

Regulatory Challenges Wastewater Management and its Impacts on Environmental Sustainability

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Abstract: Before the enactment of the Job Creation Law, liquid waste disposal was governed by a specific permit system. However, with the introduction of the Job Creation Law, this system transitioned to requiring businesses to obtain technical approvals to comply with wastewater quality standards. Challenges have emerged, particularly improper practices that fail to align with ethical environmental principles. This research critically examines Indonesia's legislative framework for liquid waste management, focusing on its implementation and impact under the Job Creation Law, with a specific emphasis on environmental sustainability. A significant finding highlights persistent issues in managing household and laundry wastewater, which remain inadequately addressed under current regulations. Such gaps undermine environmental ethics, both anthropocentrism and ecocentrism. This paper advocates for synchronized regulations and comprehensive guidelines to mitigate adverse effects on environmental sustainability, ensuring stronger legal protections for Indonesian society.

Keywords: Wastewater Management; Ecocentrism; Job Creation Law; Environmental Ethics; Sustainability

1. Introduction

Natural resources and the environment play a profoundly strategic role in safeguarding the continuity of national development and the sustainability of life within the nation. The availability of both living and non-living natural resources could be much higher¹ highlighting the need for strategic policies to optimize their potential. This realm stands as the backbone, providing food, energy, water, and supporting life systems. Appropriate laws and regulations, as well as public policies governing natural resources and the environment, constitute the primary foundation for development to enhance economic competitiveness while concurrently preserving environmental quality.²

The conservation of natural resources encompasses the preservation of water resources. Water, as a component of water resources, is a vital branch of production crucial for the

¹ Sigit Sapto Nurgoho, *Hukum Sumber Daya Alam di Indonesia* (Klaten: Lakeisha, 2022).

² Iswandi Umarand Indang Dewata, *Pengelolaan Sumber Daya Alam* (Yogyakarta: Deepublish, 2020).

livelihood of many and controlled by the state for utilization, aiming for the utmost welfare of the people, this is in accordance with the mandate of the Constitution of the Republic of Indonesia 1945 (hereinafter will be referred to as “Indonesian Constitution 1945”). Provision of clean water has also been recognized as a human right at the global level and is now regarded as one of the United Nations Sustainable Development Goals (SDG).³ For many countries, integrated water resources management⁴ and cooperation between different levels of government⁵ are pertinent, especially in achieving SDG 6 on clean water and sanitation.

However, challenges to the implementation of this constitutional mandate arise when water has experienced a decline in quality due to human influence. Significant pressure on the aquatic environment has resulted from one of the major pollutants: wastewater. Wastewater is channeled through combined sewer systems or sanitation channels and processed in wastewater treatment facilities or septic tanks. Urban wastewater arises from domestic sources, originating from household activities, while industrial and agricultural wastewater results from residue and remnants of industrial processes.⁶

The ramifications resulting from wastewater pollution include a reduction in the carrying capacity of surface water, the spread of disease outbreaks, contamination of water bodies, soil pollution, river mouth sedimentation, eutrophication, alterations in surface water ecosystems, aquatic biota mortality, disruptions in food chains, and damage to marine ecosystems. For instance, polluted rivers stemming from indiscriminate disposal or contamination of discharged water lead to their contamination, posing health risks to surrounding communities. The same issue arises in the management of waste from other industry such as the automotive industry⁷ be that in Indonesia or across Southeast Asia.⁸

The regulation of wastewater in Indonesia is primarily governed by Law Number 32 of 2009 concerning Environmental Protection and Management (hereinafter referred to as 'Law 32/2009' which established foundational principles for environmental protection, including wastewater management. This law has been improved by the Law Number 22 of 2021 concerning the Implementation of Environmental Protection and Management.

³ Alsaadi, S.A., Md Khalid, R., & Wan Dahalan, W. S. A. (2020). Revisiting the human right to water in contemporary international law. *UUM Journal of Legal Studies*, 11(1), 37-49. <https://doi.org/10.32890/uujls.11.1.2020.6860>

⁴ Rahman, S.A. & Khalid, R.M. (2009). Water resource management in Malaysia: Legal issues and challenges. *International Journal of Sustainable Development and Planning*. 4(3), pp. 258–264.

⁵ Khalid, R.M. & Jalil, F. (2018) Theories of Federal-State Relationship. *Jurnal Undang-undang dan Masyarakat (Special Issue)* 115 – 127. <https://doi.org/10.17576/juum-2018-special-08>

⁶ NSW Office of Local Government, *The Environment & Health Protection Guidelines: Onsite Wastewater Management* (Nowra: NSW Office of Local Government, 2023).

⁷ Ali, H. M., Simic, V., Sitingjak, C., Hassim, J. Z., Said, M. H. M., Khalid, R. M., Kaka, G. E., & Ismail, R. (2023). Exploring Public Perceptions and Disposal Procedures in the Development of a Comprehensive End-of-Life Vehicle Regulation in Malaysia: A Pilot Study. *Sustainability*, 15(6), 4786. <https://doi.org/10.3390/su15064786>

⁸ Jamaluddin, F., Saibani, N., Mohd Pital, Wahab, D. A., Hishamuddin, H., S.M., Sajuri, Z., and Khalid, R.M. (2022). End-of-Life Vehicle Management Systems in Major Automotive Production Bases in Southeast Asia: A Review. *Sustainability*. 14(21), 14317; <https://doi.org/10.3390/su142114317>.

