

## Environmental Law Aspect in Medical Hazardous and Toxic Waste Control

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**Abstract:** Hazardous toxic waste (B3) medical waste in Indonesia is undeniably a serious threat that impacts environmental pollution as well as public health. Data from the Ministry of Environment and Forestry (KLHK) shows that the control of such waste by hospitals still does not meet the prescribed standards. Law No. 32 of 2009 concerning Environmental Protection and Control (PPHL) has regulated that every person who generates hazardous waste is obliged to manage the waste they produce and if they are unable to do so, they must hand over the control to another party. The problems in this article are, what are the obstacles faced by hospitals in the control of medical B3 waste and how is the solution to the problem of hospital medical B3 waste control. This article is a normative legal research, descriptive in nature, and deductive inference. The conclusion of this research is that the obstacles faced by hospitals in the control of medical hazardous waste are due to the lack of waste treatment facilities compared to the amount of medical hazardous waste generated by hospitals and solutions to medical waste control problems, among others, by adding medical hazardous waste control facilities and encouraging each hospital so that the hospital can self-manage the waste.

**Abstrak:** Limbah bahan beracun berbahaya (B3) limbah medis di Indonesia tidak dapat disangkal merupakan ancaman serius yang berdampak pada pencemaran lingkungan dan juga kesehatan masyarakat. Data Kementerian Lingkungan Hidup dan Kehutanan (KLHK) menunjukkan bahwa pengendalian limbah tersebut oleh rumah sakit masih belum memenuhi standar yang ditentukan. Undang-Undang Nomor 32 Tahun 2009 tentang Perlindungan dan Pengendalian Lingkungan Hidup (PPHL) telah mengatur bahwa setiap orang yang menghasilkan Limbah B3 wajib mengelola limbah yang dihasilkannya dan apabila tidak mampu maka harus menyerahkan penguasaannya kepada pihak lain. Permasalahan dalam artikel ini adalah, apa saja kendala yang dihadapi rumah sakit dalam pengendalian limbah B3 medis dan bagaimana solusi permasalahan pengendalian limbah B3 medis rumah sakit. Artikel ini merupakan penelitian hukum normatif, bersifat deskriptif dan inferensi deduktif. Kesimpulan dari penelitian ini adalah kendala yang dihadapi rumah sakit dalam pengendalian limbah B3 medis disebabkan karena kurangnya fasilitas pengolahan limbah dibandingkan dengan jumlah limbah B3 medis yang dihasilkan rumah sakit dan solusi permasalahan pengendalian limbah medis antara lain, dengan menambah fasilitas Pengendalian Limbah B3 medis dan mendorong setiap rumah sakit agar rumah sakit dapat mengelola sendiri limbah tersebut.



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## INTRODUCTION

The government, including the Ministry of Environment and Forestry (KLHK), is also always following developments related to the problem of medical waste classified as infectious B3 waste (HPSN, 2021). According to data from the Ministry of Environment and Forestry (KLHK) until 2019, out of 2,877 hospitals in Indonesia, only 117 hospitals had B3 processing licenses. Not all of them have the same standards. Because, of the 117 hospitals, only 111 hospitals use incinerators. Six other hospitals use autoclaves. It was recorded that the medical waste stockpile due to Covid-19 until February 2021, reached 6.4 million tons. A recent study estimating the amount of medical waste in Asia reported that Indonesia is predicted to have disposed of at least 420 tons of medical waste (Budi Setiadi Daryono, 2023).

According to KLHK data, in a period of just 1 year (from March 2020 to February 2021), the amount of medical waste generated by health facilities is 6,418 tons, and the most is generated by health facilities in DKI Jakarta, namely 4,630 tons. This figure does not include medical waste from the Covid-19 vaccination process which started in January 2021 and is targeted to target 180 million Indonesians. Meanwhile, data from E-Monev Medical Waste in September 2019 by the Directorate of Environmental Health of the Ministry of Health, there 43% of hospitals whose medical waste control meets standards, 83% of hospitals do waste segregation and 96% of hospitals have environmental documents. On the other hand, there are hospitals that have incinerators but are not operational because they are not licensed, but quite a number have not managed their waste according to the standard (Fery Firmansyah, 2023).

