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The Impact of Regulatory Deregulation on the Effectiveness of Hazardous and Toxic Materials (B3) Management Permits at PT Futai Tanjung Merah

Deizen D. Rompas^{1*}, Harly S. Muaja², & Roy Ronny Lembong³

^{1,2,3}Universitas Sam Ratulangi,
Indonesia

Correspondence

Deizen D. Rompas, Universitas Sam Ratulangi, Indonesia, Bahu, Malalayang, Manado City, North Sulawesi, e-mail: rompas.deizen@unsrat.ac.id

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Original Article

Abstract

Amendments to environmental regulations under Law No. 11 of 2020 on Job Creation have generated significant implications for the environmental licensing framework, particularly in the management of Hazardous and Toxic Substances (B3). This study aims to provide a comprehensive examination of the technical procedures for implementing B3 management permits at PT Futai Tanjung Merah, Bitung City, in accordance with Law No. 32 of 2009, Government Regulation No. 74 of 2001, and Government Regulation No. 101 of 2014. It also analyzes the administrative, technical, and institutional barriers that affect the effectiveness of implementation. Employing a descriptive qualitative design with a juridical-empirical approach, this research utilizes interviews, field observations, and legal document analysis as its primary data collection methods. The findings reveal that, while the implementation of B3 permits generally complies with existing regulations, their overall effectiveness remains constrained by policy overlaps, inadequate supervision, and limited public participation. The study concludes that achieving efficient environmental permit governance requires stronger synergy between legal certainty, institutional capacity, and public transparency.

Keywords: *Implementation, Licensing, Management of Hazardous and Toxic Substances*

Abstrak

Perubahan regulasi lingkungan melalui UU No. 11 Tahun 2020 tentang Cipta Kerja telah menimbulkan implikasi signifikan terhadap sistem perizinan lingkungan, termasuk pengelolaan Bahan Berbahaya dan Beracun (B3). Penelitian ini bertujuan untuk mengkaji secara komprehensif prosedur teknis pelaksanaan izin pengelolaan B3 pada PT Futai Tanjung Merah, Kota Bitung, sesuai dengan ketentuan UU No. 32 Tahun 2009, PP No. 74 Tahun 2001, dan PP No. 101 Tahun 2014, serta menganalisis hambatan administratif, teknis, dan kelembagaan yang memengaruhi efektivitas implementasinya. Penelitian ini menggunakan metode kualitatif deskriptif dengan pendekatan yuridis-empiris melalui wawancara, observasi lapangan, dan analisis dokumen hukum. Hasil penelitian menunjukkan bahwa meskipun pelaksanaan izin B3 telah mengacu pada regulasi, efektivitasnya terhambat oleh tumpang tindih kebijakan, lemahnya pengawasan, dan rendahnya partisipasi masyarakat. Kesimpulannya, dibutuhkan sinergi antara kepastian hukum, kapasitas kelembagaan, dan transparansi publik untuk mewujudkan tata kelola perizinan lingkungan yang efisien.

Kata kunci: *Pelaksanaan, Perizinan, Pengelolaan Limbah B3*

1. INTRODUCTION

The management of Hazardous and Toxic Materials (B3) waste has become a global concern due to its profound implications for environmental sustainability, human health, and ecological balance. In the era of modern industrialization, B3 waste emerges as an inevitable consequence of intensified production processes involving chemicals, heavy metals, and other hazardous substances. Rapid economic growth across Southeast Asia, including Indonesia, has contributed to improved public welfare; however, it has also placed considerable pressure on the environment's carrying capacity. Historical data indicate that the intensity of B3 waste generation in the ASEAN region and China has risen substantially since the 1990s. In Indonesia, the Philippines, and Thailand, the release of hazardous substances during this period is estimated to have increased by 4.8 to 10 times, reflecting weaknesses in industrial waste management and environmental supervision systems.

B3 waste poses serious risks due to its toxic, corrosive, flammable, reactive, and bioaccumulative properties. If not properly managed, such waste can contaminate soil, water, and air, leading to long-term health problems for humans, including chronic illnesses and genetic disorders. Consequently, the management of hazardous and toxic waste constitutes not only a moral obligation but also a legal responsibility for all entities involved in the production, transportation, utilization, storage, and processing of such materials.

