

Implementation of Medan Mayor Regulation Number 27 of 2018 Concerning Drainage Management in Medan Tembung District from the Perspective of Siyasah Dusturiyah

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Abstract: This study evaluates the implementation of Medan Mayor Regulation Number 27 of 2018 concerning drainage management in Medan Tembung District from the perspective of siyasah industrial and *maqāṣid al-syarī'ah*. A normative-empirical approach was used: primary data were obtained through interviews with officials and field observations conducted in 2025; secondary data were in the form of Perwal 27/2018, technical documents, and fiqh siyasah literature. Qualitative analysis compared norms and practices and assessed the extent to which the implementation of the Perwal met the objectives of *maqāṣid*, particularly *ḥifẓ al-nafs* (protection of life/health) and *ḥifẓ al-māl* (protection of property). The results showed that the implementation of the Perwal has not been optimal: maintenance is more reactive than scheduled, sediment cleaning and dredging are inconsistent, there are limitations in human resources and technical equipment, and handling is not evenly distributed throughout Medan Tembung District. This condition reflects the gap between normative provisions and field reality; from a *maqāṣid* perspective, the fulfilment of *ḥifẓ al-nafs* and *ḥifẓ al-māl* has not been adequately achieved. The contribution of this research is to present a study of industrial siyasah that links the norms of the Mayor's Regulation with field evidence as well as normative-fiqhiyah policy recommendations to strengthen drainage maintenance based on public welfare.

Kata kunci: Drainage; Policy Implementation; Medan Mayor Regulation Number 27 of 2018; Medan Tembung District; Industrial Administration.

Introduction

Urban flooding and inundation are critical issues in urban infrastructure management in many developing countries. Rapid development growth, changes in land use, and increasing rainfall intensity often result in urban drainage systems being unable to optimally

accommodate rainwater runoff.¹ This situation not only causes infrastructure damage but also disrupts social and economic activities and increases environmental health risks. In the modern urban context, drainage systems are a crucial part of public services aimed at maintaining the sustainability of urban activities and protecting the public from the risks of inundation and flooding.²

In Indonesia, urban flooding is an increasingly frequent problem and has significant impacts on social, economic, and public health activities. Various studies have shown that the increase in impermeable surface area due to urbanisation and the limited capacity of urban drainage systems are the main factors triggering the increasing frequency of inundation and flooding in urban areas.³ Furthermore, changes in rainfall patterns, resulting in increasingly intense rainfall due to climate change, have increased pressure on existing drainage systems, making drainage networks previously designed for specific conditions unable to optimally accommodate rainwater discharge. This condition makes waterlogging more likely in areas with high residential density and poorly maintained drainage systems.

Medan, one of Indonesia's major cities, also faces similar problems. One area that periodically experiences flooding is the Medan Tembung District. Based on field observations and interviews with local government officials, several residential areas and roads in this district experienced flooding during periods of increased rainfall intensity in 2025. This condition is related to drainage sedimentation, garbage blockages, and limited and irregular drainage maintenance. This situation shows that the problem of flooding is not solely caused by technical hydrological factors but is also related to the governance and effectiveness of the implementation of

¹ Agus Dwiyanto, *Reformasi birokrasi publik di Indonesia*. (Gadjah Mada University Press, 2011).

² Alesi Teixeira Mendes dkk., "Strategic Typologies for Urban Drainage and Stormwater Management Services: A Tailored Approach to Address Cities Specificities," *City and Environment Interactions* 28 (Desember 2025): 100254, <https://doi.org/10.1016/j.cacint.2025.100254>.

³ Joko Handoyo dkk., "Analisis Spasial Tingkat Kerawanan Banjir di Kecamatan Cepu Kabupaten Blora dengan Pendekatan Metode Skoring Berbasis Sistem Informasi Geografis," *Sainteks* 22, no. 1 (2025): 63-77, <https://doi.org/10.30595/sainteks.v22i1.25180>; Ade Kosasih dkk., "Strengthening the Indonesian Bicameral Parliament: Siyasa Dusturiyah Perspective," *Al-Istinbath: Jurnal Hukum Islam* 9, no. 1 (2024): 335, <https://doi.org/10.29240/jhi.v9i1.10047>.

drainage management policies at the regional level.⁴

Normatively, the Medan City Government has enacted Medan Mayoral Regulation Number 27 of 2018 concerning the establishment of the Road and Drainage Maintenance Operational Technical Implementation Unit within the Medan City Public Works Department.⁵ This regulation governs the planning, construction, maintenance, and supervision of drainage networks as part of regional public services. However, in practice, public policy implementation often results in a gap between normative provisions and on-the-ground implementation, known as the implementation gap.⁶ This gap can arise from limited resources, weak institutional coordination, or suboptimal policy oversight mechanisms.