The wastewater industry has been also regulated by the Minister of Environment and Forestry Regulation Number 68 of 2016 concerning Domestic Wastewater Quality Standards and Regulation Number 16 of 2019 concerning Wastewater Quality Standards.

The above legal framework has been significantly modified by the Law Number 2 of 2022 concerning Job Creation (hereinafter referred to as 'Job Creation Law'). This omnibus law has consolidated and simplified over 70 laws to reduce bureaucratic red tape. This was done to attract foreign investment by creating a more business-friendly environment. True to its name, the law seeks to stimulate the economy and generate employment opportunities, particularly post COVID-19 pandemic. It also aims at supporting small businesses by reducing barriers and provides incentives for their growth.

The Job Creation Law has introduced substantial changes, such as transitioning from environmental permits to technical approvals for wastewater management. However, this shift has raised questions about implementation consistency and the adequacy of environmental oversight. Cahyani⁹ explains that a more relaxed regulations may lead to improper wastewater disposal, affecting water bodies, ecosystems, and public health. However, she only reviews the impact from the Sociological Jurisprudence aspects. On the other hand, Sudharto et al,¹⁰ argue that the Job Creation Law poses threat to environmental sustainability but their arguments are based on the inadequacy of zoning plans in Indonesia. Same concerns were raised by Fatma¹¹ but she was focusing on the impact of the law on the civil and criminal procedures on pollution.

Other studies have also addressed the same concerns but without specific solution to the environmental ethics. For instance, Baihaki¹² examines the shift in nomenclature from environmental permits to environmental approvals under the Job Creation Law, highlighting legal challenges but without addressing practical implications for wastewater management systems. Similarly, Fauziyah¹³ analyzed domestic wastewater management post-Job Creation Law, focusing on local government regulations but without integrating specific case studies to explore the broader societal and environmental impacts. The

⁹ Cahyani, K. N. (2021). Environmental Impact Analysis in Indonesia Post-Job Creation Law: A Sociological Jurisprudence Approach. *Journal of Law and Legal Reform*, 2(3), 439-448. <https://doi.org/10.15294/jllr.v2i2>.

¹⁰ Sudharto P.H., Rizkiana S.H., and Ali R. (2023). A sustainability review on the Indonesian job creation law. Volume 9, Issue 2, February 2023, e13431. <https://doi.org/10.1016/j.heliyon.2023.e13431>.

¹¹ Fatma U.N. (2021) Legal Review of Policy Changes on Environmental Pollution in the Law on Environmental Protection and Management of the Job Creation Law in Indonesia. *Advances in Social Science, Education and Humanities Research*, volume 583. Proceedings of the International Conference on Environmental and Energy Policy (ICEEP 2021) 273-277.

¹² Baihaki, M. Reza. "Persetujuan Lingkungan Sebagai Objectum Litis Hak Tanggung Gugat di Peradilan Tata Usaha Negara (Telaah Kritis Pergeseran Nomenklatur Izin Lingkungan Menjadi Persetujuan Lingkungan dalam Undang-Undang Nomor 11 Tahun 2020 Tentang Cipta Kerja)." *Majalah Hukum Nasional*, 51(1), 2021: 1–17.

¹³ Fauziyah. "Pengelolaan Limbah Domestik Berdasarkan Perda Nomor 6 Tahun 2018 di Kabupaten Lumajang Pasca Berlakunya UU Cipta Kerja." *National Multidisciplinary Sciences*, 2(4), 2023: 325–333.

same statement made by Sembiring et al,¹⁴ Who commented on the setback of investment motivation of the Job Creation Law, not on a case study analysis.

This study fills an essential research gap by specifically analyzing the practical implementation of wastewater governance under the Job Creation Law through a comprehensive case study of Kendari City. Unlike earlier works that primarily discuss legal frameworks in a general context, this paper combines a theoretical analysis of legal and environmental ethics with empirical insights from real-world governance challenges. By incorporating anthropocentrism and ecocentrism theories into the discussion, this study aims to provide a more holistic understanding of the environmental ethical considerations underlying wastewater governance in Indonesia. This study stands apart by offering a focused examination of how regulatory shifts impact on-the-ground wastewater management practices and their alignment with environmental sustainability. Furthermore, it contributes to the broader discourse on environmental governance in Indonesia by providing actionable recommendations for synchronizing legal and ethical frameworks to address wastewater-related challenges more effectively.

2. Theoretical Framework

2.1. The Theory of Legislation Formation

The formation of legislation in Indonesia is regulated through Law Number 12 of 2011 concerning the Formation of Legislation (hereinafter referred to as "Law 12/2011"). In general, the Law encompasses fundamental materials organized systematically, including the principles of formation, types, hierarchy, substantive content, and formation procedures of legislation. The substantive content of legislation refers to the materials contained in legislation in accordance with its type, function, and hierarchy. According to the hierarchy of legislation, lower-level regulations must not contradict higher-level ones.