From a legal perspective, Indonesia possesses a solid regulatory framework governing hazardous and toxic waste management. Article 58 of Law No. 32 of 2009 on Environmental Protection and Management (UUPPLH) mandates that any individual or business entity engaged in the production, transportation, storage, utilization, disposal, processing, or accumulation of hazardous and toxic waste must manage it in accordance with applicable laws. Further regulatory details are provided in Government Regulation No. 74 of 2001 on the Management of Hazardous and Toxic Materials and Government Regulation No. 101 of 2014 on the Management of Hazardous and Toxic Waste. These legal instruments explicitly emphasize the primary objective of hazardous and toxic waste management—namely, the prevention and mitigation of risks to the environment, human health, and other living organisms.

In practice, hazardous and toxic waste management constitutes an integral component of the environmental licensing system, which governs business activities with potential significant impacts on the environment. This system covers five key licensing categories: storage, collection, transportation, utilization, and processing of hazardous waste. The licensing process functions as an administrative and preventive mechanism designed to ensure that industrial activities operate within the parameters of environmental sustainability. Nevertheless, empirical evidence reveals that the

implementation of environmental permits continues to face numerous challenges at the administrative, technical, and institutional levels.

Persistent issues include limited awareness among business actors regarding legal obligations in waste management, inadequate government supervision, insufficient waste treatment infrastructure, and weak interagency coordination. Moreover, violations such as unlicensed waste disposal and non-compliance with technical standards remain prevalent, leading to serious environmental degradation. From the standpoint of environmental administrative law, these conditions illustrate a clear gap between well-formulated legal provisions and their ineffective implementation in practice.

Hazardous and Toxic Waste (B3) management therefore represents a critical environmental issue within the broader framework of sustainable development. Without effective management, B3 waste poses a substantial threat to ecosystems, public health, and the sustainability of natural resources. In the context of accelerated industrialization in Southeast Asia, including Indonesia, the increasing generation of hazardous waste demonstrates a concerning trend. Historical evidence shows that hazardous material releases in Indonesia, the Philippines, and Thailand rose between 4.8 and 10 times during the 1990s—underscoring the persistent weaknesses of industrial waste management and oversight systems across the region.

A number of studies have examined hazardous waste management from legal, technical, and institutional perspectives. Virlya et al. investigated hazardous waste management practices in hospitals across Jakarta, particularly during the COVID-19 pandemic. Employing a quantitative approach that combined descriptive analysis with Analytical Network Theory (ANT), the study assessed the network of stakeholders involved in waste management. The findings revealed a significant increase in hazardous waste volume (11–264%), with over 90% classified as infectious waste. Furthermore, management performance in several hospitals remained weak in administrative aspects such as record-keeping, licensing implementation, and compliance with environmental permit provisions. The Environmental Agency (DLH) emerged as a key actor with a primary facilitative role in the stakeholder network, highlighting the importance of inter-agency coordination for effective hazardous waste management.¹

Gaib analyzed the law enforcement dimension of hazardous waste control using a normative legal approach. The study emphasized that Articles 58–61 of Law No. 32 of 2009 (UUPPLH), along with Government Regulation No. 18 of 1999 in conjunction with Government Regulation No. 85 of 1999, provide a comprehensive legal framework for hazardous waste regulation. However, major challenges to pollution

¹ Eva Melyna Virlya et al., “Analisis Jaringan Stakeholder Pada Pengelolaan Limbah Bahan Berbahaya Dan Beracun Rumah Sakit Di Jakarta,” *Jurnal Kesehatan Lingkungan Indonesia* 22, no. 3 (2023): 294–303, <https://doi.org/10.14710/jkli.22.3.294-303>.

control persist due to economic development interests, low public awareness, and weak enforcement mechanisms. These findings suggest that despite the robustness of existing regulations, their implementation remains constrained by conflicts of interest between economic growth and environmental conservation.²

Yurnalisdel explored the general management of hazardous and toxic waste in Indonesia using a qualitative literature-based approach. The study emphasized that all stages of hazardous waste handling—collection, segregation, storage, transportation, and processing—must adhere to the principles of caution and safety. It further reinforced the argument that hazardous waste management is not merely a technical process, but also reflects a company's moral and social responsibility toward society and the environment.³