In addition to policy governance factors, urban drainage issues are also closely related to the dynamics of changes in the urban environment. Rapid urbanisation has led to an increase in impermeable surface area, allowing rainwater to convert more quickly into surface runoff. This condition increases the risk of inundation and flooding in urban areas, especially when the drainage network capacity cannot accommodate the increased water discharge. Furthermore, climate change has increased the frequency and intensity of extreme rainfall events, placing additional pressure on existing urban drainage systems.⁷

From a public policy perspective, this situation demonstrates that drainage management is not merely a technical infrastructure issue but also relates to the state's responsibility to provide effective and sustainable public services.⁸ Therefore, evaluation of the implementation of drainage

⁴ Maharani Fajrin Hasanah, "Valuasi pelaksanaan pemeliharaan drainase oleh Dinas Sumber Daya Air/Bina Marga/Bina Konstruksi Kota Medan sebagai upaya penanggulangan banjir" (Skripsi, Fakultas Teknik, Universitas Sumatera Utara, Medan, Indonesia, 2024); Mian Irta Ida Saragih, "Analisis sistem drainase pada Perumahan Puri Setia Budi Indah 2 di Kota Medan" (Skripsi, Universitas Sumatera Utara, Medan, 2020).

⁵ Peraturan Wali Kota Medan Nomor 27 Tahun 2018 tentang Pembentukan Unit Pelaksana Teknis Operasional Pemeliharaan Jalan dan Drainase pada Dinas Pekerjaan Umum Kota Medan, 27 Tahun 2018 (2018).

⁶ Riant Nugroho, *Public policy: Dinamika kebijakan, analisis kebijakan, dan manajemen kebijakan* (Elex Media Komputindo, 2017).

⁷ Candace Agonafir dkk., "A Review of Recent Advances in Urban Flood Research," *Water Security* 19 (Agustus 2023): 100141, <https://doi.org/10.1016/j.wasec.2023.100141>; Takele Sambeto Bibi dkk., "Assessment of the Drainage Systems Performance in Response to Future Scenarios and Flood Mitigation Measures Using Stormwater Management Model," *City and Environment Interactions* 19 (Agustus 2023): 100111, <https://doi.org/10.1016/j.cacint.2023.100111>.

⁸ Elva Imeldatur Rohmah dan Isniyatin Faizah, "Urgensi Pembatasan Masa Jabatan

management policies needs to be conducted not only from an administrative perspective but also from a normative perspective, assessing the extent to which these policies are orientated towards protecting public interests.

In Islamic legal tradition, the management of public facilities is part of the government's responsibility to realise the public welfare. The concept of *maqāṣid al-sharī'ah* places the protection of life (*ḥifẓ al-nafs*) and property (*ḥifẓ al-māl*) as the primary objectives of sharia, which must be maintained through public policies that favour the interests of the wider community.⁹ *Al-Māwardī* emphasised that the ruler has an obligation to manage public affairs for the benefit of the community through just and effective policies.¹⁰ A similar view was expressed by Ibn Taymiyyah, who emphasised that the regulation of public affairs is the government's responsibility to achieve justice and public welfare.¹¹

Previous research on urban drainage management has generally focused on technical aspects such as channel capacity, hydrological models, and the impact of land-use changes on stormwater runoff. Meanwhile, studies on the implementation of drainage management policies from a governance perspective are relatively limited, particularly those that integrate regional policy analysis with a normative approach within the framework of *siyāsah dustūriyyah* and *maqāṣid al-sharī'ah*.¹² This limitation indicates a research gap that needs to be filled, particularly in examining the relationship between regional public policy implementation and the principle of public interest in Islamic law.

