

LEGAL RESPONSIVENESS IN WASTE MANAGEMENT TO ADDRESS THE ENVIRONMENTAL CRISIS BASED ON SATJIPTO RAHARDJO'S RESPONSIVE LAW THEORY

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Abstract

This study examines the responsiveness of Indonesia's legal framework in addressing the escalating waste management crisis through the perspective of Satjipto Rahardjo's responsive law theory. Waste has emerged as a multidimensional environmental issue influenced by population growth, consumption patterns, and limited waste processing capacity. Although Law No. 18 of 2008 provides a normative foundation for integrated waste management, its implementation remains inconsistent and often disconnected from social realities. This research analyzes gaps between regulation and practice, particularly regarding public participation, institutional coordination, and infrastructure readiness. Using a normative–qualitative legal method with statutory, conceptual, and socio-legal approaches, the study evaluates how responsive law principles can strengthen waste governance. The findings show that Indonesia's waste regulations have not fully embodied responsiveness, as communities are still treated primarily as objects rather than active partners, and local initiatives are not optimally integrated into policy. This study proposes a model of ecological responsiveness, emphasizing adaptive regulation, community empowerment, and collaborative governance. These recommendations contribute to developing a more effective and sustainable legal framework capable of addressing environmental challenges.

Keywords: Community Participation, Ecological Responsiveness, Legal Responsiveness, Waste Crisis, Waste Management

INTRODUCTION

Waste management is one of the most significant environmental challenges faced by Indonesia. Population growth, increased economic activity, and changes in consumption patterns have caused waste generation to rise each year. Meanwhile, waste management capacity has not developed proportionally, resulting in substantial ecological pressure. In this context, law is required not only as a normative instrument but also as an adaptive mechanism capable of responding to social and environmental dynamics. The concept of responsive law as proposed by Nonet and Selznick becomes relevant because it emphasizes flexibility, openness to public participation, and an orientation toward substantive problem-solving

(Nonet & Selznick, 2019).

Although various waste management policies have been formulated, their implementation continues to face numerous obstacles. The waste bank program in Makassar City demonstrates effectiveness in encouraging communities to sort and recycle waste. However, its success is highly dependent on community consistency and strong institutional support (Selomo et al. 2016). In Bengkulu, research has found that most households still dispose of waste in mixed form without segregation, rendering city-level waste management processes ineffective (Ramon & Afriyanto, 2015). Efforts to process organic waste through composting have also not been optimal due to limited public education, inadequate facilities, and weak integration with local government policies (Aklis & Masyrukan, 2016). These findings reveal a mismatch between the ideal regulatory framework and empirical conditions in practice.

This situation underscores the urgency of research on legal responsiveness in waste management. Ineffective waste management poses health risks, causes environmental pollution, and exacerbates the ecological crisis. Therefore, law is required to function not only as a regulatory tool but also as a catalyst for innovation and social behavioral change.

In previous studies, responsive law theory has been applied in several contexts. For instance, Putra and Kurniawan used responsive law theory to analyze civil dispute resolution and found that adaptive law is capable of delivering more substantive justice. Another study by Fathoni showed that legal responsiveness in environmental licensing can enhance the effectiveness of sustainable development. Additionally, Rizki examined the application of responsive law in legislative processes and found that public participation is a crucial factor in realizing responsive regulations.

However, although these studies enrich the understanding of the application of responsive law theory, none specifically address waste management issues. Their findings are sectoral in nature limited to civil law, licensing, and legislation and thus do not address the need to integrate responsive law with ecological problems such as waste. This gap in previous research forms the basis for the present study.

The novelty of this research lies in the application of Satjipto Rahardjo's responsive law theory in the context of waste management, a field that has received limited attention in prior studies. This study introduces the concept of ecological responsiveness, an approach that positions law as an adaptive instrument capable of responding progressively to environmental needs. In addition to expanding the scope of responsive law theory, this research provides a new analytical framework for evaluating waste management policies more comprehensively. Theoretically, this study contributes to the development of environmental law literature through the integration of responsive legal theory with ecological issues. Practically, it offers policy recommendations that are more adaptive, collaborative, and sustainability-oriented.

