



Harmonizing Sustainable Urban Green Spaces in Greater Jakarta: A Legal Geography Analysis

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Abstract. Following Jakarta's transition from the capital to a special region, it confronts numerous challenges affecting the Greater Jakarta region. Despite a mandated 30% allocation for green open space, Jakarta's current provision only reaches 7.56%, according to the 2022 Detailed Spatial Planning Plan. With its new special region status, Jakarta can potentially address this shortfall through collaborative joint claims with surrounding regions. Policy guidelines (Minister of Public Works Number 05/Prt/M/2008) and new law No. 2 of 2024 facilitate such claims, encouraging cooperative preservation and sustainable protection of green spaces. This study, employing the Critical Legal Geography framework, scrutinizes the regulatory framework for Jakarta's post-capital identity and its efficacy in implementing joint claims for green spaces. This research employed a multifaceted methodology, including literature reviews, webinar and podcast observations, and focus group discussions. Insights from these sources highlight the importance of collaboration among central government, local governments, and stakeholders to maintain ecological equilibrium, safeguard the environment, and foster sustainable development. This collaboration is critical for preserving and establishing green spaces in the Jabodetabekjur region, as well as developing the Green Belt. Implementing joint claims among neighboring cities can satisfy Jakarta's needs while strengthening the metropolitan green belt and the governance of the Greater Jakarta Region. However, regulatory frameworks alone are insufficient; a shared commitment and understanding are essential to ensuring the sustainability of Greater Jakarta.

Keywords: Collaborative joint claims, critical legal geography, green open space, Jakarta post-capital, sustainability of greater Jakarta.

1 Introduction

Urban green spaces play a critical role in metropolitan areas by providing essential ecological, recreational, and aesthetic benefits [1][2]. However, the rapid transformation of these spaces into built environments has become a pressing issue. The expansion of urban infrastructure, while crucial for accommodating economic growth and enhancing living standards, poses significant challenges for maintaining

adequate green space [3][4]. Balancing the demands of urban development with the need to preserve and enhance green areas is vital for achieving sustainable metropolitan growth [5][1]. This is particularly true in regions experiencing rapid urbanization, where the preservation of green spaces often takes a backseat to immediate development needs.

In this context, the importance of establishing a metropolitan green belt becomes clear. As metropolitan areas like Greater Jakarta continue to expand, the loss of green spaces exacerbates environmental degradation, reduces biodiversity, and diminishes the quality of life for residents [6][7]. A well-planned green belt can mitigate these impacts by providing a continuous ecological network that supports urban biodiversity, improves air quality, and offers recreational opportunities [8]. The creation of such a green belt is not only a response to the immediate need for green space preservation, but also a strategic move to integrate sustainability into long-term urban planning [9]. Addressing this urgency requires a comprehensive approach that incorporates green belt strategies into regional development plans.

Jakarta's transition from Indonesia's capital to a special region under Law No. 2 of 2024 has further intensified these challenges, particularly in the Jabodetabekjur area, where urban development pressures threaten the provision of green spaces. This law redefines Jakarta's administrative status, allowing for a more flexible and regionally coordinated approach to urban planning and green space management. Spatial regulations require Jakarta to dedicate 30% of its land to green open space, but as of 2022, its current allocation falls significantly short, at just 7.56%. Other cities in the region also observe this situation. This shortfall underscores the need for more effective governance and regional cooperation to address the deficit and enhance green space provision.

The newly introduced regulations, including the Ministry of Agrarian Affairs and Spatial Planning (ATR/BPN) Regulation No. 14/2022, provide a framework for facilitating joint claims with neighboring areas, promoting cooperative efforts to manage and preserve green spaces. Law No. 2/2024 specifically mandates compulsory cooperation among local governments within the Jakarta special region and its surrounding agglomeration areas, setting the stage for a more unified approach to green space management. Leveraging these legal tools increases the potential to achieve the mandated green space targets, making it imperative to explore the effective implementation of these policies. This scheme has the potential to be implemented with the support mechanism of obligatory cooperation outlined in Law No. 2/2024, as well as the coordination role shaped by the Agglomeration Council. This study's focus on the regulatory framework and its implications for the formation of a metropolitan green belt is critical for understanding how collaborative approaches can contribute to sustainable urban development. The integration of a metropolitan green belt into Greater Jakarta's urban planning is not only innovative but also necessary for creating a resilient and balanced urban environment.