Thomas and Tiopan examined the implementation of Environmental Quality Standards (EQS) as a tool for pollution control. They argued that environmental quality monitoring should be conducted based on parameters established in Ministerial Regulations. The unlicensed disposal of medical waste was identified as a serious violation of the precautionary principle. Using a normative juridical approach, the study underscored the critical role of licensing instruments as preventive mechanisms to control pollution, positioning environmental permits as a tangible expression of corporate legal responsibility.⁴

Jumari assessed the effectiveness of various legal instruments governing hazardous waste management, including Law No. 32 of 2009, Government Regulation No. 101 of 2014, and Ministerial Regulation P.95/2018. Drawing on Lawrence Friedman's legal system theory, the study concluded that while the existing legal framework possesses sound substance and institutional structure, significant challenges remain in the dimension of legal culture. Common violations such as permit misuse and data manipulation persist. The study recommended simplifying the licensing system and enhancing supervisory quality as strategic measures to improve legal compliance.⁵

Dewa et al. analyzed waste management practices at PT Antam in Pomalaa through the lens of environmental administrative law. The findings revealed that the company's waste management activities were not in full compliance with the principles of environmental conservation stipulated in Law No. 32 of 2009 and Government

² Andri Yunan Gaib, "Analisis Pengendalian Dampak Limbah Bahan Berbahaya Dan Beracun (LB3) Terhadap Pencemaran Lingkungan Hidup," *Lex Administratum* 10, no. 1 (2022): 36–46, <https://ejournal.unsrat.ac.id/v3/index.php/administratum/article/view/38298>.

³ Yurnalisdel Yurnalisdel, "Analisis Pengelolaan Limbah Bahan Berbahaya Dan Beracun (B3) Di Indonesia," *Jurnal Syntax Admiration* 4, no. 2 (2023): 201–8, <https://doi.org/10.46799/jsa.v4i2.562>.

⁴ Jason Herodion Thomas and Demson Tiopan, "Tinjauan Yuridis Pelaksanaan Perizinan Pembuangan Limbah Medis Rumah Sakit X Berdasarkan Undang-Undang Nomor 32 Tahun 2009 Tentang Perlindungan Dan Pengelolaan Lingkungan Hidup," *Unes Law Review* 5, no. 4 (2023): 2242–54, <https://doi.org/10.31933/unesrev.v5i4.518>.

⁵ Arif Jumari, "Potensi Pelanggaran Pengelolaan Limbah Bahan Berbahaya Dan Beracun," *Bestuur* 7, no. 2 (2019): 76–83, <https://doi.org/10.20961/bestuur.v7i2.40414>.

Regulation No. 101 of 2014. A key insight from the study was that liability for pollution extends beyond individuals to include corporate entities, underscoring the importance of corporate liability in Indonesian environmental law.⁶

Finally, Aprilia et al. reaffirmed the relevance of the precautionary principle in the licensing of hazardous medical waste management. Using a normative legal research design, they identified inconsistencies between regulatory provisions and practical implementation. The study posited that the precautionary principle serves as both the ethical and legal foundation for every stage of waste management, including operational licensing. Accordingly, environmental permits should be regarded not as mere administrative formalities, but as integral components of a comprehensive environmental risk management framework.⁷

Most prior studies have predominantly focused on the regulatory, conceptual, and normative dimensions of hazardous and toxic waste management, while empirical research addressing the technical procedures for implementing such management permits at the regional corporate level remains scarce. Few studies have specifically analyzed the implementation of environmental permits within the operational context of local industrial enterprises such as PT Futai Tanjung Merah in Bitung City.

This study seeks to evaluate the effectiveness of hazardous and toxic waste management permit implementation and to identify the administrative and technical challenges encountered by the company. The findings are expected to provide empirical contributions toward strengthening Indonesia's environmental licensing and regulatory oversight system. Based on this background, the objectives of the study are to:

- 1) Comprehensively examine the technical procedures involved in the implementation of Hazardous and Toxic Materials (B3) management permits at PT Futai Tanjung Merah, Bitung City, North Sulawesi, in accordance with the prevailing legal framework—specifically Law No. 32 of 2009 on Environmental Protection and Management, Government Regulation No. 74 of 2001, and Government Regulation No. 101 of 2014.
- 2) Analyze the administrative, technical, and institutional obstacles within the company's environmental licensing process and identify the key factors influencing the effectiveness of its implementation.

