

## **Environmental Law: A Perspective on Harmonizing Waste Management Regulations**

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### **Abstract**

The increasing volume of waste generated by households/industries (upstream) and the increasing population density from year to year, in this case, the increasing population in each region, has led to an increase in the amount of waste generated by households/industries. Therefore, a revision of Government Regulation Number 81 of 2012 concerning the Management of Household Waste and Household-Like Waste is crucial. The purpose of this study is to provide a model for reviewing the revision of Government Regulation Number 81 of 2012 concerning the Management of Household Waste and Household-Like Waste, by harmonizing Government Regulation Number 81 of 2012 with the provisions of Law Number 32 of 2009 concerning Environmental Protection and Management, to avoid normative conflicts in the application of waste management regulations. The research method used is a normative juridical research method, implemented through a statutory regulatory approach, a literature review, and a comparative legal approach to obtain research results. The research findings demonstrate the importance of revising Government Regulation No. 81 of 2012 concerning the Management of Household Waste and Household-Like Waste. This is necessary because Law No. 32 of 2009 concerning Environmental Protection and Management and Law No. 18 of 2008 concerning Waste Management emphasize criminal penalties for improperly managed Final Disposal Sites (TPA) that pollute the environment. However, Government Regulation No. 81 of 2012 concerning Waste Management focuses more on administrative technicalities (transportation/disposal) than on criminal acts of pollution, creating ambiguity in the application of criminal articles specifically related to environmental pollution.

**Keywords:** Harmonization, Revision, Environment, Management, Waste

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## **1. Introduction.**

Article 1 of Law Number 32 of 2009 concerning Environmental Protection and Management states that the environment is a spatial unity with all objects, forces, conditions, and living creatures, including humans and their behavior, which affect nature itself, the continuity of life, and the well-being of humans and other living creatures. This provision emphasizes the importance of environmental protection and management for environmental well-being and health.

Environmental law is defined as a regulation aimed at controlling environmental damage, preventing and mitigating it, and as something that creates regulations or establishes values as a means to achieve order in environmental management. Environmental law is the totality of regulations governing human behavior regarding what should be done with respect to the environment, the implementation of which can be enforced through sanctions by authorized parties.

Waste management is one of the most pressing environmental issues (Putra et al. 2025). Improperly managed waste will result in environmental damage. In this case, environmental damage, as defined by Law Number 32 of 2009 concerning Environmental Protection and Management, is defined as any action by a person that causes direct or indirect changes to the physical, chemical, and/or biological characteristics of the environment, thereby exceeding the standard criteria for environmental damage. Municipal waste management encompasses efforts to reduce waste and handle it from its source (Maulina, A.S., 2012).

The increasing amount of household waste is positively correlated with population growth. Population growth in each region leads to an increase in household waste production, leading to waste management problems, particularly in densely populated large cities (Sulistyorini, L., 2005). The development of environmental law is inseparable from the movement for proper waste management, which focuses on greater environmental attention, given that environmental pollution from household and industrial waste has become a problem that requires collective action for the sake of a healthy lifestyle. This is reflected in the provisions of Article 9 paragraph 3 of Law Number 39 of 1999 concerning Human Rights which states that "Everyone has the right to a good and healthy living environment".

In the environmental context, the provisions of Law Number 32 of 2009 concerning Environmental Protection and Management (UU PPLH) affirm that a good and healthy

environment is a fundamental right of every citizen. Specifically, Article 65 states, "Everyone has the right to a good and healthy environment and the right to submit proposals/objections to businesses that impact the environment." Provisions on environmental protection are also contained in Law Number 6 of 2023, specifically the law that establishes Government Regulation in Lieu of Law (Perpu) Number 2 of 2022 concerning Job Creation as law.

Referring to the provisions of the aforementioned laws and regulations, both in terms of human rights and environmental aspects, these laws and regulations constitute the basis of legal protection provided by the State, in this case the Government of Indonesia, in protecting the right to a healthy environment for the community. Regarding the aforementioned laws and regulations, when linked to Law Number 18 of 2008 concerning Waste Management and Government Regulation Number 81 of 2012 concerning the Management of Household Waste and Household-Similar Waste, a common thread is found: proper waste management, in accordance with the mandate of Law No. 18 of 2008 concerning Waste Management, will achieve a good and healthy environment.

