

Legal Responsibility of Local Government in Managing Urban Green Open Spaces: A Study of the West Flood Canal Riverbank in Semarang

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Abstract

This study aims to analyze the condition and function of green open spaces (RTH) along the West Flood Canal riverbank in Semarang City and to examine the legal responsibility of the local government in its management. Addressing a gap in prior studies that predominantly focus on technical and environmental aspects, this research adopts an empirical juridical method with a socio-legal approach, combining statutory analysis with field data from observations and interviews to evaluate the relationship between normative obligations (das sollen) and implementation realities (das sein). The findings indicate that although Semarang City has formally fulfilled the statutory requirement of 30% green open space, the proportion of accessible public RTH remains significantly below legal standards, revealing a substantive gap between regulatory compliance and functional effectiveness. From the perspective of Hans Kelsen's theory of legal responsibility, this condition reflects incomplete fulfillment of legal obligations, despite ongoing governmental actions in planning, supervision, and enforcement. The novelty of this study lies in integrating ecological riverbank functions with a doctrinal analysis of municipal accountability, thereby advancing a norm-based framework for evaluating environmental governance. Strengthening green open space management is therefore essential not only for flood mitigation and environmental sustainability but also for ensuring legal accountability and improving urban public welfare.

Keywords: Green Open Spaces; Legal Responsibility; Local Government; River Boundaries

1. INTRODUCTION

The implementation of regional autonomy in Indonesia since the early 2000s has fundamentally reshaped governance structures, particularly in environmental management. Through decentralization, authority is not merely transferred from the central government to regional governments, but is accompanied by inherent legal responsibilities to supervise, regulate, and sustainably manage regional resources. Local governments are constitutionally mandated to ensure that public services including environmental protection, are implemented in accordance with statutory objectives. This framework establishes environmental governance, spatial planning, and the provision of green open spaces (Ruang Terbuka Hijau/RTH) as mandatory governmental affairs that must reflect accountability, legality, and sustainability.¹

Urban environmental conditions in Indonesia increasingly demonstrate a mismatch between development intensity and ecological carrying capacity. Flooding, declining air and water quality, uncontrolled land conversion, and shrinking green open spaces represent recurring structural problems exacerbated by rapid urbanization and limited institutional capacity. These challenges are particularly visible in Semarang City, whose complex morphology, comprising coastal zones, lowlands, and hilly areas renders it highly vulnerable to hydrometeorological disasters. Flood events, tidal inundation, and surface runoff pressures are closely linked to

¹ Ni'matul Huda, *Hukum Pemerintahan Daerah* (Bandung: Nusa Media, 2018).

spatial utilization patterns that insufficiently prioritize ecological balance. This empirical context highlights the urgency of examining how legal obligations relating to environmental protection are implemented at the municipal level.

Normatively, Indonesian spatial planning law requires every city to allocate at least thirty percent of its territory as green open space, with a substantial portion dedicated to public access. Green open spaces serve ecological, hydrological, and social functions by improving environmental quality, enhancing water absorption, and mitigating disaster risks. Although Semarang City has quantitatively met this requirement, qualitative disparities persist—particularly the limited availability of accessible public green open spaces. This situation reveals a gap between regulatory mandates and practical implementation, suggesting that compliance measured solely in numerical terms does not necessarily translate into effective environmental protection.²

Riverbank areas represent critical ecological zones within the urban spatial structure. Legally classified as protected areas, river borders function as natural buffers supporting flood control and environmental resilience. The West Flood Canal riverbank in Semarang illustrates the tension between normative spatial regulation and empirical utilization. Encroachment, inconsistent land use, and informal activities reduce ecological effectiveness and increase flood vulnerability. Consequently, riverbank management becomes not only a technical planning issue but also a question of legal responsibility, requiring local governments to enforce spatial norms while balancing social realities.

The implementation of regional autonomy policies in Indonesia since the early 2000s has brought fundamental changes in the relationship between the central government and regional governments, particularly in the administration of government affairs that directly affect public interests and the management of natural resources.³ Through Law No. 22 of 1999, which was later amended by Law No. 32 of 2004, local governments gained broader authority to regulate and manage government affairs in accordance with the characteristics and needs of their respective regions.⁴ This authority not only reflects the process of administrative decentralization, but also has legal consequences in the form of legal responsibility inherent in every policy and action of the regional government. Regional governments are required to be able to carry out development that is oriented towards the interests of the community while maintaining environmental sustainability as part of essential public services.

The position and authority of local governments are constitutionally regulated in Article 18 of the 1945 Constitution of the Republic of Indonesia, which provides space for regions to regulate and manage their own governmental affairs based on the principle of broad autonomy.⁵ This strengthening of authority is clarified through various laws and regulations, including Law

² Takdir Rahmadi, *Hukum Lingkungan di Indonesia* (Jakarta: Raja Grafindo Persada, 2019).

³ Lobubun, Muslim, Yohanis Anthon Raharusun, and Iryana Anwar. "Inkonsistensi Peraturan Perundang-Undangan Dalam Penyelenggaraan Pemerintahan Daerah Di Indonesia." *Jurnal Pembangunan Hukum Indonesia* 4.2 (2022): 294-322. <https://doi.org/10.14710/jphi.v4i2.294-322>.

⁴ Timotius, Richard. "Revitalisasi Desa Dalam Konstelasi Desentralisasi Menurut Undang-Undang Nomor 6 Tahun 2014 Tentang Desa." *Jurnal Hukum & Pembangunan* 48.2 (2018): 323-344. <https://doi.org/10.21143/jhp.vol48.no2.1666>.