2. RESEARCH METHODOLOGY

⁶ Muhammad Jufri Dewa et al., "Analisis Hukum Pertanggung Jawaban Izin Pengelolaan Limbah PT. Antam Terhadap Dampak Kerusakan Pantai Pomalaa," *Halu Oleo Legal Research* 4, no. 2 (2022): 168–182, <https://doi.org/10.33772/holresch.v4i2.49>.

⁷ Lintang Aprilia, Rahayu Subekti, and Sapto Hermawan, "Kajian Precautionary Principle Terhadap Pengelolaan Limbah Medis B3 Pada Fasilitas Layanan Kesehatan," *Indonesian Journal of Social Sciences and Humanities* 5, no. 1 (2025): 127–137, <http://journal.publication-center.com/index.php/ijssh/article/view/1786>.

This study employs a qualitative, descriptive–analytical approach to examine the effectiveness of implementing the Hazardous and Toxic Materials (B3) waste management permit at PT Futai Tanjung Merah, Bitung City, North Sulawesi. This approach was selected because it enables a contextual understanding of the dynamics of environmental policy implementation at the industrial level and uncovers the legal, technical, administrative, and institutional factors influencing the effectiveness of permit enforcement. The research adopts an empirical legal (juridical–empirical) method supported by normative analysis, integrating field-based observations with a review of relevant legal instruments, including Law No. 32 of 2009, Government Regulation No. 74 of 2001, and Government Regulation No. 101 of 2014.

The study was conducted at PT Futai Tanjung Merah, an industrial enterprise located in Bitung City, which generates B3 waste as part of its production activities. This site was purposively selected due to its legal obligation to obtain a B3 waste management permit. The research participants included internal company stakeholders (environmental managers, waste management officers, and K3L staff), government agencies (the Environmental Offices of Bitung City and North Sulawesi Province), and third-party actors engaged in waste transportation and processing. The data comprised primary data obtained through in-depth interviews and field observations, and secondary data consisting of primary, secondary, and tertiary legal materials—such as statutory regulations, research reports, academic literature, and company administrative records. Data analysis was conducted using an interactive qualitative analysis model, ensuring analytical rigor through the triangulation of data sources and methods, as well as member checking and peer debriefing.

3. RESEARCH RESULT AND DISCUSSION

3.1. Technical Procedures for Implementing Hazardous and Toxic Materials (B3) Management Permits at PT Futai Tanjung Merah

This section examines the technical procedures for implementing Hazardous and Toxic Materials (B3) management permits at PT Futai Tanjung Merah, Bitung City, North Sulawesi, with reference to statutory provisions, specifically Law No. 32 of 2009 on Environmental Protection and Management (UUPPLH), Government Regulation No. 74 of 2001 on the Management of Hazardous and Toxic Materials, and Government Regulation No. 101 of 2014 on the Management of B3 Waste. The analysis focuses on three main aspects:

- 1) Compliance with procedural stages of environmental permitting in accordance with applicable regulations;
- 2) Effectiveness of B3 waste management permit implementation in industrial practice; and

- 3) Adherence to the principles of prudence and corporate environmental responsibility under environmental law.

Field observations and analysis of permit documents at PT Futai Tanjung Merah revealed that the technical procedures for obtaining a hazardous waste management permit followed the mechanisms regulated through the Online Single Submission (OSS) system, as stipulated in Law No. 11 of 2020 on Job Creation and Government Regulation No. 6 of 2021 on the Implementation of Regional Business Licensing. The licensing process consists of three primary stages: (a) preparation of environmental documents (AMDAL or UKL-UPL); (b) issuance of Environmental Approval; and (c) issuance of an electronically integrated Business License.

Interviews with the Bitung City Environmental Agency indicated that PT Futai Tanjung Merah had submitted its UKL-UPL documents and obtained a Technical Approval for Wastewater Disposal (IPAL) pursuant to Bitung Mayoral Regulation No. 15 of 2015. These documents serve as the administrative basis for issuing a hazardous waste management permit through the OSS platform. Administratively, the company has met most formal requirements, including the submission of complete business identification data, a technical waste management report, and waste quality test results.