Generally, waste is solid waste generated from households, markets, offices, lodgings, hotels, restaurants, industry, or other human activities (Nurhidayat, 2010). Therefore, this waste must be managed. Based on the provisions of Article 22 of Law No. 18 of 2008 concerning Waste Management, waste management activities include: a. sorting, in the form of grouping and separating waste according to type, quantity, and/or nature; b. collection, in the form of collecting and transferring waste from the waste source to a temporary storage area or integrated waste processing facility; c. transportation, in the form of transporting waste from the source and/or from a temporary storage area or from an integrated waste processing facility to the final processing facility; d. processing, in the form of changing characteristics, composition and quantity of waste; and/or, e. final waste processing in the form of returning waste and/or residue from previous processing to the environmental media safely.

The increasing volume of waste generated by households/industries (upstream) and the increasing population density from year to year, in this case, the increasing population in each region, has led to an increase in the amount of waste generated by households/industries. Therefore, a revision of Government Regulation Number 81 of 2012 concerning the Management of Household Waste and Household-Like Waste is crucial. The purpose of this study is to provide a model for reviewing the revision of Government Regulation Number 81 of 2012 concerning the

Management of Household Waste and Household-Like Waste, by harmonizing Government Regulation Number 81 of 2012 with the provisions of Law Number 32 of 2009 concerning Environmental Protection and Management, to avoid normative conflicts in the application of waste management regulations.

## **2. Problem Formulation & Methode Research.**

The research problem formulation in this study is to examine the legal norms stipulated in the revision of Government Regulation Number 81 of 2012 concerning the Management of Household Waste and Household-Like Waste.

The problem-solving approach in this study utilizes a legal and comparative approach (Marzuki, P.M., 2005) through a legislative approach, a literature review, and a comparative legal approach to obtain research results related to Environmental Law from the Perspective of Harmonizing Waste Management Regulations.

The analysis of Environmental Law from the Perspective of Harmonizing Waste Management Regulations also applies a comparative approach to compare waste management in Indonesia with systems implemented in other countries by searching for regulations via trusted online media. Through this comparison, this study examines differences in waste management regulation, implementation, and policies (Diantha, 2016). The comparative results serve as the basis for identifying elements that can be considered in developing waste management. The research method used is a normative juridical research method, implemented through a legislative approach and a literature review to obtain research results.

## **3. Analysis and Discussion.**

Several studies have compared waste management between Indonesia and Singapore. Jennifera, Nadya Cristabella, and Russel Davis analyzed waste management regulations in Indonesia and Singapore and compared their implementation (Jennifer et al., 2025). Galuh Lalita Paramarta and Sunarno compared waste management between Indonesia, specifically Banyumas Regency, and Singapore, focusing on the management patterns implemented in both regions (Galuh, 2024). While all of these studies discuss the context of waste management, their focus differs from this study in that they do not address the legal norms stipulated in the revision of Government Regulation Number 81 of 2012 concerning the Management of Household Waste and Household-Like Waste.

The novelty of this research lies in the researcher's efforts to provide a study model related to the revision of Government Regulation Number 81 of 2012 concerning the Management of Household Waste and Waste Similar to Household Waste, in the form of harmonization of Government Regulation Number 81 of 2012 with the contents of the provisions of Law Number 32 of 2009 concerning Environmental Protection and Management, so that there is no conflict of norms in the application of waste management regulations.

Indonesia is a country based on law (Rumiarta, INPB 2022), the implementation of state activities must be based on law (Rumiarta, INPB, et al. 2022), this includes ensuring that waste management implementation complies with valid legal regulations. Environmental law as a provision that aims to control the prevention and mitigation of environmental damage, and environmental law as something that gives rise to the regulation or determination of values as a means to achieve order in environmental management. Environmental law as a whole regulation that regulates people's behavior regarding what should be done to the environment, the implementation of which can be enforced with sanctions by the authorities.