The data above shows that medical waste control is still a serious problem because it has not been handled according to standards. The environment is an important issue that is increasingly surfacing along with the deteriorating environmental conditions

at this time. One of the causes of the worsening environmental conditions, among others, is the presence of medical hazardous and toxic (B3) waste that is increasingly uncontrolled and has a risk of causing impacts on the environment and humans. B3 medical waste is also a serious problem in Indonesia. Therefore, a reliable hospital medical hazardous waste control system is urgently needed. The data above shows that medical waste control is still a serious problem because it has not been handled according to standards. Medical waste is waste that comes from medical, pharmaceutical, research, treatment, care or education services that use materials that are toxic, infectious, dangerous or harmful unless certain safeguards are taken. There is a lot of waste generated by hospitals.

Most of it can harm anyone who comes into contact with it, hence the need for certain procedures in its disposal (Guidelines for Hospital Sanitation in Indonesia). The environment is an important issue that is increasingly prominent along with the deterioration of environmental conditions at this time. One of the causes of worsening environmental conditions, among others, is the presence of medical Hazardous Toxic Material (B3) waste when viewed from its source is waste generated from various medical activities, such as used syringes in hospitals, medicinal chemicals, and so on. The current situation is increasingly uncontrolled and at risk of causing impacts on the environment, and when viewed from the type of waste based on its compounds, B3 waste is waste that comes from human activities. This waste contains chemical and toxic compounds, making it very dangerous for living things, especially humans. B3 medical waste is also a serious problem in Indonesia (Aris Prio Agus Santoso, et.al., 2022). Medical hazardous waste is also a serious problem in Indonesia. Therefore, a reliable hospital medical hazardous waste control system is urgently needed.



Figure 1: Control of Hazardous Waste Control in Hospitals

Source: [https://yankes.kemkes.go.id/view\\_artikel/838/manajemen-pengelolaan-b3-di-rumah-sakit](https://yankes.kemkes.go.id/view_artikel/838/manajemen-pengelolaan-b3-di-rumah-sakit)

A good and healthy environment is a constitutional right of every citizen. This is as regulated and stated in Article 28H paragraph (1) of the 1945 Constitution which states that everyone has the right to live in physical and mental prosperity, to live, and to have a good and healthy environment, and to receive health services (Siallagan, 2020). Article 59 point (1) of Law No. 32 of 2009 on Environmental Protection and Control states that every person who generates hazardous waste is obliged to carry out the control of the hazardous waste it generates and point (3) also states that in the event that every person is unable to carry out the control of hazardous waste on their own, the control is handed over to another party. Further implementing regulations of the Law are further regulated in Government Regulation No. 22 of 2021 on the Implementation of Environmental Protection and Control. The control of medical B3 waste generated from health facilities (including hospitals) is also specifically regulated in the Minister of Environment Regulation (Permen) No. P.56/Menlhk-Setjen/2015 of 2016 on Procedures and Technical Requirements for Hazardous and Toxic Waste Control from Health Care Facilities.

In accordance with the mandate of the Regulation of the Minister of Health of the Republic of Indonesia Number 2 of 2023 concerning the Implementation Regulation of Government Regulation Number 66 of 2014 concerning Environmental Health, medical waste is one type of toxic hazardous waste (B3) that can cause health problems or risk of pollution to the environment. The control of medical B3 waste generated from health facilities (including hospitals) is also strictly regulated and specifically processed in the Minister of Environment Regulation (Permen) No. P.56/Menlhk-Setjen/2015 of 2016 concerning Procedures and Technical Requirements for Hazardous and Toxic Waste Control from Health Service Facilities, so that only licensed medical waste processors can process it.