Based on this background, this study aims to analyse the implementation of Medan Mayoral Regulation Number 27 of 2018 on drainage management in Medan Tembung District and assess its

Pemerintah Desa Untuk Mewujudkan Desa Anti Korupsi," *Sosio Yustisia: Jurnal Hukum dan Perubahan Sosial* 4, no. 1 (2024): 69-97, <https://doi.org/10.15642/sosyus.v4i1.577>.

⁹ Wahbah Al-Zuhaili, *Uṣūl al-Fiqh al-Islāmī (Jilid II)* (Damaskus, Suriah: Dār al-Fikr., 1986); Ibn 'Asyur, *Maqāṣid al-Sharī'ah al-Islāmiyyah* (Dār al-Suḥnūn, 2001).

¹⁰ Ali ibn Muḥammad Al-Mawardi, *Al-Aḥkām al-Sultāniyyah wa al-Wilāyāt al-Dīniyyah*. (Dār al-Ḥurriyyah, 1989).

¹¹ Ibn Taymiyyah dan Taqī al-Dīn Aḥmad ibn 'Abd Al-Ḥalīm, *Majmū' al-Fatāwā*, Cet. I, Juz 25 (Majma' al-Malik Fahd li Ṭibā'at al-Muṣṣhaf al-Sharīf, 1425).

¹² Abdullah bin Umar bin Muhammad As-Sahibani, *Aḥkām al-Bi'ah fī Fiqh al-Islāmī* (Buraydah, Saudi Arabia: Jami'ah al-Qasim, 2008); Abdu al-Ali Ahmad Atuwah, *Al-Madkhal ilā as-Siyāsah as-Syarīyyah* (Riyad: Jamiah Imam Muhammad bin Su'ud al-Islamiyyah, 1993).

implementation from the perspective of *siyāsah dustūriyyah* and *maqāṣid al-sharī'ah*. This analysis is expected to provide an understanding of the extent to which drainage management policies are implemented in practice and how these policies can be assessed within the framework of public interest.

The novelty of this research lies in the integration of analysis of regional drainage policy implementation with normative evaluation based on the *siyāsah dustūriyyah* perspective in the local context of Medan Tembung District. This approach not only examines the effectiveness of the policy from an administrative perspective but also assesses its orientation toward the public welfare as the primary goal of governance.

Research Methods

This research uses a normative juridical approach combined with empirical studies (normative-empirical). The normative approach is used to analyse the legal provisions in Medan Mayoral Regulation Number 27 of 2018 concerning Drainage Management, specifically regarding the principles, authority, and responsibilities of local governments in managing drainage systems. Meanwhile, an empirical approach is used to assess the implementation of this policy in drainage management practices in Medan Tembung District, Medan City. Theoretically, this research utilises the *siyāsah dustūriyyah* and *maqāṣid al-syarī'ah* frameworks to assess the orientation of public policy towards protecting the public interest, particularly in safeguarding lives and property as part of the primary objectives of sharia.¹³

The research was conducted in the Medan Tembung District, Medan City, which was chosen as the research location because this area frequently experiences flooding in several residential areas and roads. The selection of the research location was based on the area's frequent problems with clogged drainage channels and high residential density, which increases the risk of urban flooding. This situation indicates a potential gap between established regulatory norms and drainage management practices in the field. Conceptually, urban flooding or inundation often occurs when drainage systems are unable to accommodate rainwater runoff due to changes in land use, increased impermeable surfaces, and limited drainage channel capacity in urban areas.

¹³ Jimly Asshiddiqie, *Pengantar ilmu hukum tata negara* (Rajawali Pers., 2016); Ibn 'Asyur, *Maqāṣid al-Sharī'ah al-Islāmiyyah*.

Field data collection was conducted from September to October 2025. The research subjects consisted of six informants selected using purposive sampling, which involves selecting informants based on specific considerations relevant to the research objectives. The informants included two technical officials from the Medan City Public Works and Spatial Planning (PUPR) Department, one official from the Medan Tembung District, and three community members living in areas frequently affected by inundation. Government officials were selected because they possess the authority and knowledge related to the implementation of drainage management policies, while the community was selected to obtain an empirical overview of the impact of inundation and the condition of drainage management in residential areas.

