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Law Enforcement Against Environmental Pollution from B3 Waste from Regional Hospitals in Karo District

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Abstract

The management of Hazardous and Toxic Waste (B3) generated by hospitals is an urgent legal obligation considering its potential danger to public health and the ecosystem. This research aims to analyze the effectiveness of administrative environmental law enforcement regarding B3 waste management in hospitals within Karo Regency, as well as to identify structural obstacles and strategic efforts undertaken by the local government. This study employs an empirical juridical method with a sociology of law approach to dissect the operation of law in society through field data and in-depth interviews. The results indicate that law enforcement in Karo Regency remains sluggish and ineffective because the Environmental Authority prioritizes a persuasive and coaching approach (preventive) over the application of strict administrative sanctions (repressive), despite the discovery of severe violations such as mixing medical waste with domestic waste and storage exceeding the time limit. This weak law enforcement is caused by an

accumulation of interrelated obstacles, including a deficit in the supervision budget, the absence of certified Environmental Supervisory Officials (PPLH), and the deterioration of incinerator facilities in regional hospitals, creating high dependency on third parties who frequently default on their obligations. In response to the failure of these conventional mechanisms, new strategies are being implemented through the transformation of digital-based supervision (e-monitoring) to bridge geographical and personnel gaps, as well as the planned centralization of medical waste processing through the Regional Public Service Agency (BLUD) mechanism to break the chain of dependency on private sectors and ensure compliance with emission quality standards. This research concludes that without improvements in the legal structure and infrastructure aspects, waste management regulations will remain mere paper rules without real coercive power.

Keywords: Hospital B3 Waste, Environmental Law Enforcement, Administrative Sanctions, Karo Regency

Introduction

A healthy environment is a fundamental requirement for the survival of humans and other living beings. The quality of the environment is crucial for the well-being of society, public health conditions, and the overall balance of the ecosystem. In the context of sustainable development, every country is required not only required to pursue economic growth but also to maintain the carrying capacity and resilience of its environment. The phenomena of climate change, natural resource degradation, and increasing environmental pollution are real global challenges that require an integrated response through national and local policies that prioritize environmental sustainability.

Humans, who are entrusted with the task of being caliphs or leaders on earth, should protect and care for the earth, including protecting the environment. Some people believe that the environment and humans must be interconnected. In Article 1, paragraph 1 of Law Number 32 of 2009 concerning Environmental Protection and Management, it is stated that "The environment is the unity of space with all objects, forces, conditions, and living beings, including humans and their behavior, which affect nature itself, the sustainability of life, and the well-being of humans and other living beings."¹ The term

¹ Law on Environmental Protection and Management, Law Number 32 of 2009, Article 1 paragraph 1.

"environment" is often used interchangeably with the term "living environment."² Although the two terms can be distinguished literally, they are generally used with the same meaning, which includes the physical, chemical, and biological environment (human living environment, animal living environment, and plant living environment).³

Similarly, in Indonesia, environmental issues are also not new. This crisis has become one of the contributors to the serious global crisis.⁴ Environmental problems, especially those caused by human actions, are severely threatening human existence and life. These problems will continue unless humans, as the main component of the environment, take maximum action to address the various factors causing pollution and environmental damage, particularly those stemming from B3 waste (Hazardous and Toxic Materials). In Article 1, paragraph 21 of the Law of the Republic of Indonesia Number 32 of 2009 concerning Environmental Protection and Management, it is stated that:⁵

"Hazardous and toxic materials, hereinafter referred to as B3, are substances, energy, and/or other components that, due to their nature, concentration, and/or quantity, either directly or indirectly, can pollute and/or damage the environment, and/or endanger the environment, health, and the survival of humans and other living beings."

The most feared B3 waste is waste from the chemical industry. Waste from the chemical industry generally contains various heavy metal elements and has cumulative and toxic properties that are not easily dissolved or destroyed. The Republic of Indonesia Law Number 32 of 2009 concerning Environmental Protection and Management has regulated the issue of waste management, particularly hazardous and toxic waste (B3). One of the industries that generates B3 waste is hospitals. Hospitals, as one of the centers for public health services, generate waste from all their activities. The various activities carried out by each hospital differ depending on the type of services provided. The waste generated is classified into 3 categories: solid, liquid, and gas.⁶ These three types of waste are further divided into two categories: medical and non-medical.⁷ According to Government Regulation No. 22 of 2021 concerning the Implementation of Environmental Protection and Management, medical waste is infectious and therefore falls under the category of hazardous waste.