Related to the aforementioned regulation, there are a number of obstacles in implementing the Minister of Environment Regulation No. P.56/Menlhk-Setjen/2015 of 2016 on Procedures and Technical Requirements for Hazardous and Toxic Waste Control from Health Care Facilities, among others, the limited number of hazardous and toxic waste processing companies that already have a license from the Ministry of Environment and Forestry,

namely there are only six companies, five of which are located in Java and 1 in East Kalimantan. The number of companies is very small compared to the number of healthcare facilities in Indonesia, such as 2852 hospitals, 9909 health centers, and 8841 clinics. Meanwhile, the waste generated from healthcare facilities, especially hospitals and health centers, is 296.86 tons/hour (October 2018) but on the other hand, the processing capacity owned by 3rd parties is only 151.6 tons/day (Siallagan, 2020).

This hazardous waste requires a more specialized handling method than non-hazardous waste. Hazardous waste needs to be treated, either physically, biologically, or chemically so that it becomes harmless or reduces its toxicity. After treatment, hazardous waste still requires a special disposal method to prevent the risk of pollution (IEC, 2023). In addition to water pollution, air pollution by waste will also occur such as unpleasant odors caused by the decay of organic waste. Burning waste made from certain plastics can even be carcinogenic and cause cancer when inhaled by humans (Aris Prio Agus Santoso, et.al., 2022). Waste treatment can be done by; 1. Reduction of waste that can be reduced by reducing the amount of waste usage; 2.

Recycling can produce other items that can be used; most of which are inorganic waste; 3. Physical processing of waste that has hazardous content such as industrial waste; 4. Disposal of waste that has no use value by going through a processing process so that the ingredients contained therein disappear.

Activists from the Sanggar Lingkungan Hidup organization saw piles of garbage bags being burned. The government's discovery of 118 containers of hazardous waste was conveyed to BBC Indonesia with various photos of the findings, which included bags of medicine and ampoules labeled with a number of hospitals. These included hospitals in Lampung, Surabaya, Yogyakarta, Solo, Cirebon, and Jakarta. Hospital waste classified as hazardous and toxic materials (B3) has accumulated and mixed with household waste. The location is between the roadside and the river. The findings of illegal B3 waste were then reported to the local district government, then to the provincial level, by confirming the findings of B3 medical waste, including used syringes, used ampoules, used infusion bottles/plastics, used infusion hoses, used infusion needles, expired drugs, and blood collection sample results.

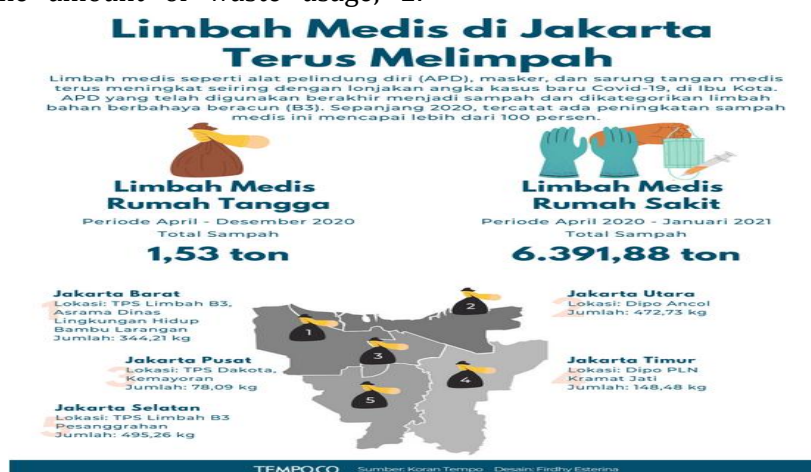


Figure 2 Household and Hospital Medical Waste Data Throughout 2020 in Jakarta

Sumber: <https://grafis.tempo.co/read/2509/limbah-medis-di-jakarta-terus-melimpah-kala-pandemi-covid-19>

Based on the field findings, KLHK secured the location by sealing it due to the alleged criminal offense of Article 104 of Law 32 of 2009, concerning Environmental Protection and Control. "The article states that any person who dumps waste and/or materials into environmental media without a permit is subject to a maximum imprisonment of three years and a maximum fine of Rp 3 billion". The handling of B3 waste in a number of hospitals has been handled specifically using third-party services. This is because not all hospitals have B3 waste treatment facilities.