2 Methods

This study employed a qualitative research design integrating various data collection methods. Initially, we conducted a thorough literature review to compile scientific articles and reports on urban green spaces and metropolitan green belts, specifically focusing on Greater Jakarta. This review provided a foundational understanding of the topic and guided the subsequent data collection and analysis [10][11]. It also identified key themes and research gaps, shaping the study's focus and methodology approach.

In addition to the literature review, the study utilized social media observations, specifically analyzing content from YouTube. From November 2023 to April 2024, we conducted a search to identify relevant webinars, online talks, and discussions about green open spaces in Indonesia or Greater Jakarta. We identified 5 pertinent videos from this search and analyzed them to gather insights from various stakeholders, including government agencies and professional associations [12][13]. This method facilitated the capture of contemporary discourse and public engagement in urban green spaces.

We performed data analysis using the Legal Geography (LG) framework, which integrates legal, geographical, sociological, and environmental perspectives to explore the complexities of law and space [14][15][16]. The LG framework enables the study to examine how legal structures and policies shape and legitimize spatial practices and relationships [11]. By investigating the interactions between law and space, the study identifies inequalities and injustices that arise from these dynamics and evaluates the impact of legal frameworks on green space management within Greater Jakarta's evolving metropolitan context. This approach provides a nuanced understanding of how laws and policies affect urban planning and environmental sustainability [17].

3 Results and Discussion

3.1 Urbanization and Economic Growth: Impact on Greater Jakarta's Green Spaces

Urbanization and economic growth dynamics closely link the existence and development of green open spaces (GOS) within metropolitan areas [18]. Rapid urbanization, driven by economic expansion, has significantly accelerated the conversion of green spaces into urban infrastructure [19][20]. This transformation includes the development of road networks, office buildings, shopping centers, and new residential areas, as well as the growth of industrial zones. As metropolitan regions experience increased economic activity, the pressure to utilize available land for infrastructure and development intensifies. This economic-driven urban expansion often results in the encroachment and reduction of green open spaces [21][22]. The need for infrastructure to support growing populations and economic activities frequently prioritizes short-term development goals over long-term sustainability considerations [23][24][25]. Urban development projects frequently sacrifice green spaces, which are crucial for environmental balance and quality of life.

The Jabotabek region or the greater Jakarta, encompassing Jakarta and its surrounding cities, became a hub for foreign and domestic investment due to its strategic location, skilled labor force, and concentration of economic activities [26][27][28]. During the 1980s and early 1990s, this region experienced a surge in secondary and tertiary economic activities, particularly in the manufacturing, finance, and property sectors [29][30][31]. As a result, Greater Jakarta became the economic center of Indonesia, with Jakarta alone accounting for four-fifths of the national money circulation and receiving significant portions of the Gross Regional Domestic Product (GRDP) from other provinces [32]. This rapid economic growth transformed Jakarta and its periphery, shaping the region into the largest metropolitan area in Southeast Asia.

This economic centrality, while boosting urban growth, also limited local autonomy under the New Order government, as centralized governance was deemed necessary to maintain economic stability. The deregulation policies introduced by the New Order in the 1980s further accelerated urban development, as they simplified business procedures, attracting more investment into the region [33][34][35]. However, this wave of economic liberalization came at the cost of sustainable development, as urban expansion often occurred without adequate consideration for green spaces, leading to significant environmental challenges in the Jabotabek area. Effendy (2009) reports a significant reduction of 23% in green open spaces in Greater Jakarta between 1972 and 1997 [36]. This trend reflects a broader pattern where economic expansion drives urban development at the expense of green areas.

The resurgence of economic growth following the 1997 financial crisis has placed increased pressure on urban green spaces in Greater Jakarta. As the primary hub of one of the world's largest metropolitan areas, Jakarta has struggled to balance development needs with green space preservation, resulting in accelerated declines in green areas that fail to meet the targets set in its spatial planning documents. From 1965 to 2022, Jakarta experienced a dramatic reduction of 79.35% in its green spaces, as indicated by various planning documents over the past five decades. This sharp decline underscores the challenge of accommodating the city's rapid growth while maintaining adequate green space. The demand for land for development projects, including infrastructure and residential areas, has intensified, often overshadowing the importance of preserving green spaces. Such reductions highlight the difficulties in achieving sustainable urban planning goals amid ongoing economic pressures.