Maria Farida Indrati states that the term "legislation" (legislation, *wetgeving*, or *gesetzgebung*) in various literature has two meanings: in general, "legislation" can be interpreted as laws and the process of making laws, while "*wetgeving*" is translated as the formation of laws in their entirety, encompassing the laws of the entire country. Thus, the definition of "*wetgeving*" in the *Juridisch Woordenboek* is as follows:¹⁵

- a. Legislation is the process of formation or the process of shaping state regulations, both at the central and regional levels.
- b. Legislation encompasses all state regulations that result from the formation of rules, both at the central and regional levels.

¹⁴ Sembiring, R. Fatimah, I. and Widyaningsih, G.A. (2020) Indonesia's Omnibus Bill on Job Creation: a Setback for Environmental Law? *Chinese Journal of Environmental Law* 4 (2020) 97–109.

¹⁵ Soeprapto and Maria Farida Indrati, *Ilmu Perundang-Undangan, Proses dan Teknik Pembentukannya* (Yogyakarta: Kanisius, 2007).

Furthermore, Law 12/2011 formulates the principles of legislation formation in Indonesia, comprising both principles of good legislation formation and substantive content principles.

2.2. The Theory of Hierarchy in Legislation

Hans Kelsen asserted that legal norms are structured hierarchically and layered within a hierarchical system. A legal norm, as it applies, originates and is based on the legal norm above it. Simultaneously, it serves as a source and basis for the legal norm below it.¹⁶ In his book titled "*Algemeine Rechtslehre*," as quoted by Maria Farida Indrati,¹⁷ Hans Nawiasky expounds that according to Hans Kelsen's theory, legal norms in any country are always layered and hierarchical. Nawiasky states that legal norms also form groups in addition to being layered and hierarchical. The legal norms within a country can be categorized into four major groups, comprising:¹⁸

Group I: *Staatsfundamentalnorm* (Fundamental State Norm).

The Fundamental State Norm, which is the highest norm in a country, is not formed by a higher norm but is 'pre-supposed' or established in advance by the society within a country. It serves as the foundation upon which the legal norms below it depends.

Group II: *Staatsgrundgesetz* (Basic State Law/Constitution).

In the Republic of Indonesia, the Basic State Law/Constitution is enshrined in the 1945 Constitution's preamble, the Resolutions of the People's Consultative Assembly, and the unwritten Basic Laws, often called Constitutional Conventions.

Group III: *Formell Gesetz* (Formal Law/Statute).

Unlike the norms mentioned above, namely the Fundamental State Norm and the Basic State Law/Constitution, the norms within a statute are more concrete and detailed. They can directly apply within society.

Group IV: *Verordnung & Autonome Satzung* (Regulation & Autonomous Regulation).

Implementation regulations derive from delegated authority, while autonomous regulations stem from attributive authority. Attributive authority in the formation of legislation refers to the granting of the authority to formulate legislation by the Constitution or laws to a state institution or government.

¹⁶ Hans Kelsen, *Teori Umum Tentang Hukum dan Negara*, trans. Raisul Muttaqien (Jakarta: Nusa Media, 2011).

¹⁷ Soeprapto and Maria Farida Indrati, *Ilmu Perundang-Undangan 1: Jenis, Fungsi, dan Materi Muatan* (Yogyakarta: Kanisius, 2007).

¹⁸ Maria Farida Indrati Soeprapto, *Ilmu Perundang-undangan, Dasar-Dasar dan Pembentukan*, (Yogyakarta: Kanisius, 2006).

2.3. Legal Protection Theory

Phillipus M. Hadjon asserts that legal protection for the people is a governmental action that is both preventive and repressive. Preventive Legal Protection aims to prevent disputes, guiding governmental actions to be cautious in discretion-based decision-making. Repressive protection, on the other hand, aims to prevent disputes, including their handling in judicial institutions.¹⁹

2.4. Anthropocentrism Theory

Anthropocentrism is an environmental ethics theory that views humans as the center of the universe. It is also a philosophical theory that asserts that values and moral principles only apply to humans and that the needs and interests of humans hold the highest and most significant value in this theory. According to this perspective, ethics only applies to humans, and any claims regarding the necessity of human moral obligations and responsibilities towards the environment are considered excessive, irrelevant, and out of place. The ethical duties and responsibilities of humans towards the environment are solely to fulfill the interests of fellow humans. Duties and responsibilities towards nature only embody moral obligations and responsibilities towards fellow humans, not a manifestation of human moral duties and responsibilities towards nature itself.²⁰

2.5. Ecocentrism Theory

Ecocentrism theory offers a more comprehensive understanding of the environment. Moral concern is expanded to encompass the entire ecological community, both living and non-living. Ecocentrism further extends into deep ecology and ecosophy, profoundly challenging human understanding of the interests of the environmental community. Deep ecology calls for new ethics not centered on humans but on all life, aiming to address environmental issues.²¹

3. Method

The research applies a normative-empirical research method that involves the analysis of applicable laws and regulations while at the same time examining the application of those laws and regulations in society. The two problem formulations to be discussed are regarding the regulation and management of wastewater in Indonesia and the impacts generated by wastewater on environmental function and sustainability. Based on the overall data collected in this research, a qualitative analysis method was subsequently employed. This method involves describing phenomena or facts obtained from the

¹⁹ Satjipto Rahardjo, *Ilmu Hukum* (Bandung: PT Citra Aditya Bakti, 2006).