In this case, the hospital did not know where the third party disposed of the B3 waste, as explained by the supporting director of Harapan Kita Heart Hospital in Jakarta. "The B3 waste that we know that there is a company that brings it, we work with third parties. At the end of the day, we don't know what happened to it." According to the Environmental Center in Cirebon, this is not only an ecological issue, an environmental issue, but it is also a humanitarian issue because the risk is so great. So we hope that the government is serious, by not covering up who is involved." (Jerome Wirawan, 2023):

In order to fulfil the above expectations, it can be done by implementing good governance which will determine the extent to which the objectives of governance can be achieved and realized. The paradigm of proper governance is that the government governs based on the aspirations and will of the people in order to ensure the common interests of all the people. To realize this correct paradigm of governance, government administration itself must be carried out properly. The above requires several things, first, good governance requires that the government itself must be truly effective in governing. Second, the government itself is subject to the rule of law. To ensure good governance, the government itself must comply with the rule of law. Without compliance with the law, and the system of

governance, there will be no legal certainty (Jerome Wirawan, 2023).

Good governance will determine the extent to which the objectives of governance can be achieved and realized. The paradigm of proper governance is that the government governs based on the aspirations and will of the people in order to ensure the common interests of all the people. To realize this paradigm of good governance, government administration itself must be carried out properly (Keraf, 2010).

The foregoing requires several things: first, good governance requires that the government itself must be effective in governing. This sounds tautological, but it is actually very important. Because, as long as the government itself is weak and ineffective, government power can become a victim and a tool for interest games. An effective government does not necessarily mean a strong government. A strong government is one that is resilient and resistant to the various pulls of interest in such a way that government power cannot be manipulated and perverted from its true purpose. Strong in the sense that it is able to resist the politics of narrow interests that intend to pervert the power of the government itself. Second, the government itself is subject to the rule of law. To ensure good governance, the government itself must abide by the rule of law. In this way, it becomes a clear rule of the game that can become a common guide in organizing life together to ensure common interests. Without compliance with the law, and the system of governance, there will be no legal certainty (Keraf, 2010).

## **METHODS**

Legal research, based on applicable legal norms, is the subject of this Article. The research was carried out through a conceptual approach. The author uses this method to identify some issues of law with respect to the control of medical hazardous waste in hospitals in Indonesia based on applicable

laws, both national and international laws relevant to the object under study. The analysis will be conducted mainly from the perspective of environmental law.

## **RESULTS AND DISCUSSION**

### **Hospital Medical Hazardous Waste Control**

Hospital medical hazardous waste control has a very important role in preventing negative impacts on the environment and health. Therefore, every hospital is required to have a reliable waste control system. Hal tersebut sesungguhnya merupakan kewajiban dari pihak rumah sakit sebagaimana yang telah diatur dalam of Law No. 32 of 2009 on Environmental Protection and Control.

According to Sunardi, there are several characteristics of waste that can be considered as B3. First, the material is explosive. Materials like this are very susceptible to exploding, especially in the face of environmental changes. Therefore, materials like this need to be handled carefully. The second characteristic is that it easily ignites or burns. Third, it is toxic, which has the potential to disturb the surrounding organisms. The determination of toxic waste is based on toxicology tests conducted on the waste. Fourth, reactive or in an unstable state can cause changes without detonation, or cause danger when in contact with humans. The last two characteristics are corrosive and infectious. Specifically, for infectious, Sunardi said that this waste is contaminated with solid pathogens that are not routinely present in the environment and have the potential to transmit disease to humans. In other words, infectious waste contains viruses that are dangerous and have the potential to transmit disease (Arief Maulana, 2023).