² Fikriana Askana dan Sari Dian Novita, "Partisipasi Masyarakat Dalam Peraturan Daerah No. 5 Tahun 2018 Tentang Perlindungan Dan Pengelolaan Lingkungan Hidup Daerah Dalam Persepektif Siyasah Dusturiyah," *Jurnal Hukum, Politik dan Komunikasi Indonesia* 2, no. 1 (2023): 39–43.

³ Moh Fadli dan Mustafa Lutfi, *Hukum dan Kebijakan lingkungan*, Universitas Brawijaya Press, 2016, p 4.

⁴ Muhammad Akib, *Penegakan hukum lingkungan dalam perspektif holistik-ekologis*, Graha Ilmu, 2015, p 1.

⁵ Law on Environmental Protection and Management, Law Number 32 of 2009, Article 1 paragraph 21.

⁶ Minister of Health Regulation Number 1204 of 2004 concerning Environmental Health Requirements for Hospitals, p. 21.

⁷ *Ibid.*

Minister of Health Decree Number 1204/Menkes/SK/2004 concerning Environmental Health Requirements for Hospitals defines hospital solid waste as all solid hospital waste resulting from hospital activities, consisting of medical and non-medical waste. Meanwhile, hospital medical waste is waste consisting of infectious, cytotoxic, radioactive, pharmaceutical, chemical, pathological waste, sharp objects, pressurized containers, and waste containing high levels of heavy metals.⁸

Therefore, waste from hospital activities must adhere to the standards and regulations for hazardous waste management as stipulated in Law Number 32 of 2009 concerning Environmental Protection and Management. Hospital waste (hazardous waste) management is an activity that includes reduction, storage, collection, transportation, utilization, processing, and/or disposal.⁹

Waste management regulations can be found in Article 59 of the UUPPLH:¹⁰

1. Every person who generates hazardous waste is required to manage the hazardous waste they produce.
2. If the hazardous waste referred to in Article 58 paragraph (1) has expired, its management shall follow the provisions for hazardous waste management.
3. If a person is unable to manage hazardous waste themselves, its management shall be entrusted to another party.
4. Hazardous waste management must obtain a permit from the Minister, Governor, or Regent/Mayor, according to their respective authorities.
5. The Minister, Governor, or Regent/Mayor is required to include environmental requirements that must be met and obligations that must be adhered to by hazardous waste managers in the permit.
6. The decision to grant a permit must be announced.
7. Further provisions regarding the management of hazardous waste are regulated in the Government Regulation.

Hospital waste management is part of environmental health activities in the healthcare sector, aiming to protect the public from the dangers of environmental pollution originating from medical waste, and is an effort to control the spread of disease. B3 waste management is also not done carelessly; each type of medical waste has its own handling method. If not done with the proper procedures, the consequences could be more widespread for the community. Hospital B3 waste pollution has a very detrimental impact on the environment. Common cases of hospital B3 waste pollution in Indonesia include the illegal disposal of hospital B3 waste and the failure to properly manage B3 waste as stipulated in Government Regulation of the Republic of Indonesia Number 22 of 2021 on the Implementation of Environmental Protection and Management. Additionally, a significant number of hospitals do not have permits to manage B3 waste, leading to environmental pollution and causing unhealthy and unstable conditions both within the hospital and in the community.

⁸ *Ibid.*

⁹ Minister of Environment and Forestry Regulation Number 6 of 2021 Concerning Procedures and Requirements for Hazardous and Toxic Waste Management, Permenlhk No. 6 of 2021.

¹⁰ Law on Environmental Protection and Management, Law Number 32 of 2009, Article 59.

Many hospitals and healthcare facilities in Karo Regency do not have a landfill or incinerator to manage hazardous and toxic waste (B3). Out of the 7 (seven) hospitals in Karo Regency, both public and private general hospitals, only one hospital has an incinerator for managing hazardous waste, namely Kabanjahe Regional General Hospital. Meanwhile, some hospitals are collaborating with third parties for the treatment of hazardous waste. This is certainly a problem because many hospitals and healthcare facilities in Karo Regency still lack a final disposal site (TPA) for hazardous waste.