However, during the initial implementation phase of the OSS, technical constraints were encountered—specifically delays in data synchronization between central and regional systems, which postponed permit issuance for several months. This challenge was attributed to suboptimal inter-agency coordination and limited human resource capacity at the regional government level. Following the full integration of the OSS–Risk-Based Approach (OSS-RBA) system, licensing efficiency improved considerably.

Document evaluations and field observations further indicated that the implementation of the hazardous waste management permit at PT Futai Tanjung Merah substantially aligns with the precautionary principle as stipulated in Article 2(e) of the Environmental Management Law (UUPPLH). This principle is reflected in the company's routine wastewater quality monitoring, the construction of dedicated drainage systems, and monthly laboratory testing conducted by accredited testing institutions.

Nevertheless, in 2023, a public complaint was filed regarding alleged environmental contamination from the company's liquid waste, which reportedly affected nearby agricultural areas. Field verification revealed that the company had not yet renewed its liquid waste discharge permit after the previous one had expired. This situation reflects administrative inconsistencies and weaknesses in internal compliance monitoring, indicating that the precautionary principle has not been fully internalized within the company's environmental management culture.

Moreover, the handling of hazardous solid waste, such as sludge generated from production processes, did not fully comply with temporary storage standards outlined

in Government Regulation No. 101 of 2014, Articles 20–24, as the Temporary Storage Facility (TPS) lacked adequate labeling and leakage protection systems in accordance with technical guidelines. Although this violation is administrative in nature, it underscores the need for enhanced technical compliance and greater environmental legal awareness at the company level.

The findings of this study indicate that the integration of environmental permits with business licenses through the OSS system represents a positive step toward licensing simplification, but it does not necessarily ensure effective pollution control. These results are consistent with Jumari, who found that Indonesia's hazardous waste management legal framework possesses adequate substantive and structural dimensions, yet continues to face significant challenges in legal culture.⁸ Administrative noncompliance—such as delayed permit renewals and incomplete temporary storage facilities—remains common, largely due to insufficient understanding of legal obligations among business operators.

This study also supports the findings of Gaib, who argued that weak law enforcement and conflicts of interest between economic growth and environmental preservation are the primary factors undermining the effectiveness of hazardous and toxic waste management systems.⁹ In the case of PT Futai Tanjung Merah, administrative compliance has not been complemented by a robust internal environmental audit mechanism. This highlights the necessity of strengthening self-monitoring and reporting systems grounded in environmental transparency.

Unlike the study by Virlya et al., which focused on the surge in medical waste during the pandemic and emphasized the importance of inter-agency coordination, this research reveals that the principal challenge within the local industrial sector lies in the technical integration between central and regional OSS (Online Single Submission) systems.¹⁰ Furthermore, although the precautionary principle—as discussed by Aprilia et al.—has been formally adopted within policy frameworks, its operational implementation at the company level remains incomplete.¹¹

The findings indicate that the effectiveness of technical procedures for implementing hazardous and toxic waste management permits at PT Futai Tanjung Merah remains partial and fragmented. Formally, the company has fulfilled its licensing obligations through the OSS system; however, discrepancies persist between documentary compliance and field implementation. The technical verification and

⁸ Jumari, “Potensi Pelanggaran Pengelolaan Limbah Bahan Berbahaya Dan Beracun.”

⁹ Gaib, “Analisis Pengendalian Dampak Limbah Bahan Berbahaya Dan Beracun (LB3) Terhadap Pencemaran Lingkungan Hidup.”

¹⁰ Virlya et al., “Analisis Jaringan Stakeholder Pada Pengelolaan Limbah Bahan Berbahaya Dan Beracun Rumah Sakit Di Jakarta.”

¹¹ Aprilia, Subekti, and Hermawan, “Kajian Precautionary Principle Terhadap Pengelolaan Limbah Medis B3 Pada Fasilitas Layanan Kesehatan.”

evaluation processes conducted by the Bitung City Environmental Agency are irregular due to budget constraints and limited supervisory personnel.