Table 1. Green Open Space (RTH) Areas in Jakarta Spatial Planning Documents (1965-2022)

| Regulation | Total UGS Planning Area (ha) | UGS Area Percentage (%) |
|--|-------------------------------------|--------------------------------|
| Djakarta Master-Plan Year 1965–1985 | 24,315.04 | 37.20 |
| Regional Regulation Number 4 the Year 1984 concerning Jakarta Spatial General Plan (RUTR) Year 1985–2005 | 19,556.61 | 29.92 |

| | | |
|--|----------|-------|
| Regional Regulation Number 6 the Year 1999 concerning the JSP Year 2010 | 9,111.60 | 13.94 |
| City Government-issued Regional Regulations Number 1 of 2014 concerning Detailed Spatial Planning and Zoning Regulations | 7,520.96 | 11.51 |
| Governor Regulation No. 31 Year 2022 concerning Detailed Spatial Planning and Zoning Regulations. | 5,025.78 | 7.56 |

(Source: derived from [6])

Other municipalities within Greater Jakarta are observing similar trends. Research by Aji et al. (2020) indicates a 5.4% reduction in green spaces in Depok from 2006 to 2019, equivalent to 166.8 hectares [37]. Similarly, Fitri et al. (2022) report a 30.4% decline in green spaces in South Tangerang between 2010 and 2020 [38]. These findings reflect a broader regional issue where green space reductions are prevalent and point to the urgent need for coordinated responses from all stakeholders in the Greater Jakarta area.

Overall, the continuing reduction in green spaces across Greater Jakarta highlights a critical issue that requires collective action. The evidence points to a need for more effective policies and planning strategies to balance economic development with green space preservation. Addressing these challenges is essential for ensuring sustainable urban growth and maintaining the ecological and social benefits provided by urban green spaces.

3.2 Policy Responses for Harmonizing Green Space in Post-Capital Greater Jakarta

Efforts to maintain and expand urban green spaces (RTH) have been a key priority for the Indonesian government. The Indonesian government has implemented policies through various programs and regulations to ensure the sustainable management of these spaces. The Ministry of Public Works Regulation 05/PRT/M/2008, which provides guidelines for the provision and use of green open spaces in urban areas, supports Law No. 26/2007 on Spatial Planning, mandating the allocation of 30% of urban areas to green spaces. The Ministry of Forestry Regulation No. 71/2009, which provides further guidance on maintaining urban green areas, also regulates the management of urban forests. These regulations reflect the government's commitment to preserving green spaces as part of the broader urban ecosystem. According to Van Meter and Van Horn (1978), policy implementation encompasses actions by both public and private individuals (and groups) directed toward achieving the goals and objectives set forth in prior policy decisions [39]. All stakeholders, including the private sector, government, academia, media, and communities, collaborate to provide a better green ecosystem.

However, despite the ambitious goal of providing 30% green space in urban areas, challenges persist in implementing these policies. Major cities face difficulties in allocating land for green spaces, especially given the rapid urban expansion and limited available land. Government planners often struggle to meet the targets set in spatial planning documents as land competition from other urban development's increases. Local governments must demonstrate strong leadership and engage in innovative, collaborative efforts to overcome these challenges and achieve sustainable urban development, involving multiple stakeholders. The goal is not just to meet the numerical targets, but also to ensure the long-term sustainability and benefits of green spaces, such as contributing to nature-based solutions and improving urban resilience.

In response to these challenges, the Ministry of Agrarian Affairs and Spatial Planning (ATR/BPN) introduced an Integrated Green Space Approach in its Regulation No. 14/2022. This policy emphasizes viewing green spaces as part of the broader urban ecological system. The approach incorporates not only green open spaces but also non-green spaces using eco-friendly materials, as well as blue open spaces that enhance both ecological and social functions. This framework promotes a more holistic approach to urban planning, integrating green, blue, and non-green spaces to support a balanced and healthy urban environment.

This approach categorizes public and private green spaces into zones that serve specific functions, including recreational areas, water absorption retention zones, and social interaction spaces. Blue open spaces, including lakes, reservoirs, and rivers, serve as critical components for flood control and water retention. Non-green open spaces, which include permeable surfaces like porous asphalt and eco-friendly pavement, contribute to the overall environmental sustainability of urban areas. Indonesia's Green-Blue Index measures the integration of these spaces, evaluating both ecological and socio-cultural elements to help cities meet the environmental, economic, and social goals necessary for a resilient urban future.

The regulation also introduces joint green space management (joint claimed RTH) to address land scarcity in cities that struggle to meet the 30% green space requirement. This cooperative mechanism allows local governments to share green spaces across administrative boundaries, encouraging collaboration between central and regional governments and even with the public. In order to increase green space coverage and meet green space goals in a way that benefits urban residents and supports broader ecological sustainability, this joint approach involves leasing, managing, or purchasing land.