⁵ Hadi, Fikri, Farina Gandryani, and Fatma Afifah. "Konsep Pemerintahan Daerah Berdasarkan Undang-Undang Nomor 23 Tahun 2014." *Jurnal Ilmu Hukum Wijaya Putra* 3.2 (2025): 83-98. <https://doi.org/10.38156/jihwp.v3i2.324>.

No. 23 of 2014 on Regional Government, which places environmental management, spatial planning, and the provision of green open spaces as part of mandatory government affairs. This affirmation shows that the responsibilities of local governments are not merely administrative in nature, but also include normative and substantive dimensions in ensuring a decent quality of life for the community. The success or failure of environmental management at the local level is an important indicator in assessing the effectiveness of regional autonomy implementation.

Scholarly discussions on green open space governance provide important context but reveal analytical limitations. Comparative regulatory studies have examined green space frameworks and conservation strategies, highlighting integration challenges within urban planning systems. Governance-oriented research emphasizes collaborative management models and stakeholder participation to strengthen sustainability outcomes.⁶ Other analyses identify institutional barriers such as weak coordination and limited resources that hinder environmental quality improvement. While these contributions broaden understanding of regulatory and governance dimensions, they remain largely descriptive and do not systematically analyze how local governments bear legal responsibility when statutory obligations are inadequately implemented, particularly within specific protected spatial contexts such as riverbanks.⁷

The research gap, therefore lies in the absence of an integrated legal analysis that connects municipal accountability with the ecological management of riverbank green spaces. Existing studies do not explicitly examine the discrepancy between quantitative fulfillment of green space requirements and the qualitative shortage of public access, nor do they address the inconsistency between spatial planning norms and actual riverbank utilization through a theory-driven legal framework. This gap underscores the need for a normative-analytical approach capable of evaluating governmental action and omission in environmental governance.

Recent research highlights the importance of regulatory frameworks in managing urban green open spaces. Jundiani et al. analyze the *urban green space regulation* and water resource conservation issues in Indonesia and Australia, showing that Indonesia faces weaknesses in integrating green space policies into broader urban planning, compared to Australia's climate adaptation strategies. This study's strength lies in its comparative legal analysis, but it does not deeply explore how local governments in Indonesia are legally held responsible for implementing those regulations, particularly through legal accountability mechanisms at the municipal level.⁸

Another study by Asyifa and colleagues examines *collaborative governance* in green open space management in Makassar City, indicating that multi-stakeholder partnerships involving government, private sector, and community can strengthen sustainable management practices. While this empirical work provides insight into governance dynamics and stakeholder roles, it

⁶ Kustiwan, Iwan, and Almira Ladimananda. "Pemodelan Dinamika Perkembangan Perkotaan dan Daya Dukung Lahan di Kawasan Cekungan Bandung." *Tataloka* 14.2 (2016): 98-112. <https://doi.org/10.14710/tataloka.14.2.98-112>.

⁷ Prasetyo, Lusya Dheanatalie Tifanni. "Analisis Livabilitas Perkotaan dan Perdesaan di Kabupaten Semarang." *Media Informasi Penelitian Kabupaten Semarang* 7.1 (2025): 57-71. <https://doi.org/10.55606/sinov.v7i1.847>.

⁸ Jundiani, Jundiani, et al. "Urban green space regulation: Challenges to water resources conservation in Indonesia and Australia." *Journal of Human Rights, Culture and Legal System* 4.1 (2024): 169-193. <https://doi.org/10.53955/jhcls.v4i1.128>.

lacks a specific focus on how such governance arrangements intersect with normative legal responsibilities under Indonesian environmental and spatial planning laws.⁹

Research by Yusuf discusses governance barriers and opportunities for enhancing environmental quality through green open spaces across Indonesian cities, identifying limited resources, weak coordination, and insufficient stakeholder awareness as key challenges. Although providing a broad overview of governance constraints, this study is predominantly descriptive and does not engage with legal accountability frameworks that determine how local governments can be held responsible for environmental protection outcomes.¹⁰

Positioned within this gap, the present study applies Hans Kelsen's theory of legal responsibility as an analytical framework to assess how statutory obligations translate into institutional practice in the management of green open spaces along the West Flood Canal riverbank. By linking ecological function, spatial regulation, and municipal accountability, this research advances beyond descriptive governance analysis and situates environmental management within a structured legal responsibility paradigm. Such an approach clarifies the causal relationship between normative duties, governmental conduct, and potential legal consequences.

Accordingly, this study aims to analyze the condition and function of green open spaces along the West Flood Canal riverbank in Semarang City and to examine the legal responsibility of the municipal government in managing and developing these areas as part of sustainable environmental protection and flood mitigation efforts. Through this integrated perspective, the research seeks to contribute to strengthening legal accountability mechanisms and improving environmentally sound urban governance.

2. METHOD

This research adopts an empirical juridical approach positioned within a socio-legal framework. The study does not examine law solely as a body of normative rules, but also as a social institution whose implementation can be observed in governmental practice.¹¹ Conceptually, the empirical juridical approach allows analysis of how legal norms governing green open spaces (RTH) are translated into policy actions, supervision, and enforcement by the Semarang City Government, particularly in the management of the West Flood Canal riverbank area. The socio-legal orientation ensures that normative legal analysis is integrated with field realities, enabling assessment of the relationship between legal obligations (*das sollen*) and their implementation (*das sein*).¹²

The research location focuses on the riverbank area of the West Flood Canal in Semarang City, selected because it represents a protected spatial zone where discrepancies frequently arise between statutory provisions on green open spaces and actual land utilization. This setting is

⁹ Nur Asyifa T, Andi Aslinda, and Herman H. "Collaborative Governance in Green Open Space Management in Makassar City". *International Journal Of Public Policy and Bureaucracy*, vol. 2, no. 1. 2025. 67-87.