Hazardous waste treatment is a process to reduce and/or eliminate hazardous and/or toxic properties. In its implementation, the treatment of B3 waste from healthcare facilities can be carried out thermally or non-thermally. Thermal treatment of B3 waste can be carried out using gravity flow type and/or vacuum type autoclave equipment, microwaves, frequency irradiation, and incinerators (Larasati et al., 2022).

Hospitals with their various activities produce waste which is now beginning to be

realized and can cause health problems due to the materials contained in it and become a chain of disease causes, besides that it can also be a source of environmental pollution of air, water, and soil. Hospital waste can be classified based on the type of generating unit and the type of control and hospital waste is broadly classified into medical and non-medical waste (Larasati et al., 2022).

Hospital medical waste falls into the category of hazardous and toxic waste which is very important to be managed properly. Some medical waste falls into the hazardous waste category and some into the infectious category. Hazardous medical waste in the form of chemical waste, pharmaceutical waste, heavy metals, genotoxic waste, and pressurized containers is still not well managed. While infectious waste is waste that can be a source of disease spread to hospital human resources, patients, visitors/patient escorts, or the community around the hospital environment. Infectious waste is usually in the form of patient body tissue, syringes, blood, bandages, materials, or equipment that come into contact with infectious diseases or other media that are thought to be contaminated by patient disease. Improper control will risk disease transmission. Some of the health risks that may be caused by the presence of hospitals include infectious diseases (Larasati et al., 2022).

According to Law of No. 32 Tahun 2009, waste is the residue of a business and/or activity. Hazardous and toxic materials, hereinafter abbreviated as B3 a substances, energy, and/or other components that due to their nature, concentration, and/or the amount, either directly or indirectly, can pollute and/or damage the environment, and/or and/or damage the environment, and/or endanger the environment, health, and the survival of humans and other living things. other living things. Then, Hazardous and toxic waste, hereinafter referred to as hereinafter referred to as B3 Waste, is the residue of a business and/or activity that contains B3.

In the preamble to the Regulation of the Minister of Health of the Republic of Indonesia Number 18 of 2020 concerning Medical Waste Control of Area-Based Health Service Facilities, it is stated that health service facilities as a place to organize health service efforts produce medical waste that has the

potential to pose a risk of disease transmission and other health problems and environmental pollution, so it is necessary to manage medical waste. B3 waste in Indonesia more or fewer shows that the concern is a serious threat. B3 waste is said to be a serious threat because it is not only harmful to the environment, but also harmful to public health.

Hazardous Waste Control in hospitals includes the following stages: a. Planning for hazardous waste needs; b. Procurement of hazardous waste; c. Storage of hazardous waste; d. Utilization of hazardous waste (with hazardous waste emergency preparedness); e. Documentation of hazardous waste utilization; f. Handling of hazardous waste; g. Staff Education and Evaluation (Zuzun Nazila, n.d.).

### **Impact on Environment and Health**

Definition of Hazardous and Toxic Waste (hereinafter referred to as LB3) according to the United Nations Environment Programme (UNEP), namely all types of waste that are solid, liquid, or gas, other than radioactive waste, infectious waste, and chemical waste which due to their chemical activity or in other words their toxic properties, are easily explosive when exposed to other waste, and other properties that can interfere with health or the surrounding environment, either directly or indirectly (due to mixing with other waste) (Setiawati & WITA, 2019).

Based on the definition of B3 waste above, B3 waste will certainly have an impact on the environment and health. The impact on the environment is, a.l., environmental pollution (to water, air, and soil), environmental destruction, and environmental health.

Indirect health risks through the release of pathogens and toxic pollutants into the environment can be posed during the treatment and disposal of healthcare waste. Healthcare waste and other products will cause adverse health effects, including (WHO, 2023):

- a. Contamination of drinking water, surface water, and groundwater if the site is not properly established, can occur and cause when disposing of untreated healthcare waste in landfills;

- b. Release of chemical substances into the environment may occur when treating healthcare effluents with chemical disinfectants and if such substances are not handled, stored, and disposed of in an environmentally sound manner;
- c. Waste incineration has been widely practiced, but the various health effects and inadequate incineration or burning of unsuitable materials result in the release of pollutants into the air and the generation of ash residues;
- d. Specialized modern incinerators operating at 850-1100°C and complete with specialized gas cleaning equipment that can meet international emission standards;
- e. Alternatives to incineration such as autoclaving, microwaving, and steam treatment integrated with internal mixing, which minimize the generation and release of hazardous chemicals or emissions should be considered in settings where there are sufficient resources to operate and maintain such systems and to minimize the generation and release of hazardous chemicals or emissions.