The effectiveness of environmental licensing can be assessed by the extent to which permits function as preventive instruments within environmental administrative law. In this case, although the company has obtained the necessary permits, periodic monitoring and reporting have not been consistently conducted in accordance with Bitung Mayoral Regulation No. 15 of 2015, particularly the requirement to submit wastewater quality test reports every three months. This reinforces the argument of Budiati that environmental licensing cannot operate in isolation but must be supported by regulatory, institutional, and behavioral synergy among business actors.¹²

The management of hazardous and toxic waste at PT Futai Tanjung Merah demonstrates improvements in governance compared to the pre-OSS implementation period. Nevertheless, further capacity building is required in data digitization, reporting transparency, and public participation in environmental oversight—aligning with the participatory environmental management principles mandated by the Environmental Protection and Management Law (UUPPLH).

Based on the research findings and comparative analysis, several key conclusions can be drawn:

- 1) Procedural Aspect: PT Futai Tanjung Merah has implemented the environmental licensing process in accordance with the national legal framework through the OSS system; however, technical implementation continues to face challenges related to inter-agency coordination and delays in permit renewal.
- 2) Substantive Aspect: The company's hazardous and toxic waste management practices do not fully comply with Government Regulation No. 101 of 2014, particularly in the areas of temporary waste storage standards and the reporting of wastewater quality test results.
- 3) Normative Aspect: Although the principles of environmental prudence and corporate responsibility have been adopted in policy documents, they have not been consistently internalized within the company's compliance culture.
- 4) Institutional Aspect: The supervisory capacity of the Bitung City Environmental Agency requires strengthening through the establishment of an integrated monitoring mechanism and the digitization of environmental permit reports.

This study provides an empirical contribution to the literature on environmental law in Indonesia by reaffirming that environmental permits function not merely as administrative formalities but as instruments for controlling ecological risks. The success of hazardous and toxic waste management depends heavily on the integration

¹² Lilin Budiati, *Good Governance: Dalam Pengelolaan Lingkungan Hidup*, 2nd ed. (Bogor: Ghalia Indonesia, 2014).

of legal frameworks, institutional governance, and corporate ethics. Therefore, reform of the licensing system must be accompanied by enhanced technical capacity and legal awareness to ensure that the fundamental objective of environmental protection and sustainability can be effectively achieved.

3.2. Obstacles and Challenges in the Environmental Permitting Process at PT Futai Tanjung Merah

This study seeks to provide an in-depth analysis of the obstacles and challenges encountered by PT Futai Tanjung Merah in the environmental permitting process from administrative, technical, and institutional perspectives, and to identify the factors influencing the effectiveness of permit implementation. The main objective is to assess the extent to which the application of statutory provisions—specifically Law No. 32 of 2009 on Environmental Protection and Management (PPLH) and Law No. 11 of 2020 on Job Creation along with their derivative regulations—has been effective in the context of Hazardous and Toxic Waste (B3) Management within the company.

The findings reveal that the principal obstacles to effective environmental permitting at PT Futai Tanjung Merah arise from three key dimensions: administrative, technical, and institutional.

1) Administrative Obstacles

Administrative obstacles primarily result from regulatory complexity and changes in the licensing system following the enactment of the Job Creation Law, which replaced the previous environmental permit framework with the concept of environmental approval. This terminological and procedural shift has generated confusion at the implementation level—both among companies and local authorities—particularly in distinguishing between AMDAL (Environmental Impact Assessment), UKL-UPL (Environmental Management and Monitoring Efforts), and SPPL (Statement of Environmental Management Capability) documents, which serve as the basis for environmental approvals. Moreover, the Online Single Submission (OSS) system has not been fully integrated in Bitung City, leading to delays in issuing Business Identification Numbers (NIB) and difficulties in uploading environmental feasibility documents.

2) Technical Obstacles

From a technical standpoint, the company faces significant challenges in complying with wastewater quality standards stipulated in Bitung Mayoral Regulation No. 15 of 2015. Several laboratory analyses have shown fluctuations in wastewater parameters that exceed permissible limits, particularly for Biochemical Oxygen Demand (BOD) and Chemical Oxygen Demand (COD). The company's limited Wastewater Treatment Plant (WWTP) capacity and shortage of personnel

trained in B3 waste management have been identified as major inhibiting factors. Furthermore, the company has not yet fully implemented an automated wastewater monitoring system as required by regulations, resulting in delays in routine reporting to the local environmental authority.