²⁰ A. Sonny Keraf, *Etika Lingkungan Hidup* (Jakarta: PT Kompas Media Nusantara, 2010).

²¹ Antonius Atosokhi Gea, Antonina Panca Yuni Wulandari, and Yohanes Babari, *Relasi Dengan Sesama* (Jakarta: PT Elex Media Komputindo, 2005).

research results based on the acquired data, encompassing both primary and secondary data. The final data analysis culminated in drawing conclusions and providing recommendations regarding what actions should be taken to address the legal issues.

4. Regulatory Challenges in Wastewater Management

There are already a number of pertinent rules and regulations within Indonesia's legal system that establish guidelines for the management and treatment of waste in general.²² The legislative regulations governing wastewater in Indonesia include:

- a) The Constitution of the Republic of Indonesia of 1945 (the Indonesian Constitution 1945)
- b) Law Number 32 of 2009 concerning Environmental Protection and Management (Law 32/2009)
- c) Law Number 6 of 2023 regarding the Ratification of Government Regulation in Lieu of Law Number 2 of 2022 concerning Job Creation as Law (Job Creation Law)
- d) Government Regulation of the Republic of Indonesia Number 22 of 2021 concerning the Implementation of Environmental Protection and Management (hereinafter will be referred to as "GR 22/2021")
- e) Minister of Environment and Forestry Regulation Number 5 of 2021 concerning Procedures for Issuing Technical Approvals and Operational Feasibility Letters for Pollution Control Fields (hereinafter will be referred to as "MoEF Regulation 5/2021")
- f) Minister of Environment and Forestry Regulation Number 68 of 2016 concerning Domestic Wastewater Quality Standards (hereinafter will be referred to as "MoEF Regulation 68/2016")
- g) Minister of Environment and Forestry Regulation Number 16 of 2019 concerning Wastewater Quality Standards (hereinafter will be referred to as "MoEF Regulation 16/2019")

The Indonesian state consistently upholds the significance of a clean and healthy environment, recognizing it as an integral part of the human rights possessed by society, as stated in the Indonesian Constitution 1945.²³ Article 28H Paragraph (1) of the Constitution emphasizes that: "*Everyone has the right to a prosperous life, physically and mentally, a place of residence, and the right to obtain a good and healthy environment, as well as access health services.*"

²² Maskun, Hasbi Assidiq, Siti Nurhaliza Bachril, and Nurul Habaib Al Mukarramah, "Conserving 30% of the Ocean: Indonesia's Commitment and Effort towards the Global Urge," *IOP Conf. Ser.: Earth Environ. Sci.* 1165, 012029 (April 2023): 4, <http://dx.doi.org/10.1088/1755-1315/1165/1/012029>.

²³ Fauziyah, "Pengelolaan Limbah Domestik Berdasarkan Perda Nomor 6 Tahun 2018 Di Kabupaten Lumajang Pasca Berlakunya UU Cipta Kerja," *National Multidisciplinary Sciences* 2, no.4 (July 2023): 325–330, <https://doi.org/10.32528/nms.v2i4.311>.

To ensure and guarantee a favorable and healthy environmental condition, the government is also obliged to provide for the economic well-being and livelihood of every citizen. To support the achievement of this mandate, the Job Creation Law was enacted. This Law aims to promote investment ease, enhance job opportunities for all citizens of the Republic of Indonesia, and simplify licensing regulations.

The Job Creation Law, which amended certain provisions within Law 32/2009, was followed up by an implementing regulation, namely GR 22/2021. This Government Regulation is intended to ensure the alignment between economic interests for the welfare of citizens and the conservation of the environment, which constitutes a right for citizens. GR 22/2021 defines wastewater as mentioned in Article 1 Point (40), stating: "*Wastewater is water originating from a process within an activity.*"²⁴

Responsibilities for enterprises and/or activities involve submitting an environmental impact assessment, environmental management effort, and environmental monitoring effort documents through the environmental document information system to the minister, governor, or regent/mayor, according to their respective authorities. The submission of environmental impact assessment, environmental management effort and environmental monitoring effort documents must be accompanied by technical approvals. Technical approvals encompass compliance with wastewater quality standards, compliance with emission standards, hazardous and toxic waste (B3) management, and traffic impact analysis.

Technical approval constitutes consent from the central government or regional government stipulating environmental protection and management standards and/or analysis concerning the impact of enterprise and/or activity traffic in a regulation. Technical approval is regulated by MoEF Regulation 5/2021. This ministerial regulation governs the procedures for issuing technical approvals and standards of operational feasibility for activities, specifically wastewater disposal and/or utilization and emission disposal.