Potential hazards that can infect hospital patients, healthcare workers and the general public come from healthcare waste containing microorganisms. Adverse health outcomes associated with healthcare waste and other products include (WHO, 2023):

- a. Sharps resulting in injury;
- b. exposure to toxins in pharmaceutical products, particularly antibiotics released into the environment, as well as substances such as mercury, during handling or incineration of healthcare waste;
- c. chemical burns arising from disinfection, sterilization or waste treatment activities;
- d. air pollution arising from the release of particulate matter during incineration of medical waste;
- e. At the time of open burning possible thermal injuries and operation of medical waste incinerators; and
- f. Radiation burns.

### **Hospital Medical Hazardous Waste Control Analysis**

#### **Hospital Constraints in Medical Hazardous Waste Control**

Regulation of the Minister of Environment and Forestry of the Republic of

Indonesia No. P. 56 of 2015 of 2016, also states that hospitals, including one of the health service facilities, are required to carry out hazardous waste management which includes reducing and sorting hazardous waste, storing hazardous waste, transporting hazardous waste, processing hazardous waste, burying hazardous waste, and/or stockpiling hazardous waste. The management of hazardous waste in hospitals is very necessary because if hazardous waste is not managed properly, it can have impacts including: causing injury, environmental pollution, and causing nosocomial diseases. Good hospital hazardous waste management is expected to minimize these impacts (Purwanti, 2018). The limited number of hospitals that have a hazardous waste treatment license causes the treatment to be constrained and results in the accumulation of hazardous waste. Harmful to the environment and health (HPSN, 2021). A number of obstacles usually occur in terms of hazardous medical waste control. Medical waste control is a series of activities including collection, transport, storage, treatment, and disposal of medical waste. Some important parts of hospital waste control are waste reduction, labeling and packaging, transportation, storage, treatment, and disposal. Medical hazardous waste is identified as a chemical substance, so it will clearly have an impact on environmental damage and human health if not managed properly.

There may be a number of reasons for this. This includes, for example, a lack of knowledge on the health risks related to healthcare waste, inadequate training in solid waste control, and the absence of suitable disposal systems, still not being implemented or developing basic procedures established by current laws and regulations. Difficulties in the implementation of a strategy to manage toxic waste, lack of funding and resources for both public and private sector operators as well as lower priority accorded to this issue. Another factor is that the majority of problems relating to healthcare waste are lack of compliance with legislation, supervision of healthcare waste disposal operations, no active steps in relation to hazardous waste contamination sites, and shortage of training for Health Care Waste Control Officers. There

are not enough rules in many countries, and they do not enforce them (HPSN, 2021).

There are other obstacles for hospitals to provide medical hazardous waste treatment facilities independently. However, the limitations of B3 waste management by hospitals independently can be understood, because in essence, their main business field is health service providers. The hope of organizing B3 waste management independently in hospitals is increasingly difficult to implement, seeing various findings including, the non-implementation of technical provisions for the operation of waste treatment with incinerator technology which causes thick smoke from combustion, the location of hospitals adjacent to residential areas, so that in applying combustion technology with incinerators cannot be implemented freely (Absori & Latif, 2020).

It can also be observed that the principle of hazardous waste control is not fully applied, among other things (Aris Prio Agus Santoso, et.al., 2022):

1. "Pollution Prevention Principle" (Efforts to minimize waste generation).
2. "Polluter Pays Principle" (Polluters must pay all the costs caused).
3. "Cradle To Grave Principle" Supervision from generation to disposal/landfill of hazardous waste.
4. Processing and disposal of hazardous and toxic waste is attempted to be carried out as close as possible to the source.
5. "Non-Discriminatory Principle" (All hazardous and toxic waste must be treated equally in its treatment and handling).
6. "Sustainable Development".