¹⁰ Yusuf, Muhamad, Denok Kurniasih, and Anggara Setya Saputra. "Governing green open space in indonesia: barriers and opportunities to enhancing environmental quality." *Otoritas: Jurnal Ilmu Pemerintahan* 13.3 (2023): 424-439. <https://doi.org/10.26618/ojip.v13i3.11685>.

¹¹ Soerjono Soekanto, *Pengantar Penelitian Hukum* (Jakarta: UI Press, 2014).

¹² Bambang Sunggono, *Metodologi Penelitian Hukum* (Jakarta: Raja Grafindo Persada, 2016).

relevant for evaluating local government legal responsibility in environmental governance and flood mitigation.¹³ The study employs two categories of data. Primary data were obtained through field observation and semi-structured interviews with purposively selected informants, including officials from local agencies responsible for spatial planning and environmental management, as well as community representatives residing near the riverbank. Informant selection followed purposive sampling criteria based on institutional authority, knowledge of policy implementation, and direct involvement in riverbank utilization. Secondary data consist of statutory regulations, municipal spatial planning documents, policy reports, and scholarly literature relevant to green open space governance and legal responsibility.¹⁴

Data collection was conducted through three integrated techniques: document study, field observation, and guided interviews. Interview instruments were designed to explore normative compliance, implementation challenges, supervisory mechanisms, and community perceptions regarding green open space management. Field observations were used to document spatial conditions and patterns of utilization along the riverbank. These techniques were intended to capture both legal structures and empirical practices affecting environmental governance.¹⁵

Qualitative data analysis was carried out through several systematic stages. First, data reduction was performed by selecting information relevant to legal responsibility, spatial compliance, and ecological management. Second, categorization organized findings into thematic groups such as normative obligations, implementation practices, enforcement dynamics, and community interaction. Third, interpretative analysis connected empirical findings with applicable legal norms using a *das sollen–das sein* framework to evaluate conformity, gaps, and institutional accountability. This staged analysis enabled the identification of patterns that reflect the effectiveness of local government responsibility in managing green open spaces.

To ensure data validity, triangulation techniques were applied. Source triangulation compared information obtained from government officials, community members, and documentary materials. Method triangulation cross-checked findings derived from interviews, observations, and legal documents. These validation procedures strengthened analytical reliability and minimized interpretive bias, ensuring that conclusions reflect both normative legal evaluation and empirical realities. Through this socio-legal empirical juridical method, the research systematically links statutory obligations, institutional conduct, and field conditions to assess the extent to which the Semarang City Government fulfills its legal responsibility in developing and managing green open spaces along the West Flood Canal riverbank.

3. RESULTS AND DISCUSSION

3.1 Green Open Spaces in the Western Flood Canal River Border Area of Semarang City

Semarang City's hydrometeorological vulnerability is inseparable from its geographical morphology, which combines coastal plains, lowland basins, and upstream hilly areas. This configuration places the city within a downstream hydrological system highly sensitive to rainfall intensity and land-use change. In spatial governance terms, such vulnerability demands

¹³ Asikin, Amiruddin, dan Zainal, *Pengantar Metode Penelitian Hukum* (Jakarta: Raja Grafindo Persada, 2018).

¹⁴ Peter Mahmud Marzuki, *Penelitian Hukum* (Jakarta: Kencana Prenada Media Group, 2017).

¹⁵ Sudikno Mertokusumo, *Penemuan Hukum* (Yogyakarta: Liberty, 2014).

the integration of ecological buffers into urban planning, particularly through the preservation of green open spaces (RTH). The West Flood Canal riverbank functions as a transitional zone between hydrological infrastructure and built urban space, making its management legally and ecologically strategic rather than merely technical.¹⁶

The normative framework governing green open spaces establishes a clear legal obligation for municipalities to allocate at least 30% of urban territory to RTH, including a minimum portion for public access. Empirical data in Semarang indicate that although total RTH coverage exceeds the statutory threshold, the proportion of publicly accessible green open space remains approximately 3.97 percent, far below the normative requirement. From a legal perspective, this disparity cannot be viewed merely as a technical imbalance but reflects a substantive gap between regulatory intent and implementation. The statutory mandate aims not only at quantitative compliance but also at ensuring ecological function and social accessibility. Therefore, the limited public RTH proportion signals partial fulfillment of legal obligations and raises questions about administrative effectiveness and accountability.¹⁷

The designation of riverbanks as protected spatial zones reinforces their function as ecological safeguards within the urban system. Spatial planning regulations classify these areas as restricted-use zones intended to preserve hydrological stability, prevent erosion, and mitigate flooding. The West Flood Canal normalization program implemented between 2010 and 2014 illustrates a policy shift toward integrating structural flood control with ecological restoration. Greening initiatives and the development of public spaces along the canal reflect an attempt to operationalize spatial norms into environmental governance practice. Legally, such initiatives represent affirmative administrative action aligned with statutory duties; however, their sustainability depends on consistent enforcement and maintenance.

Field findings reveal that despite formal planning, segments of the riverbank continue to experience non-compliant utilization, including semi-permanent structures and informal economic activities. Interviews with municipal officials indicate that enforcement is constrained by budgetary limitations and complex land status, while community members perceive the revitalized green areas as socially beneficial. These empirical observations must be interpreted within a legal accountability framework. The persistence of spatial violations suggests institutional challenges in translating normative mandates into effective control mechanisms. From a socio-legal standpoint, enforcement difficulties do not negate legal responsibility; rather, they highlight the need for adaptive governance strategies that balance regulatory certainty with social considerations.

