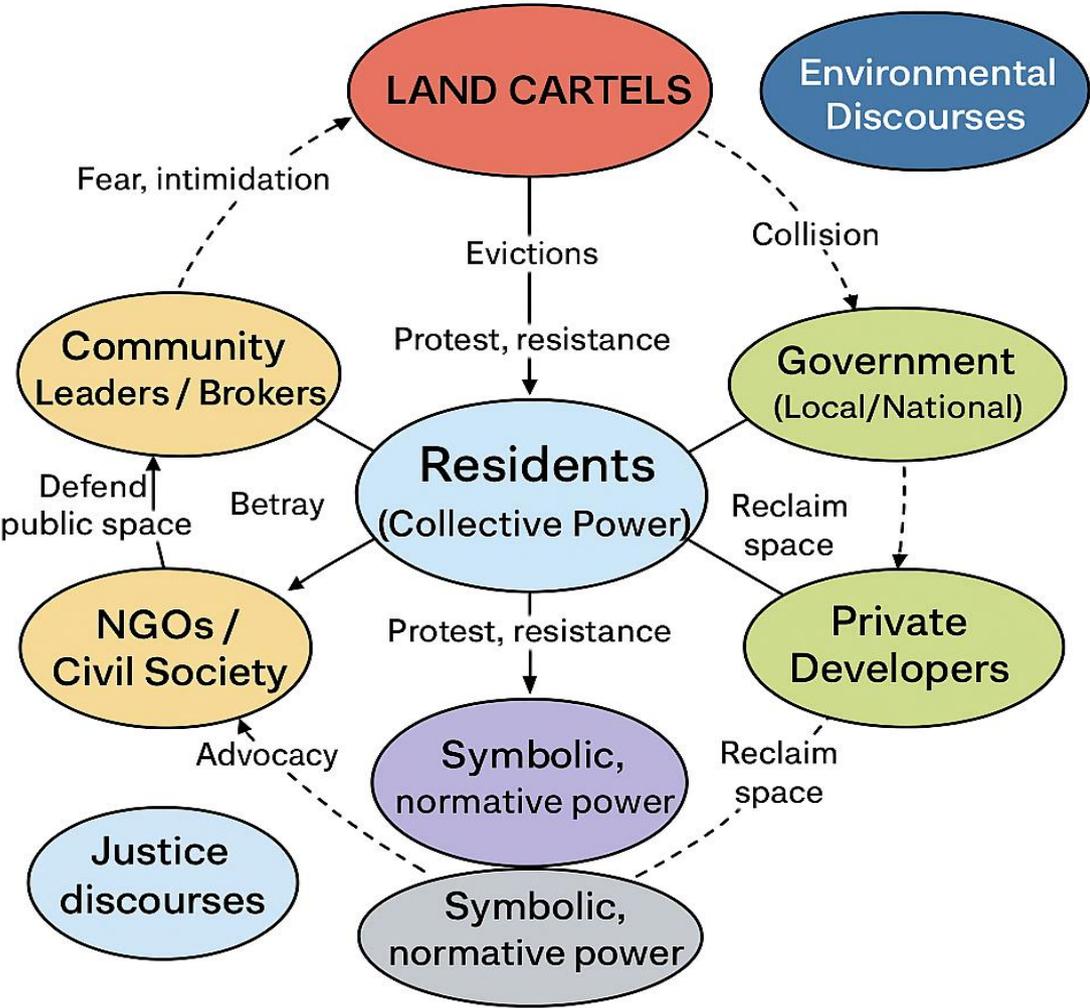
Intersections of greening and ungreening in Nairobi's informal settlements²⁹



²⁹ The figure highlights the dual role of residents as both agents of re-greening and as communities vulnerable to displacement, capturing the socio-environmental tensions that shape Nairobi's contested urban environment.

Supplementary material for Paper 2

How Land Cartels Interact with Other Actors



Source: Authors, 2025

Definition of Informal settlements³⁰

Aspect	Kenya's Definition	UN-Habitat Definition (2015)
Legal Status of Tenure	Lack of legal claim to land or dwellings; tenure insecurity is central.	No security of tenure vis-à-vis land or dwellings; includes squatting and informal rentals
Planning and Building Regulations	Structures often not compliant with planning/building codes	Housing typically non-compliant with current planning and building regulations.
Infrastructure and Services	Inadequate or lacking infrastructure and services like water, sanitation, and electricity.	Generally cut off from basic services and city infrastructure.
Community Recognition	Recognizes potential for slum dwellers to be defined as communities under Community Land Act, though this is debated.	Less emphasis on legal recognition as a "community"; more focus on urban integration and rights.
Geographic & Environmental Hazards	Not consistently emphasized in national definitions.	Often situated in geographically and environmentally hazardous areas.
Economic Context	Driven by poverty, urban migration, and lack of affordable housing.	Also acknowledges informal settlements as speculative real estate for all income levels.
Definition of Slum	Overcrowded, poor-quality housing, insecurity, and lack of planning; overlaps with informal settlements.	Slums are the most deprived form of informal settlements—high poverty, dilapidated housing, hazardous conditions, disease, and violence.
Policy Emphasis	Focused on regularization, upgrading, legal frameworks (e.g., KISIP, CLA, Land Act, Housing Policy).	Emphasizes rights-based approach, urban integration, and protection from eviction and violence.
Unique Features	Community Land Act provides possible legal pathway for tenure through community recognition.	Stronger international human rights framing; integrates socio-environmental justice aspects more explicitly.

