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The Politics of Green Space Governance:
A Trip Through Memory Lane With a Geospatial Data Lens

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ABSTRACT

Urban green spaces are vital for sustaining ecological balance and resilience in cities. In Accra, these spaces face significant threats from rapid urbanization, and rising land demand, undermining the urban ecosystem's health. This study uses geospatial techniques, key informant interviews, and direct observations to assess the loss of green spaces amidst development pressures. The research makes two key contributions. First, it provides insights into Accra's political dynamics, particularly "elite capture," driven by weak law enforcement and questionable rezoning, resulting in a 70% loss of green spaces between 1958 and 2020. Second, it highlights how inadequate spatial planning, ineffective waste management, and weak policy coordination compound challenges, further complicating alignment between formal laws and customary practices. This study enriches discourse on how individual agency, organizational behavior, institutional frameworks, and social contexts shape efforts to address urban flooding and foster sustainable development in urban Africa.

KEYWORDS

Ecosystem Resilience, Encroachment, Sustainable Urban Development, Urban Green Spaces, Urban Planning, Urban Sprawl

1. INTRODUCTION

Urban green spaces play a crucial role in promoting sustainable cities by improving the health and well-being of residents through vital ecosystem services. These designated areas provide provisioning, cultural, and regulating services that enhance urban living (Mayrand et al., 2018). Often referred to as the city's 'lungs,' they filter air, absorb carbon dioxide, and produce oxygen, contributing to a healthier environment (Fu et al., 2024; Ghana News Agency, 2023a). The quality of ecosystem services is influenced by their size, location, and characteristics. Both public and private areas, such as parks and gardens in wetlands and riparian zones, deliver ecological, social, and economic advantages. This green infrastructure is essential for creating resilient urban environments (Culwick et al.,

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2016). Nevertheless, rapid urban growth and informal settlements coupled with unemployment pose significant threats to sustainability (Esson et al., 2021; Teimouri & Yigitcanlar, 2018). Green spaces are vital for climate adaptation and urban resilience (Kitha & Lyth, 2011), but they are increasingly vulnerable to degradation in Accra.

Despite the well-documented importance of urban green spaces, there remains a significant gap in understanding how political dynamics and elite influence shape the loss of reserved ecological areas in rapidly urbanizing African cities. This study uniquely contributes to the discourse by employing a geospatial approach to quantify green space depletion while integrating political ecology to expose the underlying governance failures that have facilitated this trend. By bridging these dimensions, the research provides an innovative framework for assessing the interplay between land use policies, elite capture, and climate resilience in Accra.

Urban planning attributes the failures in developing economies to a significant reduction in urban green spaces. This reduction is associated with poverty, swift urbanisation, and a lack of political will (Dossa & Miassi, 2024). Countries in sub-Saharan Africa (SSA), including Ghana, are experiencing some of the highest urban growth rates globally (Potts, 2018). UN forecasts suggest that by 2030, two-thirds of the global population will live in urban areas (United Nations, 2018). However, despite this rapid urban expansion, many SSA countries have not yet fully harnessed its advantages, as highlighted by the World Bank's reports on uncontrolled growth (World Bank, 2015). This swift growth brings challenges such as inadequate spatial planning and poor land management, leading to the loss of green spaces and protected areas and significantly impacting climate change (Lindley et al., 2018).

Human-induced climate change harms urban ecosystems, threatens livelihoods, and increases vulnerability (Asibey et al., 2022; Boafo et al., 2025). Rising urban temperatures, exacerbated by the heat island effect (Coumou & Robinson, 2013; Wilby et al., 2021), cause heat stress that negatively impacts residents' health and quality of life (Amankwaa & Ampomah, 2024; Codjoe et al., 2020; Zölch et al., 2016). Kabisch et al. (2017) indicate that greenhouse gas emissions per capita in North American cities may exceed those in low-income countries by 25-50 times. McPhearson et al. (2015) argue that the loss of wetlands and green areas weakens urban resilience, leading to higher energy use and discomfort (Roberts et al., 2022). The 2003 European heatwave showed that loss of green spaces correlated with increased extreme heat (Kosatsky, 2005). Campbell et al. (2018) assert that the rapid conversion of green and agricultural lands into African urban developments has intensified temperature rises and urban heat islands. Amlor & Alidza (2016) highlight that reduced green spaces affect food security, water supply, and public health. Moreover, Gough et al. (2019) and Wilby et al. (2021) state that tree shade can reduce sweltering days (>40 °C) and nights (>30 °C) by about 12 and 15 days annually in low-income areas, illustrating the importance of green spaces for mitigating extreme heat.

Accra, the capital city of Ghana, boasts a population of approximately 4.7 million people (GSS 2021). In recent decades, the city has undergone significant spatial expansion (Agyemang et al., 2017). This unregulated growth arises from commercialising marginal and reserved lands and a lack of coordinated management among local government entities regarding urban sensitive areas. Encroachment into ecologically sensitive lands within Accra represents a ‘wicked’ planning challenge, characterised by its complex interrelations, multiple viewpoints, and conflicting interests, which hinder straightforward, technical solutions. Understanding these challenges is essential for fostering sustainable urban growth. This paper evaluates the loss of reserved green spaces in Accra (between 1958 and 2020) as urban development accelerates. This study contributes to scholarship in two key areas: First, by focusing on Accra, Ghana's capital, it offers empirical insights into social dynamics related to “elite capture,” which arises from inconsistent law enforcement and dubious rezoning policies, resulting in approximately 70 per cent loss of reserved green spaces during the period under consideration. Second, it underscores how the increase in impervious surfaces due to