The discrepancy between normative spatial designation and empirical utilization can be analytically mapped through the relationship between legal norms, implementation practices, and environmental impact. Normatively, riverbank protection requires the prohibition of incompatible land use. Implementation gaps permit encroachment that reduces ecological function, thereby increasing flood risk and environmental degradation. This causal chain demonstrates how incomplete legal enforcement produces tangible environmental

¹⁶ Giyarsih, Sri Rum, and Muh Aris Marfai. "Regional transformation in Semarang city, Indonesia." *Journal of Urban and Regional Analysis* 9.2 (2017): 129-139. <https://doi.org/10.37043/JURA.2017.9.2.2>.

¹⁷ Suripin, *Sistem Drainase Perkotaan yang Berkelanjutan* (Yogyakarta: Andi Offset, 2014).

consequences, reinforcing the principle that spatial regulation is inseparable from public safety obligations.

Qualitative evidence from interviews supports this interpretation. Officials emphasize vegetation’s role in stabilizing embankments and enhancing water absorption, aligning with ecological principles embedded in spatial law. Community perspectives confirm that accessible green spaces contribute to environmental quality and social well-being. When interpreted normatively, these findings demonstrate that green open space management is not only an environmental initiative but also a fulfillment of constitutional duties to protect citizens’ rights to a healthy environment. Administrative inaction or insufficient supervision may therefore constitute a failure to realize statutory objectives.

The relationship between quantitative compliance and qualitative accessibility further illustrates the legal dimension of environmental governance. Achieving aggregate RTH percentages without ensuring public usability undermines the regulatory purpose of spatial planning law. The West Flood Canal riverbank becomes a test case for evaluating whether municipal action reflects substantive compliance with legal norms or merely formal adherence. Effective green space governance requires that spatial policies translate into measurable ecological benefits and community access, consistent with the principles of legality, proportionality, and sustainability.¹⁸ To clarify this relationship, the study maps normative provisions against implementation realities and their legal–ecological implications:

Table 1. Normative–Implementation–Impact Mapping of Green Open Space Governance in the West Flood Canal River Border Area

Normative Legal Framework	Empirical Implementation	Legal–Ecological Impact Analysis
Riverbanks are designated as protected green open space with restricted land use	Partial revitalization through canal normalization, greening, and public space development	Demonstrates affirmative compliance with spatial law; improves hydrological buffering and environmental quality
Statutory obligation to provide $\geq 30\%$ urban green open space, including public accessibility	Quantitative target met, but public RTH proportion remains around 3.97%	Indicates a substantive gap between legal intent and accessibility; reflects incomplete fulfillment of statutory obligation
Prohibition of non-compliant land utilization in protected zones	Continued presence of semi-permanent structures and informal activities along certain riverbank segments	Weak enforcement reduces ecological function and increases flood vulnerability; it signals administrative accountability concerns
Municipal duty to supervise and enforce spatial regulations	Enforcement constrained by institutional and socio-economic factors	Institutional limits require adaptive governance; legal responsibility remains binding

¹⁸ Faradiba, Nadya, and Yuwono Prianto. Penegakan UU 51 Prp 1960 Atas Penguasaan Tanah Tanpa Hak (Studi Kasus: Bantaran Sungai Sepak Gabus)." *Academia Open* 10.2 (2025): 10-21070. <https://doi.org/10.21070/acopen.10.2025.12964>.

Normative Legal Framework	Empirical Implementation	Legal–Ecological Impact Analysis
Ecological protection mandate within the spatial planning regime	Vegetation rehabilitation and embankment stabilization initiatives	Supports climate adaptation, environmental protection, and fulfillment of constitutional obligations

Source: Normative synthesis and empirical findings of the present research

Table 1 entitled “Normative–Implementation–Impact Mapping of Green Open Space Governance in the West Flood Canal River Border Area” demonstrates the relationship between normative spatial planning obligations, their empirical implementation, and the resulting legal–ecological impacts in the riverbank context. The table shows that although riverbanks are legally designated as protected green open spaces and have undergone partial revitalization through normalization, greening, and public space development—indicating formal compliance with spatial law—the proportion of accessible public green open space remains significantly below statutory standards, reflecting a substantive gap between regulatory intent and implementation. In addition, the continued presence of non-compliant land use, such as semi-permanent structures and informal activities, reveals weaknesses in enforcement and supervision that reduce ecological function and increase flood risk. While institutional constraints, including limited resources and socio-economic factors, affect implementation effectiveness, they do not diminish the binding nature of local government legal responsibility. At the same time, vegetation rehabilitation and embankment stabilization efforts confirm the role of green open space as adaptive ecological infrastructure, thereby affirming that spatial regulation functions not only as a formal legal framework.

Green open spaces in this area also function as adaptive infrastructure responding to increasing climatic variability. Vegetative buffers enhance absorption capacity, stabilize embankments, and reduce runoff velocity. Spatial law, therefore, acts as an anticipatory mechanism requiring municipalities to protect ecological systems before environmental damage occurs. Sustainable governance emerges when statutory mandates, institutional capacity, and community engagement operate coherently.

The area bordering the West Flood Canal River has a strategic position in the spatial structure of Semarang City because it functions as a transitional space between the river's hydrological system and the built-up urban area. Riverbanks are classified as protected areas whose use is restricted for the sake of protecting ecological functions and environmental safety. This provision is in line with Law No. 26 of 2007 on Spatial Planning, which regulates riverbanks as part of green open spaces. This position places the area bordering the West Flood Canal as an important instrument in flood control as well as a buffer for urban environmental balance.