The sixth point above has actually been echoed at the 2021 National Waste Care Day (HPSN) Summit, which has become an important momentum to strengthen the position of the waste management sector as a driver of Indonesia's economic growth. This is a manifestation of one of the principles of sustainable waste management, namely waste to resources through the implementation of a circular economy and waste to alternative energy sources (HPSN, 2021).

Another constraint is authority. According to the Head of the DIY Economic and Natural Resources Administration Bureau, Ni Made Dwi Panti Indrayanti, in a

seminar entitled *Medical Waste Policy Solutions in Hospitals and Health Services: Can Local Governments Play a Role?* On the other hand, permits for hazardous waste treatment are still centralized under the authority of the central government, in this case, the Ministry of Environment and Forestry (KLHK). "We hope that at least the central government will 'allow' to delegate B3 waste treatment permits to local governments so that there is no waste treatment crisis," Licensing is also still constrained by what is called a temporary permit and the central and local governments can monitor waste disposal so that it can be ensured that what has been given a temporary permit is implemented (FK UGM, 2023).

### **Implementation of Medical Hazardous Waste Control**

Data from E-Monev Medical Waste in September 2019 by the Directorate of Environmental Health of the Ministry of Health, there 43% of hospitals whose medical waste control meets standards, 83% of hospitals do waste segregation and 96% of hospitals have environmental documents. On the other hand, there are hospitals that have incinerators but are not operational because they are not licensed, but quite a number have not managed their waste according to the standard.

Solid medical waste is categorized as hazardous and toxic waste that needs to be managed in accordance with applicable regulations. Currently, the management of solid medical waste independently by health service facilities (*fasyankes*) still does not meet the requirements (Sulastri, n.d.).

According to the Ministry of Health in 2020, the amount of solid medical waste generation from health facilities in Indonesia was 294.66 tons/day. Meanwhile, the capacity of solid medical waste processing in health facilities has only reached 53.12 tons/day plus the capacity of processing services by third parties of 187.90 tons/day, so there is still a deficit of untreated waste (Prasetiawan, 2020: 15). The low performance of solid medical waste management is caused by the number of waste processors not proportional to the amount of solid medical waste generated by health facilities (Sulastri, n.d.).

Hospital waste management needs to receive serious attention and adequate so that the negative impacts that occur can be avoided or reduced. Therefore, in the management of hospital Waste, the hospital management must carry out Waste management in accordance with applicable legal provisions (Siallagan, 2020).

The current state of medical waste management does not fulfill the provisions contained in the laws and regulations. The findings of this situation include the occurrence of direct disposal of medical waste into the environment (open dumping), non-compliance with waste treatment regulations, shortage of processing service providers, limited knowledge to manage waste, both implementers and supervisory officers, and waste management without accompanying licensing documents (Absori & Latif, 2020).

The expert of Constitutional Law and Administrative Law Philipus M. Hadjon stated that there are four functions of licensing in the administrative law. The four functions are to prevent harm, protect certain objects, distribute rare objects or goods, and select certain people or activities. In the context of hazardous and toxic waste management (B3), the function of permits is to prevent harm and direct certain activities. In hazardous and toxic waste management, a permit is absolutely necessary. From the administrative side, waste management is also absolutely necessary because it causes harm. In other words, the function of permits in waste management is a preventive instrument, not a repressive instrument. "Therefore, it is very inappropriate if we contrast Article 59 paragraph (1) with Article 102 of the Environmental Management Law," according to Philipus M. Hadjon (Mahkamah Konstitusi Republik Indonesia, 2023).