Methodology

This research uses a type of research based on the effectiveness of law, reviewed thru direct research (field research) or categorized as empirical legal research. This research focuses on legal studies that examine how the normative legal system can function "law in action," based on the doctrines of American realists such as Holmes, who stated that "law is not just logic but experience," or Roscoe Pound's view of "law as a tool of social engineering." This contrasts with the positivists' view that law is "law as it is written in books," which sees law solely as a system of rules found in legislation.¹¹

The research approach used in this study is the empirical/juridical sociological (sociological legal research) approach. This research is also often referred to as field research, which is based on primary data, namely data obtained directly from the community as the first source thru field research activities. Primary data is obtained thru observation, interviews, and/or the distribution of questionnaires.¹² Primary data consisted of interviews with informants and respondents in Karo Regency, North Sumatra, using purposive sampling techniques and were analyzed qualitatively. This qualitative analysis is used to present data systematically, logically, and effectively to facilitate understanding and interpretation of the required data. Additionally, this research is also supported by secondary data sourced from relevant legal materials and literature references as supplementary information.

Discussion

Law Enforcement Against Hospitals in Karo Regency that Pollute the Environment due to B3 Waste

Karo Regency has three main hospitals that provide medical services to the community, namely Kabanjahe Regional General Hospital, Efarina Etaham Berastagi Hospital, and Amanda Berastagi Hospital. Based on an interview with Mr. Dr. Immanuel Sinuhaji, Sp.P.A., as the Head of the Karo Regency Health Service, it was explained that the data from the Karo Regency Health Service for 2024 shows that all three facilities generate B3 waste from various service activities such as operating rooms, laboratories, pharmacies, and intensive care units. This waste includes infectious, pathological, pharmaceutical, chemical, and heavy metal waste.¹³

Law enforcement against B3 waste management violations by hospitals in Karo Regency is based on the provisions of Article 63 paragraph (3) letter c of Law Number 32 of 2009 concerning Environmental Protection and Management, which grants authority for guidance and supervision to district/city governments. This authority is not only administrative but also an important instrument for ensuring that B3 waste management standards are consistently adhered to by healthcare facilities. Based on an interview with Mrs. Rutina Br Sembiring S.Sos, M.I.T, Acting Head of the Karo Regency Environmental Agency, it was found that the Environmental Agency (DLH) prefers a persuasive approach with the hospital before taking firm action such as sanctions. Hospital supervision is carried out at least twice a year, but this intensity is still not proportional to the volume of hazardous waste (B3) generated daily.¹⁴

The statement above indicates that the current implementation of environmental law enforcement in Karo Regency is more inclined toward the application of monitoring instruments (preventive) and soft sanctions (non-judicial repressive). The Head of the Environmental Agency explicitly acknowledged violations related to the storage deadline for hazardous waste at the Temporary Storage Facility (TPS), but the legal response provided was still limited to administrative warnings. This shows that the discretion of state administrative officials is very dominant in determining the severity of the legal actions taken. Law enforcement is not carried out rigidly solely for the sake of legal certainty, but there is a consideration of benefit, namely the continuation of healthcare services for the wider community, which justifies why severe sanctions such as government coercion or license suspension have not been fully applied to violating hospitals.

This phenomenon aligns with the theory of law enforcement put forward by Philipus M. Hadjon, where the enforcement of administrative law has two main functions: a preventive function through supervision and a repressive function through the application of sanctions.¹⁵ In the context of Karo Regency, the repressive function being carried out has not reached the level of severe sanctions as stipulated in Article 76 paragraph (2) of Law Number 32 of 2009 concerning Environmental Protection and Management (UUPPLH). The administrative sanctions imposed are limited to written warnings, which is the mildest level in the hierarchy of administrative sanctions. This also reflects Andi Hamzah's view on the term "law compliance," or fulfilling the law through persuasion, which seems to be preferred by the Karo Regency Government over the approach of strict law enforcement.

Based on interviews with Mr. Andrian William, S.IP, M.Si, Head of Environmental Pollution Management and Control Division at the Karo Regency Environmental Service, it was found that the mechanism for supervising the management of hospital B3 waste is carried out through routine inspections every three months, as well as incidental

¹¹ Sigit Sapto Nugroho dan Anik Tri Haryani, *Metodologi Riset Hukum*, Lakeisha, Klaten, 2020, p 46.

¹² Fakultas Hukum, *Buku Pedoman Penulisan Tugas Akhir* (Universitas Malikussaleh, n.d.), p 111.

¹³ Immanuel Sinuhaji, "Head of Karo Regency Health Service," interview, Karo, November 18, 2025, 2:30 PM.