3) Institutional Obstacles

From an institutional perspective, coordination among agencies responsible for environmental licensing and supervision remains suboptimal. The Bitung City Environmental Agency, the Regional Licensing Agency, and other relevant technical institutions continue to operate in a sectoral and fragmented manner without a well-established communication and coordination mechanism. This fragmentation leads to overlapping authority, particularly in the evaluation of environmental document feasibility and in the post-permit monitoring stages. Additionally, budget constraints and the limited technical capacity of field inspectors further weaken the effectiveness of environmental permitting and oversight in the region.

The research findings indicate that the implementation of environmental licensing at PT Futai Tanjung Merah has not yet achieved optimal effectiveness. Although the company has demonstrated a commitment to complying with applicable regulations, the dynamics of licensing policy reforms and weak institutional capacity remain major inhibiting factors. This study also reveals that fundamental changes in environmental licensing regulations introduced through the Job Creation Law (Law No. 11 of 2020) have generated legal uncertainty, particularly concerning the elimination of administrative lawsuit mechanisms following the removal of the term “environmental permit.” Consequently, communities affected by industrial activities face significant challenges in formally expressing their concerns or submitting appeals against government environmental approval decisions.

These findings are consistent with the results of previous research. For instance, Hulaifa and Kassie found that the abolition of environmental permits has the potential to weaken public oversight and create ambiguity in environmental law enforcement.¹³ Similarly, Badawi and Wedhatami, in their study of industrial sector licensing, confirmed that the Online Single Submission (OSS) system still encounters substantial technical and administrative obstacles, particularly in regions with underdeveloped digital infrastructure.¹⁴

¹³ Shena Novera Hulaifa, “Law Enforcement as a Systematic Effort to Preserve the Environment,” *Jurnal Multidisiplin Indonesia* 2, no. 1 (2023): 730–39, <https://doi.org/10.57235/qistina.v2i1.465>; Denicia Kassie, “Unravelling The Legal Labyrinth: Investigating Barriers to Effective Adoption and Enforcement of International Environmental Law in Domestic Jurisdictions,” *Journal of Environmental Management* 352 (2024): 119944, <https://doi.org/10.1016/j.jenvman.2023.119944>.

¹⁴ Ahmad Badawi and Bayangsari Wedhatami, “Implementasi Online Single Submission Sebagai Penyederhanaan Birokrasi Perizinan Untuk Meningkatkan Peluang Perizinan Berusaha Dan Investasi,” in *Bookchapter Hukum Dan*

Despite these similarities, this study makes a distinctive contribution by highlighting the local context of Bitung City, a strategic industrial hub in eastern Indonesia. The case of PT Futai Tanjung Merah illustrates that licensing obstacles are not solely the result of national-level regulatory changes but also stem from weak policy synchronization and coordination among regional agencies. Hence, this study broadens the analytical perspective on environmental management decentralization, especially in the context of the hazardous waste management industry. As noted by Handayani et al., Prasetyo and Jaelani, and Setiyawan, environmental permits serve as a control mechanism for activities with potential environmental risks.¹⁵ Within the framework of the Job Creation Law, transforming the concept of a “permit” into an “approval” has not necessarily simplified the process; instead, it has created implementation gaps at the operational level.

The effectiveness of environmental licensing fundamentally depends on three key pillars: transparency, public participation, and institutional accountability.¹⁶ These pillars have been significantly weakened under the current regulatory regime. For instance, restricting public participation only to directly affected parties undermines the quality of environmental democracy and contradicts the principle of access to justice as guaranteed under Article 28H of the 1945 Constitution. Furthermore, the weak post-approval monitoring system demonstrates that environmental permits function more as administrative formalities than as preventive legal instruments.

From a technical standpoint, the company’s failure to meet wastewater quality standards indicates a lack of integration between the technical, legal, and administrative aspects of waste management. Although regulatory provisions prescribe detailed hazardous waste management procedures, their practical effectiveness depends largely on the availability of infrastructure, skilled human resources, and technological capacity at both the corporate and local government levels.

The study confirms that the effectiveness of environmental licensing at PT Futai Tanjung Merah is strongly influenced by structural and institutional factors. First, dual authority between central and local governments in granting environmental approvals

Lingkungan (Semarang: Universitas Negeri Semarang, 2025), 23–52, <https://bookchapter.unnes.ac.id/index.php/hk/article/view/457>.