Improved waste management is urgently needed as Indonesia is entering a waste emergency, with a waste accumulation volume of up to 56.63 million tons by 2023. According to the National Waste Management Information System (SIPSN), waste generation in Indonesia in 2023 reached 56.63 million tons, of which 22.09 million tons, or 39.01 percent, were properly managed. The majority of the remainder was still disposed of in open dumps, which pollute the environment and do not meet modern management standards, necessitating stronger regulations on waste management (<https://www.hukumonline.com>). The volume of waste generated by households/industries (upstream) and the increasing population density from year to year, in this case the increasing population in each region, has led to an increase in the amount of waste generated by households/industries, thus necessitating a revision of Government Regulation Number 81 of 2012 concerning the Management of Household Waste and Household-Like Waste.

That the provisions of Government Regulation Number 81 of 2012 concerning Waste Management in its regulatory provisions focus more on administrative technicalities (transportation/disposal) rather than criminal acts of pollution, thus creating ambiguity in the application of criminal articles in a *lex specialis* (specifically) manner related to environmental pollution. This ambiguity is said to be due to Law Number 32 of 2009 concerning Environmental Protection and Management and Law No. 18 of 2008 concerning Waste Management, in its

provisions there is an emphasis on criminal penalties if the Final Disposal Site (TPA) is not managed properly and pollutes the environment in this case related to the environment, so it can be said that Government Regulation Number 81 of 2012 concerning Waste Management is contrary to the intention of emphasizing criminal penalties if the Final Disposal Site (TPA) is not managed properly and pollutes the environment as regulated in Law Number 32 of 2009 concerning Environmental Protection and Management and Law No. 18 of 2008 concerning Waste Management.

Government Regulation Number 81 of 2012 concerning Management of Household Waste and Household-like Waste is still in effect and is one of the main legal bases for waste management in Indonesia. Government Regulation Number 81 of 2012 regulates the obligation to reduce and handle waste, including the obligations of producers and the management of household-like waste. The following are important points related to the status of Government Regulation Number 81 of 2012 in this case its legal status is still valid and valid since its promulgation on October 15, 2012. Scope of Government Regulation Number 81 of 2012 regulates waste reduction (limitation, recycling, reuse) and waste handling (sorting, collection, transportation, processing, final processing). In the context of producer obligations, Government Regulation Number 81 of 2012 emphasizes the responsibility of producers in waste reduction, with a transition period and a national roadmap. Although Government Regulation Number 81 of 2012 remains in effect, its management is being synergized with new regulations, such as Government Regulation Number 27 of 2020 concerning Specific Waste Management and related regional regulations.

The study model for the revision of Government Regulation Number 81 of 2012 concerning the Management of Household Waste and Household-Like Waste involves harmonizing Government Regulation Number 81 of 2012 with the provisions of Law Number 32 of 2009 concerning Environmental Protection and Management and Law Number 18 of 2008 concerning Waste Management to avoid conflicting norms in the implementation of waste management regulations. This includes an omnibus approach focused on implementing environmental protection and waste management based on a circular economy. This also incorporates the provisions of Government Regulation No. 22 of 2021 concerning the Implementation of Environmental Protection and Management, which focuses on legal norms for the Implementation of Environmental Protection and Management related to Household Waste and Household-Like Waste, as well as integrating B3 and non-B3 waste management, and

requiring environmental approval. Furthermore, the revision of Government Regulation No. 81 of 2012 must accommodate Government Regulation No. 26 of 2025 concerning Environmental Protection and Management Planning (P3LH), which focuses on strengthening environmental protection planning based on carrying capacity for waste management, which must align with national waste management.

The importance of revising Government Regulation No. 81 of 2012 concerning the Management of Household Waste and Household-Like Waste is emphasized. This is necessary because Law No. 32 of 2009 concerning Environmental Protection and Management and Law No. 18 of 2008 concerning Waste Management, in its provisions there is an emphasis on criminal penalties if the Final Disposal Site (TPA) is not managed properly and pollutes the environment in this case related to the environment. However, in the provisions of Government Regulation Number 81 of 2012 concerning Waste Management, the regulatory provisions focus more on administrative techniques (transportation/disposal) rather than criminal acts of pollution, thus creating ambiguity in the application of criminal articles in a *lex specialis* (specifically) related to environmental pollution.