¹⁴ Rutina Br Sembiring, Acting Head of the Karo Regency Environmental Service, Interview, November 19, 2025, 10:30 AM

¹⁵ Philipus M Hadjon, "Edisi Khusus Perlindungan Hukum Bagi Rakyat Indonesia Sebuah Studi tentang prinsip-prinsipnya Penangannya oleh Pengadilan Dalam Lingkungan Peradilan Umum dan Pembentukan Peradilan Administrasi," *Surabaya: Peradaban*, 2007.

inspections that respond to public complaints. In carrying out this supervisory function, the most dominant violation found was non-compliance with waste sorting standards, specifically the mixing of sharp medical waste such as syringes into domestic waste containers.¹⁶

It appears that the direct supervision mechanism (onsite inspection) has been implemented by the Karo Regency Environmental Agency (DLH), but its effectiveness still faces challenges due to partial compliance from the hospital. The finding that medical (infectious) waste was mixed with domestic waste is a serious violation of the standard operating procedures for hazardous waste management. The actions of the supervising officers who ordered on-site sorting and the creation of an inspection report indicate an attempt at immediate enforcement in the field.

Challenges in Law Enforcement Against Environmental Pollution Caused by Hazardous Waste from Hospitals in Karo Regency

Based on an interview with Mrs. Rutina Br Sembiring S.Sos, M.I.T, the Acting Head of the Karo Regency Environmental Agency, it was found that the intensity of supervision over the management of hazardous waste from hospitals in Karo Regency has not been optimal due to the classic constraint of limited travel budget, which is disproportionate to the distribution of existing healthcare facilities, making it difficult to realize the function of early detection of violations thru routine inspections.¹⁷ This clearly illustrates that the main obstacle faced by law enforcement institutions in the region is the issue of institutional capacity, both financially and in terms of human resources. Limited operational budgets lead to low monitoring frequency, causing what should be routine and planned monitoring to become passive and incidental. Additionally, the limited number of environmental supervision functional officials with competency certifications results in suboptimal quality of technical inspections in the field. This leads to many potential violations of B3 waste management going unnoticed by the authorities, resulting in weak law enforcement at the early detection stage.

If analyzed using Soerjono Soekanto's law enforcement theory, this constraint falls under the classification of Law Enforcement Factors. Soekanto emphasizes that one of the conditions for the functioning of law is the mentality and professionalism of law enforcers, which must, of course, be supported by the availability of adequate personnel.¹⁸ In the case of Karo Regency, although supervisory authority has been normatively granted by Law Number 32 of 2009 concerning Environmental Protection and Management, this authority cannot be executed effectively due to the imbalance between the workload of supervision and the number of available personnel.

Based on an interview with Mr. dr. Jasura Pinem, M.Kes, Director of Karo Regency General Hospital, found that the

effectiveness of B3 waste management is hampered by inadequate facilities, where aging assets lead to damage to incinerator components and a shortage of spare parts, resulting in the inability of healthcare facilities to consistently reach the required temperature parameters for toxin and bacterial destruction as stipulated by regulations.¹⁹

The inability of the equipment to consistently reach standard combustion temperatures leads to suboptimal management of hazardous waste and potential violations of quality standards. This problem is exacerbated by logistical constraints such as a shortage of spare parts and high maintenance costs, which are disproportionate to the maintenance budget allocated to the regional hospital.

Field research indicates that there are several significant obstacles hindering the enforcement of environmental regulations against pollution caused by hospital hazardous waste. First, there are legal obstacles in the form of overlapping central and regional regulations, which lead to confusion in technical implementation in the field. For example, some provisions in local regulations regarding environmental permit fees are not fully aligned with the Ministry of Environment Regulation Number 56 of 2015 concerning the management of B3 waste from healthcare facilities.²⁰ This norm inconsistency impacts the uncertainty of licensing procedures and reporting obligations that hospitals must fulfill.

The second obstacle is technical barriers and resource availability. Based on observations, some hospitals in Karo Regency do not yet have incinerators that meet emission standards according to the Minister of Environment Decree Number 03 of 2014 concerning the Company Performance Rating Assessment Program in Environmental Management (PROPER).²¹ In fact, some hospitals use simple incineration methods that do not allow for achieving safe emission standards. This practice risks producing dioxins and furans, two types of harmful compounds that can cause long-term health problems. This condition is exacerbated by the limited availability of trained technicians who can operate the wastewater treatment equipment correctly.