Data collection techniques included in-depth interviews, field observations, and documentation studies. Interviews were conducted using a semi-structured interview guide to elicit information regarding drainage policy implementation, implementation constraints, and its impact on the community. Observations were conducted by directly observing the physical condition of drainage channels, flooding points, and community activities at the research site. Documentation studies were conducted by reviewing policy documents, local government reports, and various regulations related to drainage management in Medan City. The data obtained were then analysed using descriptive qualitative analysis, through the stages of data reduction, data presentation, and drawing conclusions to identify the alignment between regulatory provisions and policy implementation in the field.

Results and Discussion

Normative Framework for Drainage Management from the *Siyasah Dusturiyah* Perspective

A review of regulations shows that drainage management is part of the government's obligation to ensure public welfare. Within the framework of industrial governance, the state is responsible for regulating public affairs related to the safety and welfare of the community. This principle is reflected in the Islamic concept of leadership, which places the ruler as a trustee responsible for safeguarding the public interest and preventing social harm.¹⁴ *Al Mawardi* explains that managing public facilities such as

¹⁴ Khodijah Srikandi dkk., "Tinjauan *Siyasah Dusturiyah* Tentang Peran Kementerian Agama dalam Mengimplementasikan Program Moderasi Beragama (Studi Kasus di

roads and waterways is part of the government's function to maintain order in community life and prevent dangers that could harm the public.¹⁵ Therefore, drainage management is not only understood as a technical infrastructure issue but also as a normative obligation of the state to protect the public from the risk of flooding and environmental damage.

This normative framework can also be understood through the concept of *maqasid al sharia*, which places the protection of life and property as the primary objective of law. Waterlogging caused by poorly maintained drainage channels has the potential to cause various social impacts, such as damage to homes, disruption of economic activity, and the risk of environmentally based diseases. This situation demonstrates that drainage management is directly related to the protection of community life and property. Ibn Asyur emphasised that public policy must be directed towards achieving collective welfare and preventing social harm that could threaten public welfare.¹⁶ From this perspective, routine drainage maintenance is a form of preventive policy implementation that aligns with the principles of *maqasid al sharia*.

From a positive legal perspective, Medan Mayoral Regulation Number 27 of 2018 provides a normative basis for local governments to regulate urban drainage management. This regulation establishes the authority of technical units to carry out channel maintenance, sediment removal, and drainage construction repairs to maintain optimal water flow. The existence of this regulation demonstrates that, normatively, local governments have sufficient legal instruments to support sustainable drainage management. However, public policy studies indicate that the existence of legal norms does not always guarantee effective implementation if not accompanied by consistent administrative mechanisms and adequate oversight.¹⁷

The findings of this study demonstrate that conceptually, drainage management has strong legitimacy from both positive and Islamic legal perspectives.¹⁸ The principles of public benefit, protection of life, and protection of property provide a normative basis for the government to

Kabupaten Bekasi),” *Ranah Research : Journal of Multidisciplinary Research and Development* 7, no. 4 (2025).

¹⁵ Al-Mawardi, *Al-Aḥkām al-Sultāniyyah wa al-Wilāyāt al-Dīniyyah*.

¹⁶ Ibn 'Asyur, *Maqāṣid al-Sharī'ah al-Islāmiyyah*.

¹⁷ Nugroho, *Public policy: Dinamika kebijakan, analisis kebijakan, dan manajemen kebijakan*.

¹⁸ Abdullah Syahatatah, *Ru'yatuddin al-Islāmī fī al-Hifāz 'alā al-Bi'ah* (Kairo, Mesir: Dar as-Syuruq., 2001).

ensure the sustainability of the urban drainage system. However, this normative legitimacy still requires more concrete translation into public administration practices so that policies do not remain merely regulatory. In this context, *siyasah dusturiyah* demands that every public policy be realised through concrete actions that are able to provide effective protection for society.¹⁹

Empirical Implementation of Drainage Management in Medan Tembung District

Field research findings indicate that the implementation of drainage management policies in Medan Tembung District still faces various structural challenges. Based on observations and interviews with technical officials and the community, drainage maintenance activities tend to be responsive to the occurrence of flooding. Channel cleaning is usually carried out when residents report blockages or when flooding disrupts community activities. This work pattern indicates that maintenance activities have not been fully implemented in a preventative and scheduled manner.