The Ministry of Agrarian Affairs and Spatial Planning (ATR/BPN) recently introduced Regulation No. 14/2022 and Law No. 2/2024, both of which include the Jabodetabekjur agglomeration area, significantly influencing the regulation of urban green spaces (RTH) in Greater Jakarta. This legislative framework is critical for harmonizing green space management in Greater Jakarta, the post-capital city. It designates the agglomeration area, comprising Jakarta and its surrounding cities and districts, as a functional network connected through integrated regional infrastructure systems, despite administrative differences. This approach aims to synchronize development across these interconnected areas, covering aspects such as transportation,

waste management, environmental management, flood control, drinking water management, and spatial planning.

The agglomeration council was established as a key institutional mechanism for overseeing, coordinating, monitoring, and evaluating programs within the Jabodetabekjur agglomeration area. The council plays a critical role in developing a master plan that serves as a reference for government ministries, local authorities, and other stakeholders involved in regional development. By aligning development projects with regional goals and supporting them with appropriate budgeting and government programs, this strategic planning promotes a cohesive and sustainable approach to urban growth and green space management.

Law No. 2/2024 mandates compulsory cooperation among local governments within the agglomeration area. One of the key cooperative mechanisms is the joint green space recognition scheme, which facilitates collaborative efforts to meet urban service needs and achieve national strategic objectives. Under this scheme, the Ministry of Home Affairs and the Ministry of ATR/BPN, supported by the Agglomeration Council, coordinate to manage and develop green spaces collectively. This includes managing and integrating various types of green and blue spaces, such as urban forests, water bodies, and green belts.

The joint claimed RTH scheme, as estimated by the Ministry of ATR/BPN, identifies several potential green and blue spaces for joint management, such as the Depok situ (169.68 ha), the Bantargebang waste management area in Bekasi, and urban forests in Tangerang and Bogor. This scheme enables the effective use of green spaces across administrative boundaries, promoting a metropolitan green belt that enhances ecological connectivity and sustainability. By leveraging joint management, the agglomeration area can better address urban environmental challenges and improve residents' quality of life.

The formation of a metropolitan green belt in the Jabodetabekjur agglomeration area is crucial for creating a sustainable ecological unity. The agglomeration council's role, along with mandatory cooperation and joint green space recognition schemes, is critical in achieving this goal. By integrating efforts across local governments and utilizing joint management schemes, the region can establish a continuous green belt that supports both ecological resilience and urban livability, ensuring a balanced and sustainable urban environment for the future.

4 Conclusion

The regulation and management of urban green spaces in Greater Jakarta are undergoing significant changes due to recent legislative developments. Despite a mandated 30% green open space allocation, Jakarta's current provision falls short at just 7.56%, as do other cities and regions in the agglomeration area. The Ministry of Agrarian Affairs and Spatial Planning (ATR/BPN) Regulation No. 14/2022 provides a critical framework for addressing this shortfall by promoting collaborative joint claims with neighboring regions. These regulations facilitate the cooperative management and preservation of green spaces, which are essential for sustaining ecological balance and

improving urban livability. However, achieving the ambitious green space targets will require more than just regulatory measures; it necessitates a concerted effort from all stakeholders involved.

Urbanization and economic growth challenges have significantly impacted the availability of green spaces in Greater Jakarta. Economic activities driving rapid urban expansion have significantly reduced green areas, with Jakarta alone witnessing a 79.35% decline from 1965 to 2022. The surrounding municipalities mirror this trend, highlighting a widespread issue that requires effective policy responses. Limited land availability and competing development needs have hindered efforts to manage and expand green spaces. Therefore, successful implementation of green space policies relies on innovative approaches and strong collaboration among local governments and stakeholders.

In the post-capital metropolis era, the newly established agglomeration council and the joint green space recognition scheme offer promising solutions for addressing the region's green space challenges based on Law 2/2004. The agglomeration council's role in overseeing and coordinating regional development is crucial for creating a cohesive green belt that spans Jakarta and its surrounding areas. By leveraging joint management schemes and integrating various types of green and blue spaces, the region can enhance ecological connectivity and sustainability. The formation of a metropolitan green belt, supported by collaborative efforts and regulatory frameworks, is essential for fostering a resilient and sustainable urban environment in Greater Jakarta.

Future research should focus on evaluating the effectiveness of joint green space management schemes in practice and assessing their impact on urban sustainability and ecological resilience. Additionally, investigating stakeholder engagement strategies and their role in successful implementation could provide valuable insights into overcoming challenges related to green space preservation. Examining case studies from other metropolitan areas that have successfully integrated similar approaches may offer practical lessons and recommendations for improving green space management in Greater Jakarta.

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