Based on the foregoing, the objectives of this study are: (1) to analyze the level of legal responsiveness in waste management in Indonesia; (2) to identify gaps between regulation and practice; and (3) to formulate more effective and sustainable policy strategies based on the principles of responsive law. The research questions address how law responds to waste management issues and how the principles of responsive law can strengthen waste management policies.

This study employs a normative-qualitative legal research method by combining

statutory, conceptual, and socio-legal approaches. The statutory approach is used to examine waste management regulations, while the conceptual approach is applied to analyze the responsive law theories of Nonet, Selznick, and Satjipto Rahardjo. The socio-legal approach is utilized to understand empirical conditions through the analysis of previous studies, regional policies, and relevant field phenomena.

The research data sources consist of primary legal materials such as laws and related regulations, as well as secondary legal materials including literature, scientific journals, and research reports. The collected data are analyzed descriptively and qualitatively to identify the level of legal responsiveness and the gaps between normative frameworks and waste management practices. The writing method employs a juridical-descriptive technique, which involves systematically organizing data, presenting findings analytically, and interpreting them through the framework of responsive law theory. This technique is used to generate policy recommendations that are more adaptive and oriented toward environmental sustainability.

IMPLEMENTATION METHOD

This study employs a normative-qualitative legal research method aimed at examining legal responsiveness in waste management as a means of addressing the environmental crisis based on Satjipto Rahardjo's responsive law theory. The normative approach is chosen because the research focuses on analyzing legal norms governing waste management, particularly Law Number 18 of 2008 on Waste Management and its implementing regulations. The nature of this research is descriptive-analytical, meaning that it systematically describes the applicable legal provisions while simultaneously analyzing the extent to which these norms are capable of responding to the social and ecological needs of society in waste management practices.

The approaches used in this study include the statutory approach, the conceptual approach, and the socio-legal approach. The statutory approach is applied to examine the substance of waste management regulations and relevant environmental policies. The conceptual approach is used to analyze and elaborate on Satjipto Rahardjo's responsive law theory, as well as the ideas of Nonet and Selznick, as the theoretical foundation for assessing legal responsiveness. Meanwhile, the socio-legal approach is utilized to understand the gap between legal norms and social realities through the examination of previous studies, regional policy practices, and empirical phenomena of waste management in various regions of Indonesia.

The research data sources consist of primary legal materials, namely laws and regulations related to waste management and environmental protection, as well as secondary legal materials in the form of books, scientific journals, research findings, and official reports relevant to the topic of study. All data are analyzed using descriptive-qualitative analysis techniques by systematically organizing legal materials, interpreting legal norms through the framework of responsive law theory, and drawing conclusions inductively. This method is employed to identify the level of legal responsiveness, reveal gaps between regulation and practice, and formulate policy recommendations that are more adaptive, participatory, and oriented toward environmental sustainability.

RESULTS AND DISCUSSION

The environmental crisis caused by waste has become an empirical reality in Indonesia. The country is among the world's largest waste producers, ranking fifth globally in 2020. Data from the Ministry of Environment and Forestry indicate that national waste generation reached approximately 68.5 million tons in 2023 and continues to increase annually. Household activities contribute the largest share, with organic waste accounting for approximately 40–45% and plastic waste around 15% of the total composition (IndoAsri, 2025).

However, the current waste management system has not been able to keep pace with the increasing volume of waste. In 2024, nearly one-third of generated waste was inadequately managed. Of the 37.31 million tons of waste recorded nationally, only 67.8% was properly handled, leaving approximately 25.3 million tons unmanaged (SIPSN, 2024). These data, collected from 342 regencies and municipalities across Indonesia, illustrate a persistent structural imbalance between waste generation and management capacity.