In drainage management practices, differences in maintenance intensity were found between main channels on main roads and secondary channels in residential areas. Main channels are cleaned relatively more frequently because they are located on busy transportation routes, making them a priority for the local government.²⁰ Conversely, several secondary channels in residential areas experience delays in maintenance, resulting in sedimentation and waste accumulation, often causing flooding.²¹ This finding aligns with previous research that suggests irregular maintenance schedules are a significant factor contributing to the suboptimal functioning of urban drainage systems.²²

¹⁹ Rochmad Rochmad dan Nashwan Abdo Khaled, "Qadhâya al-Mar'ah al-Ijtima'iyah al-Haditsah 'Inda Zainab Al-Ghazali Fi Tafsiriha 'Nazharât Fi Kitâbillah,'" *Studia Quranika* 4, no. 2 (2020): 201, <https://doi.org/10.21111/studiquran.v4i2.3808>.

²⁰ Ihda Shofiyatun Nisa' dkk., "The Role of Women in Islamic Politics: From the Early Period to the Contemporary Era through the Lens of Kimberlé Crenshaw's Intersectionality Perspective," *Kawanua International Journal of Multicultural Studies* 5, no. 2 (2024): 271-81, <https://doi.org/10.30984/kijms.v5i2.1252>.

²¹ Firda Nurmalasari dkk., *Dampak Ketidadaan Peran Ayah (Fatherless) terhadap Pencapaian Akademik Remaja: Kajian Sistematis*, bag. 1-14, 1, no. 4 (2024).

²² Saragih, "Analisis sistem drainase pada Perumahan Puri Setia Budi Indah 2 di Kota Medan."

Interviews with technical officials revealed that limited operational resources are a major obstacle to routine maintenance. The availability of heavy equipment for dredging sediment and the limited budget allocation for maintenance are still limited, so drainage maintenance activities are often focused on the most urgent locations. From an urban infrastructure management perspective, this condition can lead to a reliance on emergency measures that are less effective in the long term. Drainage systems that are not regularly maintained tend to experience reduced flow capacity, increasing the risk of flooding during heavy rainfall.

In addition to institutional factors, this study also found that community behaviour also influences the effectiveness of drainage management. At several observation points, the practice of dumping waste into drains, which causes blockages, accelerates sedimentation and reduces the canal's capacity to accommodate rainwater. The study on urban flood management explains that increasing impermeable surfaces and canal blockages are important factors exacerbating flood risk in urban areas.²³ These findings indicate that successful drainage management depends not only on local government capacity but also requires collective community awareness of environmental protection.

Overall, the empirical findings of this study indicate that the implementation of drainage policies in Medan Tembung District still faces various challenges related to limited resources, institutional coordination, and community participation. This situation highlights a gap between established policy norms and management practices on the ground. This gap provides an important basis for further analysis of the relationship between legal norms and the reality of drainage policy implementation.

Gap Analysis of Drainage Policy Implementation

The research results indicate a discrepancy between the normative framework established in Medan Mayoral Regulation Number 27 of 2018 and the drainage management practices observed in the field. In public policy studies, this condition is known as the implementation gap, which is the difference between the designed policy and the reality of its implementation. The implementation gap often occurs when institutional capacity, resources, and coordination mechanisms do not fully support

²³ Agonafir dkk., "A Review of Recent Advances in Urban Flood Research"; Abu Rizal Khairi dan Nuzul Barkah Prihutomo, "Evaluasi Sistem Drainase terhadap Banjir pada Jalan Tol Jakarta- Cikampek Km 08+000 s.d. Km 10+000," *CIVeng* 6 (2025).

consistent policy implementation. In the context of drainage management, this is evident in the reactive maintenance pattern and the lack of an integrated monitoring system.²⁴

From a maqasid al-sharia perspective, this implementation gap has important normative implications. The principle of protecting life and property requires that public policies prevent predictable social harm.²⁵ Waterlogging caused by clogged drainage channels can cause public health problems and damage residents' property. Studies of urban drainage systems indicate that inadequate drainage systems can increase the risk of flooding and cause significant socioeconomic losses for urban communities. Therefore, policies that are not optimally implemented can be considered as not fully fulfilling the objectives of public welfare.²⁶

From a siyasa industrial perspective, the government has an obligation to ensure that public policies provide tangible benefits to the community. Ibn Taymiyyah emphasised that the goal of government is to achieve justice and public welfare through the effective management of public affairs.²⁷ If policies fail to prevent avoidable losses, this indicates weaknesses in governance. Therefore, a comprehensive evaluation of drainage policy implementation is necessary to ensure that policies do not stop at the normative level but provide real protection for the public.