Actors within the Land Cartel Economy³¹

³⁰ Government of Kenya (2016) *Sessional paper No. 02 of 2016 on national slum upgrading and prevention policy*. Nairobi: Ministry of Land, Housing and Urban Development.

Government of Kenya (2022) *The Community Land Act, Chapter 287 (Revised Edition 2022)*. Nairobi: National Council for Law Reporting. Available at: <https://www.kenyalaw.org/lex/actview.xql?actid=CAP.+287> (Accessed: 4 May 2025). Government of Kenya (2024) *National slum upgrading and prevention strategy (2024–2034)*. UN-Habitat (2003) *The challenge of slums: Global report on human settlements 2003*. London: Earthscan. UN-Habitat (2007) *Twenty-first session of the governing council (16–20 April 2007), Nairobi, Kenya*. Nairobi: UN-Habitat. UN-Habitat (2015) *Habitat III issue papers: 22 – Informal settlements*. United Nations Human Settlements Programme. Available at: <https://unhabitat.org/habitat-iii-issue-papers-22-informal-settlements> (Accessed: 15th April 2025)

³¹ Kamunyoru (2016), Joireman (2011), Kimari (2021), Fieldwork, 2023-2024

Actor	Mechanism of Influence	Role in Land Governance	Impact on Residents
Structure Owners	Control rental units, manipulate access	Informal landlords; enforce local tenancy rules	Provide shelter but may raise rents or resist formal upgrades
Brokers	Connect buyers/tenants to land or units	Intermediaries between residents, chiefs, and structure owners	It can ease access, but often charge fees or exploit uncertainty
Youth Groups	Enforce evictions, protect cartel interests	Informal “security” during disputes or development projects	Often feared; provide order or violence depending on context
Chiefs / Elders	Record structures, arbitrate disputes	De facto authorities managing informal tenure	Offer legitimacy, but may demand informal fees or favour elites
Political Patrons	Protect networks, influence project outcomes	Use position to support or block upgrading, title reform	May enable land grabs or defend resident interests selectively

Economic flows within Cartel- Controlled Zones³²

Actor / Role	Type of Economic Flow	Estimated Value / Range	Function of Payment
Structure Owners	Rent collection	KES 1,000–5,000 per unit/month	Housing provision, informal tenancy
Brokers	Connection or facilitation fees	KES 500–10,000 (case dependent)	Securing plots, mediating access to land or housing
Chiefs / Local Leaders	Recording fees or permissions	KES 200–2,000 per plot	Informal documentation of land use or ownership
Youth Groups	“Security” or protection fees	KES 50–500/week from businesses	Safety enforcement, eviction muscle
Political Patrons	Project influence, loyalty payments	Variable / non-transparent	Blocking or enabling upgrading, informal land reallocations

Appendix 2: Co-authorship Certificate

³² Kamunyori (2016), Kimari (2021), Fieldwork, 2023-2024



[The Editorial Board of the *Urban Matters Journal*
Institute for Urban Research
Malmö University
Sweden

Date: August 15, 2025

To Whom It May Concern,

The Editorial Board of the *Urban Matters Journal* certifies that **Valentine Opanga** and **Annapia Debarry** have co-authored and published the article titled “**Urban Invisibles: Feminist Perspectives on Marginalization and Resistance in Nairobi and Addis Ababa through the Lens of Embodied Research Practices**” in our journal.

This article was published as part of the thematic issue “**Feminisms for Our Time! Urban Inequalities and Contestations in the Age of Global Change,**” guest-edited by **Dr. Syeda Jenifa Zahan** and **Prof. Carina Listerborn**.

We confirm that both authors contributed equally to the research and writing of the piece, with a 50% – 50% contribution.

Urban Matters (ISSN 2004-206X) is a popular science journal published by the Institute for Urban Research, an interdisciplinary research center that brings together all urban research at Malmö University in Sweden. The journal publishes accessible and engaging work on urban issues, including research articles, commentaries, interviews, photo essays, and book reviews. We aim to bridge academic analysis and journalistic expression to reach audiences both within and beyond academia.

The journal is committed to fostering critical public debate around the social, economic, political, cultural, and ecological consequences of contemporary urbanization—one of the most pressing global challenges of our time.

We are pleased to recognize the valuable contribution of Valentine and Annapia to this mission through their jointly authored article.

You can visit the issue in: <https://urbanmattersjournal.com/issue/feminisms-forourtimes/>. If you have any comments or questions, you can contact us by emailing to adriana.espinosa@mau.se.

Sincerely,



Adriana de la Peña on behalf of the Editorial Board
Urban Matters Journal