Unmanaged waste is frequently disposed of indiscriminately, contaminating rivers, coastal areas, and residential environments. Field observations reveal limited waste management infrastructure in many regions, including insufficient transportation fleets, minimal recycling facilities, and continued reliance on conventional disposal methods. For instance, in Kupang City, only 60–70% of daily waste can be transported due to the limited availability of waste collection trucks, resulting in illegal dumping and waste accumulation (Haning et al., 2025). Similar conditions are observed in other regions, where open dumping practices at landfills remain prevalent, causing soil, water, and air pollution.

Open dumping contributes significantly to methane emissions, exacerbating climate change, while plastic waste degrades into microplastics that threaten marine ecosystems and human health. The government has even declared “waste emergency” statuses in several areas, such as Bali, particularly during certain monsoon seasons when marine debris intensifies. These phenomena demonstrate that waste has evolved into a multidimensional crisis extending beyond sanitation concerns.

In response, Indonesia enacted Law No. 18 of 2008, which shifted the waste management paradigm from a collect–transport–dispose model toward waste reduction at the source through the 3R principles (Reduce, Reuse, Recycle). Nevertheless, implementation remains suboptimal due to inadequate infrastructure, inconsistent local policies, and low public awareness regarding waste segregation (Law No. 18 of 2008). Socioeconomic and cultural factors further hinder behavioral change, resulting in a substantial gap between legal norms and practical realities.

Responsive law theory, as developed by Satjipto Rahardjo, emphasizes that law must be sensitive and adaptive to societal needs. Law should not be treated merely as a rigid normative text but as an instrument to achieve social welfare and justice. Rahardjo famously asserted that “law is for humans, not humans for law,” underscoring the principle that legal systems must serve societal interests rather than impose abstract obligations detached from reality (Rahardjo, 2006).

Drawing on the framework of Nonet and Selznick, responsive law represents a stage in which legal systems prioritize substantive justice and social problem-solving, distinct from repressive or purely autonomous (formalistic) law. Responsive regulation actively incorporates social values, public participation, and contextual adaptability.

When assessed through this theoretical lens, Indonesia's waste management regulations

exhibit a gap between normative aspirations and practical responsiveness. Law No. 18 of 2008 is normatively progressive, incorporating principles such as responsibility, sustainability, benefit, justice, awareness, and collective participation. However, its implementation remains predominantly top-down and administrative, failing to adequately address underlying social behaviors and structural constraints.

For example, Medan City has enacted Regional Regulation No. 6 of 2015, which imposes fines and imprisonment for illegal dumping. Despite these strict sanctions, enforcement has been inconsistent, and public compliance remains low, with thousands of violations recorded annually (Banjarnahor et al., 2025). This indicates that legal coercion alone has not effectively transformed social behavior, reflecting limited regulatory responsiveness.

From the perspective of responsive law theory, Indonesian waste regulation continues to emphasize command-and-control mechanisms rather than participatory, problem-oriented approaches. As a result, law functions more as an autonomous structure than as a living instrument capable of facilitating meaningful social change.

The responsiveness of waste management law is influenced by structural, social, cultural, and institutional factors. One major inhibiting factor is low public awareness and participation. Waste segregation is not yet perceived as an ecological obligation, and high-consumption lifestyles combined with entrenched disposal habits persist across both urban and rural settings. Limited environmental education further slows behavioral transformation.

Another significant barrier is inadequate infrastructure. Many regions lack sufficient waste collection points, recycling facilities, and technologically advanced landfills. When infrastructure does not support legal obligations—such as waste segregation—regulations lose their practical enforceability (Banjarnahor et al., 2025). Responsive law requires alignment between legal norms and institutional capacity.

Institutional fragmentation and weak inter-agency coordination further undermine implementation. Waste management involves multiple actors at national and local levels, yet policy synchronization remains limited, resulting in overlapping or unsustainable programs.