Efforts to Overcome Environmental Pollution Caused by Hospital B3 Waste in Karo Regency

Referring to the complexity of law enforcement constraints previously outlined, this study found that strategies for mitigating environmental pollution from B3 waste in Karo Regency can no longer rely solely on conventional approaches. Based on field data collected from various stakeholders, four pillars of strategic efforts currently underway and planned have been identified, including digital oversight transformation, regional waste management restructuring, strengthening government enforcement instruments, and revitalizing community participation.

¹⁶ Adrian Wiliam, Head of Environmental Arrangement and Pollution Control Division, Karo Regency Environmental Service, on November 19, 2025, at 11:20 AM Western Indonesian Time.

¹⁷ Rutina Br Sembiring, Acting Head of the Karo Regency Environmental Service, Interview, November 19, 2025, 10:30 AM.

¹⁸ (Soerjono Soekanto, 2012, p. 4)

¹⁹ Jasura Pinem, Director of Public Hospital of Karo, Interview, Interview on November 17, 2025, at 2:00 PM WIB.

²⁰ Minister of Environment Regulation Number 56 of 2015 concerning the management of B3 waste from healthcare facilities.

²¹ Minister of Environment Decree Number 03 of 2014 concerning the Program for Assessing Company Performance Ranking in Environmental Management (PROPER).

a. Transforming Supervision Through an Integrated Digital Reporting System

The first effort emphasized by local environmental authorities is the modernization of monitoring mechanisms to address the disparity between the area under surveillance and the availability of personnel. Based on information from the Head of the Karo Regency Environmental Service, the agency is developing an electronic waste management performance reporting system (e-monitoring). This system requires every healthcare facility to upload transportation manifest documents and visual documentation of the hazardous waste temporary storage facility (TPS) conditions in real-time to a centralized data server.²² This step is designed to create an early warning system that allows for the automatic detection of administrative violations such as transportation delays without the need for physical inspections, thus optimizing the efficiency of budget and human resources.

From the perspective of state administrative law, this digitalization initiative is a form of strengthening the function of preventive supervision, as mandated by environmental law enforcement theory. The transformation from manual monitoring, which is prone to data manipulation, to digital monitoring ensures the principles of transparency and accountability for environmental data. This is in line with efforts to strengthen the legal structure so that it can adapt to technical challenges in the field, ensuring that the pollution prevention function remains effective despite the limitations of the agency's operational facilities.²³

b. Centralization of Medical Waste Treatment Through the BLUD Mechanism

On the infrastructure aspect, concrete solutions are offered to break the chain of private hospitals' dependence on third parties who often default. The management of Kabanjahe Regional General Hospital (RSUD) has proposed an operational cooperation scheme through the Regional Public Service Agency (BLUD) mechanism, where the hospital's incinerator facility is projected to become a regional medical waste processing center for all nearby healthcare facilities.²⁴ This strategy allows private hospitals to legally dispose of their medical waste within Karo Regency at a more affordable fee, while also providing operational revenue for the Regional General Hospital to ensure routine maintenance and the stability of the incinerator machine's performance according to quality standards.

Theoretically, this step addresses the "Means Factor" constraint in Soerjono Soekanto's law enforcement theory by optimizing state assets for the broader public good.²⁵ Through this scheme, the local government is present to facilitate the need for waste treatment facilities, which have

previously been left entirely to the inefficient market mechanism. This approach is a form of policy engineering aimed at creating an independent and sustainable waste management ecosystem at the local level, reducing the risk of waste accumulation due to long-distance transportation constraints.

c. Reconstruction of Regional Regulations and Strengthening of Administrative Sanctions

To provide a more tangible deterrent effect, the Karo Regency Government, through Adrian Wiliam, Head of the Environmental Planning and Pollution Control Division of the Karo Regency Environmental Service, is conducting an academic study to revise the Regional Regulation regarding waste management.²⁶ The main focus of this research is to clarify the government's coercive sanctions clause (*bestuursdwang*) and the mechanism for administrative fines. This new regulation is planned to grant direct executive authority to Environmental Supervisory Officers (PPLH) to take immediate repressive actions, such as temporarily sealing the operations of healthcare facilities proven to be improperly disposing of B3 waste, without having to go through lengthy judicial procedures. The goal is to streamline enforcement bureaucracy so that legal responses can be carried out quickly (immediate enforcement).