The city of Semarang has geographical characteristics that make it prone to hydrometeorological disasters, especially flooding and waterlogging that occur repeatedly in low-lying areas. The morphological conditions of the region, which consists of coastal areas, lowlands, and hills, require a spatial management system based on disaster risk mitigation. The existence of green open spaces along riverbanks acts as a structural element that supports water absorption capacity and slows surface runoff. Without consistent riverbank management,

pressure on the urban hydrological system will increase and have a direct impact on public safety.¹⁹

The West Flood Canal is the main flood control infrastructure built to divert the flow of the Garang River and other rivers so that they do not overflow into the city center. The function of this canal is not only technical, but also has ecological and social dimensions that are inherent to the surrounding area. The Semarang City Government, through its Spatial Plan (RTRW) document, has designated the canal's boundaries as part of green open space that must be preserved for sustainability. This designation reflects a normative awareness that river management cannot be separated from the regulation of the surrounding space.

The normalization program for the West Flood Canal, implemented between 2010 and 2014, was an important milestone in the restructuring of the river area in Semarang. The normalization, which included dredging sediment, widening the riverbed, and strengthening embankments, proved to increase flow capacity and reduce the potential for flooding during the rainy season. Follow-up improvements, such as greening and the construction of public spaces along the riverbanks, expanded the canal's function as an urban green space. This policy signaled a shift in the river management paradigm from a purely structural approach to one that integrates ecological and social aspects.

Interviews with officials from the Semarang City Public Works and Spatial Planning Agency revealed that the development of green open spaces along the West Flood Canal is seen as part of a long-term flood control strategy. The source stated that vegetation in the border area can reduce embankment erosion and increase soil stability around the river. The local government also acknowledged that budget constraints and the complexity of land status are the main obstacles to optimizing public green open spaces in the area. These findings reveal a gap between normative planning and implementation capacity in the field.

From the perspective of the surrounding community, the interviews revealed a positive perception of the green open space along the West Flood Canal. Residents felt that the area had been tidied up and was now cleaner, more orderly, and safer than before, when it was filled with illegal buildings. The green open space is also used as a place for social interaction, light exercise, and family recreation. This perception reinforces the argument that the development of green open spaces along riverbanks not only has an ecological impact but also improves the quality of life of urban communities.

The reality on the ground shows that there is still utilization of riverbanks that does not comply with spatial planning regulations. Several segments of the West Flood Canal riverbanks are still occupied by semi-permanent buildings and informal economic activities that reduce the ecological function of the area. Local government officials interviewed stated that enforcement often faces social resistance and socio-economic issues from communities whose livelihoods depend on these locations. This situation shows that spatial planning law enforcement requires a more comprehensive and socially sensitive approach.

¹⁹ Rahmawati, Dwi, and Trida Ridho Fariz. "Kajian Kapasitas Masyarakat dalam Menghadapi Dampak Perubahan Iklim Berbasis Pendekatan Penghidupan Berkelanjutan di Wilayah Pesisir Kota Semarang." *Desa-Kota: Jurnal Perencanaan Wilayah, Kota, dan Permukiman* 6.2: 150-161. <https://doi.org/10.20961/desa-kota.v6i2.86007.150-161>.

Legally, the administrative management of green open spaces along riverbanks is part of the authority of local governments, which must be carried out in accordance with the principles of good governance. Failure to maintain the function of riverbanks can be classified as negligence in carrying out legal obligations as stipulated by laws and regulations.²⁰ Policies on the management and supervision of riverbank areas must be viewed as a form of legal accountability of local governments to the community. This perspective emphasizes that green spaces are not merely aesthetic elements, but part of a constitutional obligation to protect the environment.

The existence of green open spaces along the West Flood Canal is also correlated with adaptation efforts to climate change, which is becoming increasingly apparent in urban areas. Increased rainfall intensity and unpredictable weather patterns require ecological spaces that can reduce the impact of these extremes. Strengthening riverbank vegetation serves as a natural buffer that supports the city's drainage system. This approach is in line with the principles of sustainable development, which place environmental protection as an integral part of regional development policy.²¹

The development of green open spaces along the banks of the West Flood Canal reflects the local government's efforts to fulfill its legal obligations in environmental management. Although progress has been made through normalization and spatial planning programs, implementation challenges still require policy strengthening, consistent monitoring, and community participation support. The integration of legal planning, institutional capacity, and social acceptance is key to the successful management of riverbanks as green open spaces. The legal responsibility of local governments in the context of green open spaces does not stop at compliance with norms, but is reflected in the sustainability of the ecological and social functions of river areas.

3.2 Local Government Legal Responsibility in the Development of Green Open Spaces in the Western Flood Canal River Border Area of Semarang City

Local governments have a strategic position in Indonesia's constitutional system as government entities that derive their legitimacy directly from the 1945 Constitution of the Republic of Indonesia. Article 18, paragraph (1) of the 1945 Constitution emphasizes that local governments are not merely administrative units, but rather subjects of government that have autonomous authority to regulate and manage government affairs based on the principle of decentralization. Local governments play a major role in the delivery of public services, development planning, and sustainable environmental management.²²

Local government authority in environmental governance derives from constitutional decentralization that imposes not only administrative discretion but also binding legal responsibility. Within spatial planning law, the obligation to provide and manage green open

²⁰ Firdaus, Muhammad Ananta, Risni Ristiawati, and Salma Saphira. "Formulasi kebijakan pelaksanaan perlindungan kawasan sempadan sungai di kota Banjarmasin." *Jurnal Ius Constituendum* 6.2 (2021): 424-441. <https://doi.org/10.26623/jic.v6i2.3667>.

²¹ Faradila, Nikta, et al. "Eksistensi Badan Perencanaan Pembangunan Daerah Kota Palu Dalam Pembangunan Infrastruktur Di Kota Palu." *Jurnal Ekuitas* 7.3 (2025): 670-681. <https://doi.org/10.36985/c3ncdd56>.