¹⁵ Tuti Handayani et al., “The Application of Indonesian Environmental Administrative Law with Regard to Criminal Considerations,” *International Journal of Sustainable Law* 1, no. 1 (2024): 34–40, <https://doi.org/10.71131/wpyxjg60>; Fitri Nur Aini Prasetyo and Abdul Kadir Jaelani, “The Changing of Environmental Approval Administrative Law Perspective,” *Journal of Human Rights, Culture and Legal System* 2, no. 3 (2022): 191–208, <https://doi.org/10.53955/jhcls.v2i3.55>; Bagus Setiyawan, “Enforcement of Administrative Environmental Law Against Environmental Pollution by The Flour Industry In Gumelar Village, Gumelar District,” *UMPurwokerto Law Review* 3, no. 1 (2022): 71–82, <https://doi.org/10.30595/umplr.v3i1.11381>.

¹⁶ Cameron Holley, “Public Participation, Environmental Law and New Governance: Lessons for Designing Inclusive and Representative Participatory Processes,” *Environmental and Planning Law Journal* 27, no. 5 (2010): 360–91; Alice Martiny et al., “Determinants of Environmental Social and Governance (ESG) Performance: A Systematic Literature Review,” *Journal of Cleaner Production* 456 (2024): 1–25, <https://doi.org/10.1016/j.jclepro.2024.142213>.

has created regulatory ambiguity. Second, the OSS system, intended to streamline administrative services, remains technically unprepared to support full integration of data and documentation. Third, limited public participation in the preparation of AMDAL (Environmental Impact Assessment) documents results in inadequate social control over potential pollution risks.

Moreover, weak post-approval monitoring and evaluation suggest that current environmental licensing policies remain reactive rather than preventive or risk-based. Therefore, the Bitung City Government, as the local environmental authority, must strengthen cross-sectoral coordination mechanisms and enhance the capacity of environmental inspectors to ensure the effective implementation of sustainability principles.

This study underscores the importance of harmonizing Law No. 32 of 2009 on Environmental Protection and Management with Law No. 11 of 2020 on Job Creation to eliminate contradictions in implementation. A regulatory reformulation ensuring clarity in definitions, responsibilities, and oversight mechanisms represents a strategic pathway to overcoming administrative and technical barriers in environmental licensing, thereby advancing the overarching goal of environmental protection and sustainability.

4. CONCLUSION

This study aims (1) to comprehensively examine the technical procedures for implementing the Hazardous and Toxic Materials (B3) Management Permit at PT Futai Tanjung Merah, Bitung City, North Sulawesi, in accordance with Law No. 32 of 2009, Government Regulation No. 74 of 2001, and Government Regulation No. 101 of 2014; and (2) to analyze the obstacles and challenges encountered in the company's environmental permitting process, including administrative, technical, and institutional aspects, while identifying factors influencing its effective implementation.

The findings indicate that, normatively, the implementation of the B3 Management Permit at PT Futai Tanjung Merah aligns with statutory provisions; however, in practice, several significant barriers persist. Administrative obstacles include overlapping regulations, bureaucratic inefficiencies, and limited coordination between local and central governments. Technical challenges arise from the inadequacy of waste treatment facilities, limited qualified human resources, and a weak environmental monitoring system. Institutionally, weak oversight mechanisms, a lack of transparency in public information, and limited community participation further affect the effectiveness of environmental permit implementation. These findings highlight the gap between normative legal frameworks and actual implementation at the operational level.

The study confirms that the effectiveness of environmental permit implementation and B3 management largely depends on the synergy among legal

certainty, institutional and technical capacity, and public participation. The results provide a valuable basis for developing policies aimed at improving the environmental permit system to make it more efficient, transparent, and equitable—particularly in the context of the Job Creation Law, which shifts the regulatory paradigm from environmental permits to environmental approvals. The study’s main limitation lies in its focus on a single company and geographical area, thus restricting its generalizability at the national level. Future research is recommended to conduct comparative analyses across regions or industrial sectors, as well as in-depth evaluations of post-permit monitoring mechanisms, to strengthen sustainable environmental governance in Indonesia.

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