MoEF Regulation 68/2016 stipulates provisions regarding standards for domestic wastewater. Domestic wastewater includes wastewater generated on a household scale and/or from businesses and/or activities with the potential to pollute the environment, necessitating wastewater treatment before discharge into the environment. Wastewater quality standards refer to the limit or concentration of pollutant elements or the quantity of pollutants allowable in wastewater to be discharged into water sources from a business and/or activity.

²⁴ Government Regulation of the Republic of Indonesia Number 22 of 2021 concerning the Implementation of Environmental Protection and Management, Article 1 Point (40).

This ministerial regulation aims to guide provincial governments in establishing stricter domestic wastewater quality standards, the central government, provincial governments, and district/city governments in regulating environmental permits, environmental impact analysis and management plans, and/or wastewater discharge permits, and responsible parties in managing domestic wastewater treatment and environmental document preparation.

5. Wastewater Governance under the Regime of Job Creation Law

Before the enactment of the Job Creation Law, the Law 32/2009 stipulated that all business plans and/or activities were obliged to have environmental permits. To acquire an environmental license, business initiators had to undergo an environmental impact analysis, one of two choices for obtaining the environmental permit. Alongside the environmental impact analysis, the alternative requirement for businesses and/or activities was the environmental management effort and environmental monitoring.

Based on environmental documents, the types of business plans and/or activities were categorized into three groups: those mandated to have an environmental impact analysis, listed in MoEF Regulation 5/2021; those mandated to have environmental management effort and environmental monitoring, designated by the governor or regent/mayor within their authority through governor or regent/mayor regulations; and those mandated to have a statement of commitment to conduct environmental management and monitoring, determined through governor or regent/mayor regulations (similar to the environmental management effort and environmental monitoring business plan and/or activities).²⁵

Since the enforcement of the Job Creation Law, there has been an elimination of certain licensing, as stated in Article 22 Paragraph (36) of the Job Creation Law, affirming:²⁶

"In order to provide convenience to every individual in obtaining environmental approval, this Law amends, abolishes, or establishes new regulations for several provisions related to Business Licensing regulated in Law Number 32 of 2009 concerning Environmental Protection and Management."

A scrutiny of the Job Creation Law has shown that, according to the provisions outlined in the legislative regulations concerning licensing, changes and eliminations were made to simplify business permits and operations, as mentioned in the draft of the Law. The removal of Articles 36 and 40 in Law 32/2009 after the enactment of the Job Creation Law aimed at altering the environmental permit as required to establish a business.

²⁵ Ubaiyana and Kristina Viri, "Perizinan Lingkungan Terintegrasi Pasca Berlakunya Undang-Undang Cipta Kerja," *Jurnal Analisis Kebijakan Kehutanan* 19, no. 1 (2022): 64, <https://doi.org/10.46601/juridicaugr.v5i1.277>.

²⁶ Fauziyah, "Pengelolaan Limbah Domestik," 325-30.

The purpose and objective of simplifying environmental permits have been detailed in an academic paper on the Job Creation Law as follows:²⁷

"Article 36 was removed due to the evolving pace of business or activities mandated to have an Environmental Impact Analysis or Environmental Management Effort and Environmental Monitoring, necessitating an environmental permit. The Environmental Impact Analysis process requires considerable time to fulfil these requirements aimed at facilitating governmental oversight of business permits. Article 40 was eliminated because the environmental permit is no longer a business prerequisite. Hence, business activities can commence while the documentation or requirements are still being processed."

The exposition above indicates that the essence of the hypothesis in these articles bears the same meaning as Law 32/2009 when describing environmental licensing as a requirement for obtaining business permits. However, more is needed to guarantee the integrity of efforts towards environmental approval for licensing when establishing a business. Concern is also raised because, from the standpoint of administrative law, a shift in the standard for environmental permits into an approval process is thought to lessen the efficiency of the government's control and supervision functions.²⁸ This discrepancy arises from Article 40 of Law 32/2009, which may lead to the requirement for environmental permits and business licenses based on environmental approval.²⁹

The Job Creation Law introduces the term "environmental approval" as a decision on environmental feasibility or a statement of willingness for environmental management approved by the central or regional government. However, the approval from the central/regional government is deemed unrelated to environmental approval, considering that the environmental approval process only requires the compilation of the environmental management effort and environmental monitoring form and its examination. Government approval norms are utilized to manage the environmental sector, such as when businesses and/or activities intend to dispose of waste in the environmental media, requiring compliance with environmental quality standards and approval from the central and/or regional government.³⁰

Thus, while environmental approval has a normative relationship with government approval, operationally, a separation exists between environmental and governmental approval in environmental management. Moreover, this conceptualization can be observed in the different objects of approval. In more operational regulations, GR

²⁷ Fauziyah, "Pengelolaan Limbah Domestik," 325-30.

²⁸ Maskun, Marthen Napang, Naswar, Hasbi Assidiq, and Siti Nurhaliza Bachril, "Legal politics of fulfillment of sustainable fisheries resources after the enactment of the omnibus law 2020," *IOP Conf. Ser.: Earth Environ. Sci.* 860, 012091 (October 2021): 2, <http://dx.doi.org/10.1088/1755-1315/860/1/012091>.