²² Ni'matul Huda, *Hukum Pemerintahan Daerah* (Bandung: Nusa Media, 2018).

spaces (RTH) constitutes a positive legal norm that directs municipal action toward ecological protection and public welfare. Hans Kelsen's theory of legal responsibility offers an analytical framework to evaluate this obligation through four interrelated elements: identification of legal norms, examination of governmental conduct, assessment of potential violations through normative imputability, and determination of administrative accountability.

Identification of positive legal norms. Spatial planning regulations mandate that municipalities allocate at least thirty percent of urban territory to green open space, including a substantial portion accessible to the public. Riverbanks are explicitly classified as protected spatial zones intended to preserve hydrological stability and environmental safety. Within Kelsen's framework, these norms create imputable obligations: municipal authorities are legally bound to organize, supervise, and enforce spatial use consistent with statutory objectives.²³ The normative structure does not merely prescribe quantitative compliance but embeds qualitative expectations relating to accessibility, ecological function, and public benefit. Consequently, legal obligation arises not only from formal percentage targets but from the substantive purpose of environmental protection.

Analysis of governmental action. Empirical findings indicate that Semarang City has achieved aggregate RTH coverage exceeding statutory minimum thresholds, while public RTH availability remains approximately 3.97 percent far below normative expectations. Administrative measures such as riverbank revitalization, demolition of illegal structures, and vegetation rehabilitation demonstrate affirmative governmental conduct aligned with regulatory mandates. From a Kelsenian perspective, these actions represent attempts to fulfill imputable duties by translating legal norms into institutional practice. Yet, the persistence of spatial encroachment and limited public accessibility reveals inconsistencies between normative objectives and operational outcomes.

Assessment of potential normative violation. Kelsen's concept of imputability establishes that legal responsibility arises when conduct or omission can be normatively attributed to a subject obligated by law. The quantitative fulfillment of total RTH does not automatically extinguish responsibility if the qualitative dimension of accessibility remains unmet. The persistent gap between the mandated public RTH proportion and empirical availability may therefore be interpreted as a form of normative deficiency. Such a deficiency does not immediately imply intentional wrongdoing; however, it raises the possibility of maladministration or structural negligence where institutional arrangements fail to secure compliance with the statutory purpose. In legal-administrative terms, prolonged tolerance of spatial violations or inadequate supervision could be categorized as a breach of the duty of care embedded in spatial governance.²⁴

This interpretation aligns with the principles of good governance (Asas-Asas Umum Pemerintahan yang Baik/AUPB), particularly legality, proportionality, and accountability. Legality demands strict adherence to spatial norms; proportionality requires that enforcement

²³ Partsch, Karl Josef. "International law and municipal law." *Encyclopedia of Disputes Installment 10*. Elsevier, 1987. 238-257. <https://doi.org/10.1016/B978-0-444-86241-9.50063-4>.

²⁴ Jansen, Nils. "The idea of legal responsibility." *Oxford Journal of Legal Studies* 34.2 (2014): 221-252. <https://doi.org/10.1093/ojls/gqt031>.

measures balance ecological protection with social considerations; accountability obliges authorities to justify administrative decisions affecting public environmental rights. Where enforcement is inconsistent or delayed, the resulting ecological degradation may be normatively imputed to governmental omission, reinforcing the legal character of environmental responsibility.

Administrative responsibility and sanction dimension. Within Kelsen's framework, legal norms inherently link obligation with the possibility of sanction. Spatial planning law authorizes administrative responses to non-compliant land use, including demolition, restoration orders, and supervisory interventions. The Semarang City Government's enforcement actions along the West Flood Canal, removal of illegal structures, and rehabilitation of vegetation illustrate the application of both repressive and restorative sanctions. These measures operationalize the causal relationship between violation and legal consequence, affirming that spatial regulation functions as a preventive and corrective legal mechanism.²⁵

A critical evaluation must nonetheless question whether quantitative compliance with the thirty percent RTH requirement sufficiently fulfills the substantive intent of environmental protection. The disproportionately low public RTH proportion suggests that formal compliance may mask structural shortcomings in accessibility and distribution. From a Kelsenian standpoint, such an imbalance can be normatively imputed as incomplete fulfillment of obligation, particularly when it undermines the social function of spatial planning law. Continued tolerance of this imbalance risks categorization as administrative negligence, emphasizing that legal responsibility extends beyond statistical indicators to the realization of normative objectives.²⁶

The interaction between ecological necessity and administrative accountability becomes especially visible in riverbank governance. Protected zones along the West Flood Canal function as legal instruments of flood mitigation and climate adaptation. Failure to maintain their integrity not only violates spatial norms but also generates foreseeable environmental harm, reinforcing the causal link between omission and consequence. Under Kelsen's theory, this causal nexus legitimizes administrative intervention and corrective sanction as essential components of legal responsibility.

One of the strategic authorities of local governments is environmental management, including the provision and development of green open spaces (RTH). This authority is part of concurrent government affairs as regulated in Law Number 23 of 2014 concerning Local Government. The management of RTH is not only related to administrative aspects, but also has ecological, social, and legal dimensions that are closely related to the principles of sustainable

²⁵ Bernatt, Maciej. "Administrative sanctions: between efficiency and procedural fairness." *Review of European Administrative Law* 9.1 (2016): 5-32. <https://doi.org/10.7590/187479816X14628633832166>.