Conversely, several supporting factors enhance legal responsiveness. Community-based innovations, such as waste banks and household composting initiatives, have demonstrated success by integrating economic incentives and social empowerment. Regions with strong political commitment and progressive leadership, such as Surabaya and Bali, have translated national frameworks into context-sensitive local policies (Media Indonesia, 2021). These examples confirm that responsive law thrives where participation, infrastructure, and governance converge.

Comparative analysis reveals significant variation in the implementation of waste management policies across regions. Surabaya exemplifies effective responsive governance through integrated programs involving community participation, sustained environmental education, and adequate supporting facilities. These initiatives foster voluntary compliance and social ownership of waste management policies (Banjarnahor et al., 2025).

Bali offers another compelling model by integrating customary law (*pararem*) into formal waste management regulation. Collaboration with traditional village institutions has enhanced compliance due to strong social legitimacy. This approach aligns with Rahardjo's view that law must be rooted in local culture to achieve effectiveness.

In contrast, Medan illustrates the limitations of formal regulation without adequate

enforcement capacity and public engagement. Despite comprehensive local regulations, weak coordination and limited infrastructure have prevented effective implementation, positioning Medan closer to an autonomous legal model rather than a responsive one.

Enhancing legal responsiveness requires a comprehensive strategy encompassing regulatory reform, integrated enforcement, infrastructure development, and community empowerment. Regulatory refinement of Law No. 18 of 2008 is necessary to strengthen producer responsibility, incentive mechanisms, and household-based waste segregation (Rusydi et al., 2023).

Law enforcement should adopt a balanced “carrot and stick” approach, combining sanctions with persuasive and participatory mechanisms. Infrastructure investment—such as TPS3R facilities, waste banks, and scheduled collection systems—is essential to support compliance.

Equally important is sustained environmental education and economic incentive schemes that encourage voluntary participation. Responsive law positions communities as active legal subjects rather than passive objects of regulation.

Satjipto Rahardjo’s responsive law theory provides a robust philosophical foundation for reforming waste management governance. The theory underscores that legal effectiveness depends on social relevance, cultural integration, and ecological justice (Aulia, 2018). Law must protect citizens’ rights to a clean and healthy environment while prioritizing vulnerable groups affected by pollution.

Responsive law also demands continuous evaluation and adaptability. In the dynamic context of waste management, regulations must evolve alongside technological developments and changing consumption patterns (Rahardjo, 2009). Only through participatory, adaptive, and justice-oriented approaches can law function as a transformative instrument rather than a symbolic framework.

CONCLUSION

This study shows that waste management in Indonesia continues to face serious challenges, as indicated by the gap between the regulatory framework and empirical conditions in practice. Although Law Number 18 of 2008 provides a relatively progressive normative foundation, its implementation has not yet been fully responsive to the social and ecological needs of society. Low levels of public participation, limited infrastructure, weak institutional coordination, and community behavior patterns that are not yet aligned with the principles of reduce, reuse, and recycle (3R) remain the main obstacles to achieving an effective waste management system.

The analysis of Satjipto Rahardjo’s responsive law theory demonstrates that waste management law in Indonesia has not yet functioned optimally as an adaptive instrument capable of responding to social dynamics and the environmental crisis. Regulations tend to remain administrative and top-down in nature, thereby providing limited space for community empowerment as active subjects in waste management. Interregional comparisons also reveal that the success of regulatory implementation is strongly influenced by the commitment of local governments, infrastructure readiness, and integration with local wisdom.

Therefore, it can be concluded that legal responsiveness in waste management in

Indonesia still needs to be strengthened through regulatory refinement, improved institutional coordination, the development of supporting infrastructure, and the enhancement of public participation. This study recommends the development of the concept of ecological responsiveness as an approach that emphasizes legal flexibility, multi-stakeholder collaboration, and community empowerment to achieve sustainable waste management.

As a direction for future research, more in-depth studies are needed on community-based models of responsive law implementation and the effectiveness of innovative local policies. In addition, empirical research on the relationship between community behavior, institutional capacity, and the effectiveness of law enforcement in various regions can provide a more comprehensive contribution to the formulation of waste management policies in the future.

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