²⁹ Fauziyah, "Pengelolaan Limbah Domestik," 325-30.

³⁰ Law Number 6 of 2023 on the Stipulation of Government Regulation in Lieu of Law Number 2 of 2022 on Job Creation to Become Law, Article 22 Point (35).

22/2021 introduces another term in environmental management. It can be assumed to be a derivative norm from governmental approval, also separate from environmental approval, considering that the delegated norms are then determined with more technical approval. GR 22/2021 even refers to it as a technical approval.³¹

Furthermore, technical approval may encompass preventing water pollution quality standards, technical approval for meeting air emission standards, technical approval for non-mobile source emission standards, technical approval for discharging wastewater into the sea, and technical approval for managing hazardous waste. Various permit requirements are undertaken with differing qualifications. Hence, despite uniform norms, approvals are verified based on segmented procedures within various authorities. It indirectly implies a preference for a single-medium permitting concept. Therefore, as idealized by Law 32/2009, the desired internal integration efforts are actually nullified by the existence of the Job Creation Law.

6. Issues of the Current Management of Wastewater in Indonesia: A Lesson from Kendary, Southeast Sulawesi

As mentioned earlier, the government explicitly guarantees every citizen's constitutional right to a good and healthy environment, as stipulated in Article 28H Paragraph (1) of the Indonesian Constitution 1945. This assurance is absolute, positioning citizens to receive protection from the government, which is held solely accountable. Hence, it becomes imperative for the community to actively enhance the sustainability of a healthy environment for the continuity of normal life. Thus, wise development, especially in the environmental domain, must be grounded in environmental insight to achieve sustainability and ensure the well-being of present and future generations. Indonesia's wealth of natural resources is a crucial asset in the national development process.³²

Contemporary industrial development undertaken by companies yields positive impacts, such as job creation and increased national revenue through taxation. However, it also significantly brings negative consequences, notably environmental pollution, which poses inherent dangers.³³ The following case study from Kendari City, Southeast Sulawesi Province, Indonesia can serve as a tool for introspection and assessment to determine

³¹ M Reza Baihaki, "Persetujuan Lingkungan Sebagai Objectum Litis Hak Tanggung Gugat di Peradilan Tata Usaha Negara (Telaah Kritis Pergeseran Nomenklatur Izin Lingkungan Menjadi Persetujuan Lingkungan dalam Undang-Undang Nomor 11 Tahun 2020 Tentang Cipta Kerja)," *Majalah Hukum Nasional* 51, no. (July 2021): 1-17, <https://doi.org/10.33331/mhn.v51i1.137>.

³² Zainal Abidin, Zul Akli, and Johari, "Perlindungan Hukum Terhadap Masyarakat Yang Terpapar Limbah B3," *Jurnal Reusam* 4, no. 2 (2020): 29, <https://ojs.unimal.ac.id/reusam/article/view/3660/2142>.

³³ Endi Suhadi, La Ode Risman, Bima Helpin Satria, and Iman Alirahman, "Perlindungan Hukum Terhadap Masyarakat Atas Pencemaran Limbah Rumah Tangga di Kota Tangerang," *Jurnal Pengabdian Masyarakat Indonesia* 2, no. 3 (2022): 55, <https://jurnal-stiepari.ac.id/index.php/safari/article/view/95>.

how well wastewater management is carried out in under the regime of the Job Creation Law.

In Kendari City, the wastewater management is implemented by the Environmental and Forestry Agency of Kendari City in accordance with Regional Regulation Number 3 of 2016 regarding Domestic Wastewater Management, which in its Article 1 Point 11 defines domestic wastewater management as *“an integrated effort involving planning, arrangement, processing, maintenance, supervision, control, recovery, and development of domestic wastewater.”*³⁴

Before the Job Creation Law was enacted, wastewater management in Kendari City was executed through the “Liquid Waste Management Permit”. However, following the implementation of the Job Creation Law, liquid waste management is no longer in effect. The Environmental and Forestry Agency of Kendari City applies the instrument of technical approval for compliance with wastewater quality standards. Under this system, business entities must submit a request for technical approval documents regarding wastewater management when establishing a business.

All business entities undertaking activities that involve wastewater discharge and are subject to environmental impact assessment and environmental management efforts as well as environmental monitoring efforts must manage wastewater and obtain technical approval for wastewater quality compliance and an operational eligibility certificate for the environmental impact analysis, environmental management effort, and monitoring classes. For businesses subject to environmental monitoring efforts, submission for technical approval is not obligatory, but they must manage wastewater and test its quality. The technical approval aims to ensure that the wastewater managed by business activities, when discharged into the environment, adheres to quality standards without causing environmental pollution.