Analysis of this legislative effort shows a strengthening of the Legal Substance component in Lawrence M. Friedman's legal system theory. The shift in approach from a persuasive coaching pattern to a repressive-administrative enforcement pattern is considered necessary to enhance the rule of law in the eyes of business actors.²⁷ Legal certainty, as one of the goals of law according to Sudikno Mertokusumo, can only be achieved if legal norms are accompanied by the threat of sanctions that can be effectively executed and cause a real burden of loss for the violator.²⁸

d. Revitalizing Social Control and Public Transparency

The final, equally crucial effort is the empowerment of civil society as an external watchdog. The initiative that emerged from community members and environmental observers in Kabanjahe led to the formation of a citizen forum educated on valid environmental violation reporting procedures. Additionally, the implementation of public transparency is also encouraged, where hospitals are required to display their waste management compliance status in publicly accessible areas. This strategy leverages social sanctions and a culture of shame to pressure corporations into compliance, considering that reputation is a valuable asset for healthcare institutions.

Within the framework of legal sociology, this effort strengthens the "Social Factors" and "Cultural Factors" in law enforcement.²⁹ The community participation encouraged here is not merely passive participation, but informed and

²² Rutina Br Sembiring, Acting Head of the Karo Regency Environmental Service, Interview, November 19, 2025, 10:30 AM.

²³ Lawrence M. Friedman dan Grant M. Hayden, *American Law: An Introduction* (Oxford: Oxford University Press, 2017), 15-16.

²⁴ Jasura Pinem, Director of Karo Regency Regional General Hospital, Interview, Interview on November 17, 2025, at 2:00 PM WIB.

²⁵ Soerjono Soekanto, *Faktor-Faktor Yang Mempengaruhi Penegakan Hukum* (Jakarta: Rajagrafindo Persada, 2012), 4.

²⁶ Adrian Wiliam, Head of Environmental Arrangement and Pollution Control Division, Karo Regency Environmental Service, on November 19, 2025, at 11:20 AM Western Indonesian Time.

²⁷ *Op cit.* Friedman dan Hayden, *American Law*, p. 16.

²⁸ Sudikno Mertokusumo, *Mengenal Hukum* (Yogyakarta: Liberty Yogyakarta, 1999), p. 145.

²⁹ Soerjono Soekanto, *Faktor-Faktor Yang Mempengaruhi Penegakan Hukum*, p. 5.

empowered participation. By involving the community as the "eyes and ears" of law enforcement, the gaps in oversight left by the limitations of the state apparatus can be filled. Information transparency is also an implementation of the human right to a good and healthy environment.

Conclusion

1. The implementation of administrative environmental law enforcement against hospitals in Karo Regency regarding the management of Hazardous and Toxic Waste (B3) is still not running effectively and tends to be partial. The Karo Regency Environmental Agency, as the authorized authority, prioritizes a preventive-persuasive approach through appeals and verbal warnings, rather than imposing strict administrative sanctions as mandated in Article 76 of Law Number 32 of 2009 concerning Environmental Protection and Management. It was found that there was excessive discretion in tolerating violations—such as waste accumulation exceeding storage time limits—under the pretext of maintaining the continuity of public health services. This permissive attitude results in the law's function as an instrument for controlling environmental impact becoming blunted, where hospital compliance is not driven by legal awareness or fear of sanctions, but rather by mere administrative formality.
2. Obstacles in law enforcement against hospital B3 waste pollution in Karo Regency are caused by the accumulation of interconnected constraints in legal structure, facilities, and legal culture factors. From a structural perspective, there is a budget deficit for supervision and a shortage of certified Environmental Supervisory Officers (PPLH), which results in very low inspection intensity. From a facilities perspective, the absence of licensed incinerator facilities in the majority of private hospitals and the reliance on third parties who often default creates a condition of impossibility of performance for legal entities. Additionally, the pragmatic legal culture among hospital operational staff and the low public participation in social control exacerbate the situation, making waste management violations a practice considered common and repeatedly occurring without significant correction.
3. The environmental pollution control efforts formulated in Karo Regency are aimed at transforming the monitoring and management system toward greater integration. The main strategies include modernizing supervision through the implementation of a digital reporting system (e-monitoring) to overcome geographical and personnel constraints, as well as centralizing medical waste processing initiatives through regional cooperation with Kabanjahe Regional General Hospital under the Regional Public Service Agency (BLUD) scheme. In addition, the strengthening of legal substance is being carried out through the revision of regional regulations to grant direct executive authority to environmental supervisors, accompanied by the revitalization of civil society's role as external supervisors to create social pressure on non-compliant healthcare facilities.

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