In addition to institutional factors, the dynamics of urban development also influence the effectiveness of drainage systems. Urbanisation and the increase in impermeable surfaces in urban areas can increase the volume of rainwater runoff, thereby placing a greater burden on existing drainage systems. Research on urban drainage systems indicates that increasing urbanisation and changes in rainfall intensity can cause existing drainage systems to become unable to optimally accommodate runoff. This situation demonstrates that drainage management requires long-term planning that takes into account the dynamics of urban development.

²⁴ Risnawati, "Pengelolaan drainase perkotaan dalam perspektif tata kelola pemerintahan daerah.," 2024.

²⁵ Anna Pia Monachese dkk., "Challenges and Innovations in Urban Drainage Systems: Sustainable Drainage Systems Focus," *Water* 17, no. 1 (2024): 76, <https://doi.org/10.3390/w17010076>.

²⁶ M. Khairu Mammun dan Adhitiya Augusta Triputra, "Implications of Appointing Acting Regional Heads (Pj) for Democracy in Indonesia from the Perspective of Masalah Mursalah," *Jurnal Dusturiyah* 15, no. 1 (2025).

²⁷ Ibn Taymiyyah dan Al-Ḥalīm, *Majmū' al-Fatāwā*.

Therefore, the results of this study indicate that gaps in drainage policy implementation relate not only to administrative aspects but also to normative and structural dimensions. Integration of the principles of *maqasid al-Shari'ah*,²⁸ public policy governance, and urban infrastructure planning is crucial to ensure that drainage management truly realises the public good. This approach also emphasises that the success of public policy depends heavily on the government's ability to translate legal norms into effective and sustainable administrative practices.

Conclusion

This research shows that the implementation of drainage management policies as stipulated in Medan Mayoral Regulation Number 27 of 2018 has not been fully effective in addressing flooding in Medan Tembung District. Although this regulation provides a legal basis for urban drainage management, various obstacles remain in implementation, such as limited drainage maintenance, low public participation in maintaining drainage cleanliness, and weak coordination between agencies. These conditions result in some drainage channels not functioning optimally, increasing the risk of flooding, especially during periods of high rainfall.

The research findings also indicate that urban drainage issues are not solely related to technical aspects of infrastructure but are also influenced by policy governance, residential density, and community social behaviour. This aligns with various international studies that suggest urban flooding is often triggered by a combination of rapid urbanisation, land-use changes, and the limited capacity of existing drainage systems. Therefore, the effectiveness of drainage policies requires a more comprehensive approach that integrates regulatory aspects, urban planning, and public participation in urban environmental management.

From the perspective of public interest (*siyāṣah dustūriyyah*) and *maqāṣid al-syarī'ah* (Islamic principles), drainage management policies are orientated toward protecting the public interest (*maṣlaḥah 'āmmah*), particularly the protection of people's lives and property from the risks of flooding and inundation. Therefore, strengthening drainage governance through increased institutional capacity, improved maintenance systems, and increased public awareness are crucial steps toward realising policies

²⁸ Ibrahim Munib dkk., "The Urgency of Expert Witnesses in Settlement of Cases in The Egyptian Judicial Legal System," *The Indonesian Journal of Islamic Law and Civil Law* 5, no. 1 (2024): 1-20, <https://doi.org/10.51675/jaksya.v5i1.749>.

orientated toward the public interest.

This research has limitations because it focuses only on the Medan Tembung District and emphasises analysing policy implementation from a legal and public policy perspective. Therefore, further research is recommended to integrate a multidisciplinary approach, including technical analysis of hydrology and drainage system capacity, to yield a more comprehensive understanding of urban drainage management.

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