In the case of hotel development planning, the hotel entity must acquire technical approval for wastewater management. Before submitting the approval request, technical calculations are conducted concerning capacity, employees, hotel visitors, and bedding, which are then incorporated into the technical approval document, detailing the management of wastewater from toilets, kitchens, etc. Business entities submit a request for technical approval, which, upon careful examination by experts assessing the alignment of wastewater management characteristics and compliance with quality standards, results in the issuance of technical approval. Newly established hotels are mandated to seek approval from the Environmental and Forestry Agency for technical approval. For existing hotels holding valid liquid waste disposal permits (IPLCs), these

³⁴ Kendari City Regional Regulation Number 3 of 2016 regarding Domestic Wastewater Management.

permits remain effective until expiration, typically after a five-year period. Upon expiration, hotels or other businesses must seek technical approval.

In the case of wastewater management at the Park Mall in Kendari City, the technical management involves water quality testing conducted by consultants. The Park Mall cannot discharge its wastewater into the Kadia River in Kendari City because the river exceeds quality standards. Therefore, the Environmental and Forestry Agency advised against discharging wastewater into the Kadia River. Instead, The Park Mall opted for technical approval, using the treated wastewater for irrigation purposes on its premises. The treated wastewater from the wastewater treatment plant is utilized to water the mall's land.

While this case highlights an example of effective compliance with current regulations for large-scale businesses, the situation is starkly different for small-scale businesses, such as laundries, which often lack the resources or regulatory incentives to implement proper wastewater treatment systems. Based on field observations and interviews with laundry operators in Kendari City, most small-scale laundries dispose of untreated wastewater directly into household drainage systems or public sewers. This practice is common, as many laundry operators are unaware of regulatory requirements, and enforcement by local authorities remains minimal.

This disparity raises critical questions about the effectiveness of current wastewater management regulations and their enforcement. While large businesses like The Park Mall are held to higher compliance standards due to their visibility and scale, small-scale businesses often operate without adequate oversight. Current regulations, such as Minister of Environment and Forestry Regulation Number 68 of 2016 concerning domestic wastewater quality standards, theoretically apply to all businesses but lack clear mechanisms for ensuring compliance among smaller enterprises.

Moreover, the reliance on technical approvals under the Job Creation Law, as seen in The Park Mall case, primarily benefits larger businesses with the capacity to navigate regulatory procedures and invest in wastewater treatment facilities. Small-scale businesses, which face financial and technical constraints, are often excluded from such regulatory frameworks. This regulatory gap undermines the broader goals of environmental protection, as cumulative pollution from numerous small-scale sources can significantly impact water quality, particularly in urban areas like Kendari City.

To address these challenges, more inclusive regulatory measures are needed to accommodate small-scale businesses. This could include providing financial incentives or technical assistance for implementing affordable wastewater treatment solutions, coupled with stricter enforcement mechanisms targeting non-compliance. Without such measures, the effectiveness of current wastewater regulations remains limited, leaving

small-scale pollution sources largely unregulated and contributing to ongoing environmental degradation.

In the context of healthcare development from an environmental perspective, efforts to prevent and control environmental pollution must be implemented. Hospitals, in conducting various activities, produce diverse waste comprising liquid, solid, and gaseous materials. Hospital waste must be managed as part of environmental sanitation aimed at safeguarding the community from environmental hazards. Hospital liquid waste is categorized into domestic and infectious waste.

The management of hospital wastewater involves wastewater treatment plants employing aeroc and non-aeroc systems to break down pollutants potentially present in hospital wastewater. The aerobic-based wastewater treatment plant collects wastewater from the emergency room, operating theater, morgue, and laboratory, equalizes and screens it for initial filtration, proceeds with pretreatment, undergoes management at the wastewater treatment plant, and then lactonizes it before discharge. The hospital requires bacteria that consume pathogens or contaminants from blood and other pollutants before being discharged through lactonization. Subsequently, the wastewater is tested against the wastewater quality standards.

Apart from hospitals, hospitality businesses, and shopping centers or malls, laundry services must also manage their wastewater. Laundry services involve washing clothes or other textile materials, either through the act of washing or the facility where washing is performed. Based on an interview conducted by the author with one of the laundry managers in Kendari City, specifically at Laundry Express Pratama, the wastewater is managed by releasing it through pipes that flow into the roadside drainage system. This practice is not only limited to larger laundries like Laundry Express Pratama in Kendari; smaller-scale laundries like Alya Laundry in Andonohu, Kendari, also dispose of their wastewater directly into the drainage system without using machinery or pipes.

In Kendari, most companies, particularly medium-to-largescale ones, possess technical approval for wastewater standards, hold operational permits, and are directly reviewed by the Kendari Environmental Agency. The implementation of "Water Wise" in Kendari involves diverting wastewater for irrigation purposes. Several companies in Kendari redirect their wastewater for irrigation, avoiding direct disposal into water bodies.

The proliferation of laundry businesses in Kendari City has arisen from the demand for convenient garment cleaning services that don't disrupt daily activities. Users prefer entrusting their soiled garments to laundry services to avoid extensive manual efforts. One of the simplest types of laundry services, known as wash-and-iron, has flourished across Kendari, especially around campuses and student boarding houses, mainly catering to the student population.