²⁶ Pavlakos, George. "Kelsenian imputation and the explanation of legal norms." *Revus. Journal for Constitutional Theory and Philosophy of Law/Revija za ustavno teorijo in filozofijo prava* 37 (2019): 47-56. <https://doi.org/10.4000/revus.4808>.

development. Sustainable development requires a balance between meeting the needs of the current generation and protecting the environmental capacity for future generations.²⁷

The obligation to provide green space in urban areas is regulated in Law Number 26 of 2007 concerning Spatial Planning, which requires local governments to provide at least 30% of the city area as green space, consisting of 20% public green space and 10% private green space. This provision is reinforced by the Minister of Agrarian Affairs and Spatial Planning/National Land Agency Regulation No. 14 of 2022 concerning the Provision and Utilization of Green Space, and is further implemented through local policies, particularly Semarang City Regulation No. 5 of 2021 concerning the Semarang City Spatial Plan and Local Regulation No. 7 of 2010 concerning Green Space Planning.

Based on empirical data, Semarang City has quantitatively met and even exceeded the minimum green space requirement, with a total green space covering more than 30% of the city's area. The high proportion of green space is influenced by the spatial characteristics of Semarang City, which has suburban areas with low to moderate levels of development. However, qualitatively, there is a serious problem related to the low proportion of public green space, which is only around 3.97%, far below the minimum requirement of 20% as mandated by law. This condition shows an imbalance between the ecological availability of green space and the accessibility of green space for the community.

Riverbank areas, particularly the West Flood Canal (BKB) riverbank, have strategic potential as locations for public green space development. Ecologically, riverbanks function as protected areas that play an important role in flood control, increasing water absorption, controlling erosion, and improving the quality of the urban environment.²⁸ Legally, the use of riverbanks as green spaces is permitted and even prioritized based on the provisions of the Semarang City Spatial Plan and the Minister of Public Works and Public Housing Regulation related to riverbanks.

The development of green spaces along the banks of the West Flood Canal is also relevant to the empirical conditions of Semarang City, which in recent years has faced an increased risk of flooding due to high rainfall, degradation of water catchment areas, and sedimentation and narrowing of the river. Revitalization of the riverbanks through the arrangement of green spaces has had a positive impact, both ecologically and socially, by improving environmental quality, providing public spaces, and strengthening flood control functions.

From the perspective of Hans Kelsen's theory of legal responsibility, the responsibility of local governments in developing green spaces along the banks of the West Flood Canal can be analyzed through the elements of norms, actions, causal relationships, and sanctions. Legal norms clearly require local governments to manage and protect green spaces, especially in protected areas such as riverbanks. If the local government is negligent in carrying out these obligations, then this negligence becomes a factual condition that fulfills the elements of a legal violation and can trigger the application of administrative sanctions and corrective measures.²⁹

²⁷ Emil Salim, *Pembangunan Berkelanjutan* (Jakarta: LP3ES, 2010).

²⁸ Suripin, *Sistem Drainase Perkotaan yang Berkelanjutan* (Yogyakarta: Andi Offset, 2014).

²⁹ Sudikno Mertokusumo, *Penemuan Hukum* (Yogyakarta: Liberty, 2014).

The Semarang City Government has taken steps to organize, supervise, and enforce the law against violations of space utilization in the area bordering the West Flood Canal River, including the demolition of illegal buildings and vegetation rehabilitation. These actions demonstrate the application of legal consequences that are both repressive and restorative, as conceptualized in Hans Kelsen's theory. The development of green spaces in the riverbank area not only reflects compliance with normative obligations but also serves as an important instrument in flood risk mitigation, environmental protection, and improving the quality of life for the community.

Local governments occupy a central position in Indonesia's constitutional structure because they derive their legitimacy directly from the 1945 Constitution of the Republic of Indonesia. Article 18 of the 1945 Constitution provides the constitutional basis for regions to regulate and manage their own affairs based on the principles of decentralization and regional autonomy.³⁰ This authority is not only administrative in nature, but also carries legal responsibility for every public policy that affects the interests of the community. Local governments act as subjects of public law bound by constitutional obligations to protect the environment as part of citizens' rights.

Environmental management, including the provision and development of green open spaces, is one of the concurrent affairs of government as stipulated in Law No. 23 of 2014 on Regional Government. This regulation emphasizes that regional governments have the authority and legal responsibility to plan, implement, and oversee environmental policies in their respective regions.³¹ This responsibility cannot be separated from the principle of legality, which requires that every government action be based on applicable laws and regulations. The management of green open spaces must be understood as a legal obligation inherent in the autonomous authority of local governments.

The obligation to provide green open spaces is normatively regulated in Law Number 26 of 2007 concerning Spatial Planning, which requires every city to provide at least 30 percent of its area as green open spaces. This provision reflects legal recognition of the ecological function of green open spaces as part of the public interest that must be guaranteed by the state through local government. Minister of Agrarian Affairs and Spatial Planning/National Land Agency Regulation No. 14 of 2022 provides an operational basis for the implementation of this obligation at the local level. With clear and tiered regulations, local governments have no discretion to ignore their obligation to provide and manage green open spaces.³²

Although Semarang City has quantitatively met the minimum green space requirements, the reality shows that there are serious problems in terms of the quality and distribution of public green spaces. The proportion of public green open space that is still far below the legal

³⁰ Putra, Panji Andika, M. Arafat Hermana, and Sandi Apriyanto. "Implementasi kebijakan otonomi daerah dalam pasal 18 undang-undang dasar 1945 dalam perspektif politik hukum di Indonesia." *Bataradarma Journal (Law Studies)* 1.1 (2020). <https://doi.org/10.37638/bataradarma.v1i1.165>.

³¹ Jannah, Annisa Sephia, et al. "Tanggung Jawab Administratif Pemerintah Daerah dalam Pengawasan Izin Lingkungan." *Constitutio: Journal of State and Political Law Research* 4.1 (2025): 99-115. <https://doi.org/10.47498/constituo.v4i1.5009>.