Enri Damanhuri, an environmental expert from the Institut Teknologi Bandung (ITB), said that hazardous and toxic waste needs to be managed specifically. In Indonesia, every node of hazardous waste management must be equipped with a permit, namely a storage permit, collection permit, transport permit, utilization permit, processing permit, and hazardous waste landfill permit. "I personally cannot imagine the consequences if the licensing instrument as stated in Law Number 32 Year 2009

paragraph (4), is abolished in the hazardous waste management system in Indonesia. The management of hazardous and toxic waste in Indonesia, which we must admit is not yet perfect, will go backwards to the pre-1994 era,".

The former of Minister of Environment Alexander Sonny Keraf who was involved in drafting the law said that the spirit, vision, and big dream behind the drafting of Law No. 32/2009 was to protect the environment as a human right. In other words, the spirit, vision, and big dream behind the making of the law is to guarantee protection for all Indonesians from environmental disasters and potential disasters. "The government has acted constitutionally to protect all the people of Indonesia and all the land of Indonesia from environmental disasters in line with the constitutional recognition of a good and healthy environment as a human right (Mahkamah Konstitusi Republik Indonesia, 2023).

The Director General of Waste Management, Waste, and B3 said: provide a way out, don't make it difficult, and don't make it long if you then arrange or take care of technical approval or SLO (Certificate of Operational Feasibility), because now there is no B3 waste permit but technical approval and SLO, so I am also open if anyone feels that being legalized is made complicated" (Mahkamah Konstitusi Republik Indonesia, 2023).

Based on Article 275 of Government Regulation No. 22/2021, Hazardous Waste Management is an activity that includes reduction, storage, collection, transportation, utilization, processing, and/or landfilling. In the series of B3 Waste Management, it is necessary to involve several parties, namely: Hazardous Waste Generators, Hazardous Waste Collectors, Hazardous Waste Transporters, Hazardous Waste Beneficiaries, Hazardous Waste Processors and Hazardous Waste Hoarders. Parties conducting Hazardous Waste Management must have a Hazardous Waste Management Technical Approval as stipulated in Government Regulation 22 of 2021 concerning the Implementation of Environmental Protection and Management. A hazardous Waste Management Permit is a preventive administrative instrument whose issuance

can be carried out in 1 (one) integrated permit by the Minister, governor, or regent/mayor in accordance with their authority based on the submission of the permit applicant, except Waste management permit for Hazardous Waste Transportation activities. In addition, in order to provide a reference for local governments and industries engaged in Hazardous Waste Management, several technical regulations in Hazardous Waste Management have been prepared (Pslb3 Launching Aplikasi Sistem Pelaporan, 2023).

For this reason, a focused analysis is needed which starts from the identification of emerging issues, the readiness of policy instruments, and the role of stakeholders. Gradually, through planning efforts, programs, infrastructure development, and monitoring efforts up to the accreditation assessment on an ongoing basis carried out by an authorized institution (Absori & Latif, 2020).

## **CONCLUSION**

The conclusion of this research is that the obstacles faced by hospitals in the control of medical hazardous waste are due to the lack of waste treatment facilities compared to the amount of medical hazardous waste generated by hospitals and the implementation of B3 medical waste control in hospitals has not been optimal. It is because existing data, shows that most of them still do not meet the standards of B3 medical waste management as stipulated in the applicable laws and regulations, especially those stipulated in Law Number 32 of 2009 concerning Environmental Protection and Management.

Recommendations that can be submitted by the author are: increase the number of medical hazardous waste control facilities in each hospital so that medical hazardous waste control can be carried out independently by the hospital. Then, increase the number of medical hazardous waste control companies as well as increase the capacity to manage these wastes to anticipate an increase in the amount of medical hazardous waste in hospitals. For this, it is important to support the Government's ability to offer incentives such as capital participation by the government for investors

or private parties wishing to make investments in waste control. Tax exemptions, assist in the procurement of land for trade or other facilities relating to medical hazardous waste treatment systems shall also be granted as well as the obligation of licensing put forward by experts in State Administration Law and Environmental Law, the ease of implementation of matters that become obstacles can be carried out immediately, especially in terms of the implementation of compliance with environmental law regulations related to medical hazardous waste.

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