The revision of Government Regulation Number 81 of 2012 needs to focus on strengthening law enforcement against producers (EPR), synchronizing waste sorting standards in temporary storage facilities, and integrating modern waste processing technologies. Waste sorting standards in temporary storage facilities are crucial to addressing the slow transition from the final disposal paradigm to source-based reduction. Furthermore, norms are needed that specifically regulate Strengthening Extended Producer Responsibility (EPR). In this case, the 10-year transition period (ending 2022) in Article 17 needs to be updated with a stricter and more binding roadmap for producers to recall waste packaging. In the norms related to sanctions, the importance of including sanctions for producers who do not meet waste reduction targets must be more firm and clear regarding waste sorting standards and sorting synchronization.

In the context of waste management abroad, Singapore implements very strict waste management regulations through the Zero Waste Nation approach and incineration to maximize waste volume reduction by up to 90%. Regulations authorize the National Environment Agency (NEA) to lead waste management, supported by high fines (S\$300–S\$2,000) for littering violators, with a focus on recycling, e-waste, and final disposal on Semakau Island. The following are the main points of Singapore's waste management regulations: the first pillar of the policy is the Zero

Waste Masterplan, which aims to reduce waste sent to the final processing site on Semakau Island by 30% by 2030, extending the life of the final processing site beyond 2035.

Incineration (Waste-to-Energy) involves burning almost all unrecycled waste in an incineration plant at 1000°C, generating approximately 2–3% of the country's electricity. The final processing site in Semakau, Singapore, is the only landfill that accepts incineration ash, specifically designed to be environmentally friendly and integrated with the marine ecosystem.

#### **4. Conclusion.**

The study model related to the revision of Government Regulation Number 81 of 2012 concerning the Management of Household Waste and Household-like Waste, namely in the form of harmonization of Government Regulation Number 81 of 2012 with the provisions of Law Number 32 of 2009 concerning Environmental Protection and Management and Law Number 18 of 2008 concerning Waste Management to avoid norm conflicts in the implementation of waste management regulations. This includes an omnibus approach focused on the implementation of environmental protection and circular economy-based waste management, which also accommodates the provisions of Government Regulation Number 22 of 2021 concerning the Implementation of Environmental Protection and Management which focuses on accommodating legal norms for the Implementation of Environmental Protection and Management related to Household Waste and Household-like Waste and integrating B3 and non-B3 waste management, and the existence of environmental approval. Furthermore, the revision of Government Regulation Number 81 of 2012 must accommodate Government Regulation Number 26 of 2025 concerning Environmental Protection and Management Planning (P3LH), which focuses on strengthening environmental protection planning based on waste management carrying capacity, which must align with national waste management.

The revision of Government Regulation Number 81 of 2012 needs to focus on strengthening law enforcement for producers (EPR), synchronizing waste sorting standards in temporary storage areas, and integrating modern waste processing technologies. Waste sorting standards in temporary storage areas are crucial to addressing the slow transition from final disposal to source-based reduction. Furthermore, specific regulations are needed to strengthen Extended Producer Responsibility (EPR). The 10-year transition period (ending 2022) in Article 17 needs to be updated with a stricter and more binding roadmap for producers to recall waste packaging. Regarding sanctions, the inclusion of sanctions for producers who fail to meet waste

reduction targets must be more explicit and clear, especially regarding waste sorting standards and the synchronization of sorting.

Revising Government Regulation No. 81 of 2012 concerning the Management of Household Waste and Household-Like Waste is crucial. This is necessary because Law No. 32 of 2009 concerning Environmental Protection and Management and Law No. 18 of 2008 concerning Waste Management emphasize criminal penalties for poorly managed Final Disposal Sites (TPA) that pollute the environment. However, Government Regulation No. 81 of 2012 concerning Waste Management focuses more on administrative technicalities (transportation/disposal) than on criminal acts of pollution, creating ambiguity in the application of criminal provisions specifically related to environmental pollution.

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