³² Wardhani, Savira Djumi, Aisyah Sandy, and Oot Hotimah. "Analisis Penyesuaian Perpetaan RDTR Perkotaan Sebulu dengan Permen ATR/BPN No. 11 dan 14 Tahun 2021." *Jurnal Spatial Wahana Komunikasi dan Informasi Geografi* 25.1 (2025): 1-9. <https://doi.org/10.21009/spatial.251.001>.

requirements shows that the fulfillment of legal obligations has not fully addressed the substance of the regulatory objectives. This condition can be analyzed through the theory of legal utility, which demands that legal norms provide tangible benefits to society.³³ Public green spaces that are not accessible to the public are essentially not fully performing their social function as intended in the legislation.

Riverbank areas, particularly along the West Flood Canal, are strategically positioned as objects of local government legal responsibility in green space management. In terms of spatial planning regulations, riverbanks are classified as protected areas whose use is restricted in order to preserve ecological functions and environmental safety. The designation of riverbanks as priority locations for green space development reflects the application of the precautionary principle in environmental management. This principle requires local governments to anticipate potential environmental damage before more widespread impacts occur.

The development of green spaces along the banks of the West Flood Canal is also closely related to the local government's obligation to mitigate flooding. The increasing risk of flooding due to climate change, river sedimentation, and urban development pressure requires local governments to take active and preventive measures. This responsibility is in line with the principle of environmental protection, which places prevention as the main instrument of policy. The arrangement of green spaces along riverbanks serves as complementary structural and non-structural measures in flood control.

From Hans Kelsen's legal theory perspective, local governments' obligations in managing green spaces are a direct consequence of the binding nature of legal norms. Legal norms create a relationship between commands, obligations, and sanctions, so that any failure to fulfill obligations can be classified as a violation of the law. If local governments do not carry out their obligations to manage green spaces in accordance with the provisions, there is a causal relationship between these actions or omissions and potential environmental and social losses. Legal responsibility is not merely moral in nature, but has real legal consequences.³⁴

The implementation of the arrangement and control of the West Flood Canal border area by the Semarang City Government demonstrates concrete efforts to fulfill these legal obligations. The demolition of illegal buildings, vegetation rehabilitation, and public space planning are forms of administrative sanctions as well as environmental restoration measures. These steps reflect a legal approach that is not only repressive but also restorative. This approach is in line with developments in modern environmental law, which emphasizes the restoration of environmental functions as the main objective of law enforcement.

Despite various efforts to improve governance, challenges in implementing local government legal responsibilities remain complex. The socioeconomic factors of communities living in riverine areas often pose obstacles to consistent enforcement of spatial planning laws.³⁵ This

³³ Utami, Tanti Kirana, et al. "Pengaruh Teori Perundang-Undangan Terhadap Dinamika Norma Hukum Dalam Sistem Hukum Indonesia." *Jurnal Hukum Ius Publicum* 5.2 (2024): 264-293. <https://doi.org/10.55551/jip.v5i2.199>.

³⁴ Muhtadi, Muhtadi. "Penerapan Teori Hans Kelsen Dalam Tertib Hukum Indonesia." *Fiat Justisia: Jurnal Ilmu Hukum* 5.3 (2011). <https://doi.org/10.25041/fiatjustisia.v5no3.75>.

³⁵ Noviani, Erina, et al. "Analisis Hukum Kebijakan Pengelolaan Sempadan Sungai Perkotaan Terhadap Pertumbuhan Penduduk." *Justicia Sains: Jurnal Ilmu Hukum* 10.2 (2025): 380-394. <https://doi.org/10.24967/jes.v10i2.4037>.

situation requires a balance between legal certainty and social justice in the implementation of environmental policies. Local governments are required to formulate policies that are not only legally compliant but also responsive to the social realities of the community.

The legal responsibility of local governments in developing green spaces in the area bordering the West Flood Canal is a manifestation of interrelated constitutional, administrative, and ecological obligations. The implementation of this responsibility cannot be measured solely by the fulfillment of the green space percentage, but by the extent to which its ecological and social functions are carried out sustainably. The integration of the principle of legality, environmental protection studies, and Hans Kelsen's legal theory is an important basis for assessing the performance of local governments. This discussion emphasizes that the development of green space along riverbanks is a strategic instrument in realizing equitable and sustainable urban environmental management.

4. CONCLUSION

This study confirms that the management of green open spaces (RTH) along the West Flood Canal riverbank in Semarang is not merely a spatial planning issue but constitutes a legally binding obligation of the local government within the framework of environmental governance and regional autonomy. Although Semarang City has formally fulfilled the quantitative requirement of 30% green open space, the significantly low proportion of accessible public RTH demonstrates a substantive gap between normative mandates and empirical implementation. Through Hans Kelsen's theory of legal responsibility, this condition reflects an incomplete realization of legal obligations, where governmental actions in planning, supervision, and enforcement remain evident but have not yet fully achieved their intended ecological and social functions. The study contributes theoretically by integrating ecological riverbank management with a doctrinal analysis of legal accountability, thereby shifting the discourse from descriptive spatial evaluation toward a norm-based assessment of governmental responsibility. Practically, the findings highlight the need for strengthening enforcement mechanisms, improving the distribution and accessibility of public green spaces, and adopting adaptive governance approaches that balance legal certainty with socio-economic realities. Ultimately, effective management of riverbank green open spaces is essential not only for flood mitigation and environmental sustainability but also as a concrete manifestation of the state's obligation to guarantee citizens' rights to a healthy environment and equitable urban public welfare.

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