The impact of these laundry businesses, both positive and negative. The manager of a prominent laundry establishment in Kendari, Laundry Express Pratama for example, has acknowledged the issue of managing laundry wastewater. According to Muhammad Ryan Anugrah, the laundry manager: *"Regarding wastewater management in laundry, there isn't any specific government regulation. As a laundry service provider, we dispose of wastewater from clothes washing into the general drainage system."*

Similar issues concerning laundry wastewater disposal exist in smaller laundry establishments, where wastewater is released into household drains for laundry business purposes. One such laundry, Alya Laundry, operated by Sanusi Bafadal, echoes the sentiments of the larger laundry entities. Bafadal mentioned: *"The wastewater from Alya Laundry is released into the household drainage, particularly as we operate within a residential complex. Hence, our disposal method resembles any other household's; there's no specialized wastewater management."*

This scenario highlights humans' moral accountability in accordance with environmental ethics, incorporating both anthropocentrism and ecocentrism principles. Anthropocentrism perceives humans as the center of the universal ecological system. Ecocentrism, in contrast, pertains to broader environmental ethics, different from biocentrism, which focuses solely on ethical concerns. The absence of efficient management practices for wastewater despite the regulations outlined in the Job Creation Law, which were subsequently adopted as regional regulations, underscores human moral responsibility. This disparity between regulation and practice reflects a gap in environmental accountability and ethical management of wastewater.³⁵

7. Recommendations

The prevailing issue found from the case study in Kendari City is that wastewater from small businesses like laundries and household has yet to be addressed by the government. Consequently, business operators and residents need help managing their wastewater, leading to uncontrolled disposal. This unregulated disposal could result in water pollution, leading to losses for the surrounding community. It could ultimately cause soil and water contamination and even pose health risks to humans. To address this issue, several actionable recommendations based on the practice of environmental ethics, both anthropocentrism and ecocentrism, are proposed to strengthen the practical impact of existing regulations:

7.1. Introduce Simplified Regulatory Guidelines for Small-Scale Businesses

The government should develop specific regulations tailored to small-scale businesses such as laundries. These regulations must include simplified compliance

³⁵ P. Julius F. Nagel, "Etika Lingkungan Hidup," *Universitas Widya Mandala Surabaya 2*, no. 1 (2020): 522–523, <https://doi.org/10.31284/j.semitan.2020.1004>.

processes, such as requiring laundries to use basic, cost-effective wastewater treatment technologies (e.g., grease traps, filtration systems) before discharging wastewater into public drainage);

7.2. Provide Financial Incentives and Technical Assistance

Small-scale businesses often lack the financial and technical resources to invest in wastewater management systems. To address this, the government could introduce subsidies, low-interest loans, or grants to help businesses adopt simple treatment solutions. Additionally, local governments or environmental agencies could offer free or subsidized training programs to raise awareness about the environmental impact of untreated wastewater;

7.3. Establish a Monitoring and Reporting Mechanism

A practical and scalable monitoring mechanism is essential to ensure compliance. Local governments can implement community-based monitoring programs where residents, businesses, and local authorities collaborate to oversee wastewater management. Simple reporting tools, such as online forms or mobile apps, could facilitate communication between businesses and regulators;

7.4. Incentivize Sustainable Practices

Small-scale businesses that adopt wastewater treatment practices should be recognized and rewarded. For instance, laundries implementing proper treatment systems could receive certifications or recognition from local governments, which could be used as marketing advantages to attract environmentally conscious customers;

7.5. Increase Public Awareness and Education

Awareness campaigns targeting both businesses and the general public are critical. These campaigns should emphasize the link between untreated wastewater and environmental degradation, as well as the long-term benefits of adopting sustainable practices. By increasing public pressure, small businesses may be motivated to comply voluntarily.

The absence of efficient management practices for wastewater, despite the regulations outlined in the Job Creation Law and its subsequent adoption into regional regulations, reflects the need for proactive solutions. These recommendations align with the principles of environmental ethics, balancing anthropocentric goals of economic development with ecocentric commitments to environmental preservation. Implementing these measures would help close the regulatory gap and promote sustainable wastewater management across all scales of business operations.

8. Conclusion

Prior to the enactment of the Job Creation Law, wastewater management applied a permit system called the permit for liquid waste management. However, after implementing the Job Creation Law, the permit for liquid waste management ceased to be in effect. Wastewater management is now governed by businesses submitting requests for technical approvals to meet wastewater quality standards. All business entities or activities involved in wastewater discharge, which are obliged to conduct environmental impact assessment and environmental management efforts, must manage wastewater and possess technical approvals for wastewater quality compliance along with an operational feasibility letter for the environmental impact assessment and environmental management efforts categories.

Regulatory challenges persist in managing household and laundry wastewater. Households lack specific rules from the Environmental Agency to manage wastewater through wastewater treatment plants. Household wastewater enters drainage systems, resulting in water pollution. Consequently, all accumulated household wastewater flows into the drainage, ultimately reaching water bodies like the Kadia River and contaminating the water. The difficulty in regulating household wastewater stems from the Environmental Agency's inability to manage it. These issues result in water pollution that can adversely affect the surrounding community. Such problems do not reflect environmental ethics, namely anthropocentrism and ecocentrism, wherein human responsibility entails preserving environmental functions for the benefit of both humans and the surrounding environment.

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