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Covid-19 Medical Waste Management in the Perspective of Environmental Law

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Abstract

Proper disposal of medical waste is one of the most important things in dealing with the Covid 19 pandemic. Over the last two years, the large number of Covid-19 cases caused by Delta and Omnicron variants has also led to an increase in medical waste generated by the use of masks and other personal protective equipment. This leaves homework for all of us, not just the government. This medical waste is generated not only in medical facilities but also in communities and homes. The waste in this pandemic is classified as Hazardous Waste and Toxic Waste (B3) and may be classified as Infectious Waste. The purpose of this study is to study the management of medical waste related to Covid19 from an ecological point of view so that it can effectively reduce the accumulation of waste that may have a natural impact on health promotion. Is to do. This investigation is a doctrinal/normative legal investigation that uses a legal approach. The data was collected through literature reviews and qualitatively analyzed. As a result of this study, the management of COVID-19 medical waste is regulated, and the treatment of medical facility waste and household waste is different. The purpose of this regulation is to reduce the increase in the amount of waste that can affect the environment and public health.

Keywords: Covid-19; Medical Waste; Environmental Law

I. Introduction

Indonesia is currently in the transition from a pandemic to an endemic Covid19. So far, the number of positive cases of Covid 19 has decreased and the status has dropped to Tier 1 in many parts of Indonesia, but the problem still occurs. The problem is that there is still a lot of medical waste, especially at home. COVID19 medical waste management is one of the most important because of concerns that it can be a vehicle for spreading the virus if infectious medical waste is not optimally managed. Infectious waste is medical waste that is classified as dangerous and toxic waste (B3). Infectious waste is generated in the form of used masks, used gloves, used bandages, used handkerchiefs, and used plastic beverages. The rest of the patient's diet also includes used syringes, used infusion sets, and used personal protective equipment (PPE). Residents of these wastes were also monitored by a monitored person (ODP) who was self-quarantining at home.

Worldwide, it is estimated that at least 5.2 million people, including 4 million children, die each year from diseases associated with poorly managed medical waste. Therefore, in responding to the Covid-19 outbreak, many ways are taken to break the Covid-19 chain in various ways. One of the ways to do this is by properly managing infectious medical

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waste according to procedures. Waste management policies are based on written legal norms as positive laws. The legal basis for this Waste Management is:

1. Law No. 18 of 2008 on Waste Management (Hereinafter referred to as the Waste Management Act)
2. Law Number 32 of 2009 concerning Environmental Protection and Management (Hereinafter referred to as UUPPLH);
3. Government Regulation Number 81 of 2012 concerning Management of Household Waste and Similar Waste of Household Waste;
4. Presidential Regulation of the Republic of Indonesia Number 97 of 2017 concerning National Policies and Strategies for the Management of Household Waste and Waste Similar to Household Waste;
5. Regulation of the Minister of Environment and Forestry Number P.10/MenLHK/Setjen/PLB.0/4/2018 concerning Guidelines for Formulating Regional Policies and Strategies for the Management of Household Waste and Types of Household Waste
6. Circular of the Minister of Environment and Forestry Number SE.5/MenLHK/PSLB3/PLB.0/10/2019 concerning the National Movement for Sorting Waste from Home.
7. Regulation of the Minister of the Environment Number 13 of 2012 concerning Guidelines for the Implementation of 3R Through Waste Banks
8. Minister of Public Works Regulation No. 3 of 2013 concerning the Implementation of Waste Infrastructure and Facilities in the Handling of Household Waste and Types of Household Waste

In Part C of the Circular Letter of the Ministry of the Environment Number 2 of 2020 it is explained regarding household waste and household-like waste handling COVID-19 19, with the following handling:

a. All caretakers or garbage collectors should be equipped with personal protective equipment, especially masks, gloves, and safety shoes, which should be disinfected daily.

b. To reduce the accumulation of wasted masks, healthy people are encouraged to use reusable masks that can be washed daily.

c. People who are healthy and use disposable masks should tear, cut, and cut the mask and pack it neatly before throwing it in the trash.

d. The local government prepares special trash bins for masks in public spaces.

The most common family medical waste is masking. Medical masks are mainly made of fiber and paper and should be disposed of after use. Masks should also be discarded or sent to landfills (TPS) rather than non-recyclable junk. The treatment is done by appropriate methods such as incineration and pyrolysis (heat treatment without oxygen). Hand sanitizers are much safer for the environment because they are volatile and easily evaporate into the air to form a vapor phase.[1]

Mask waste is classified as medical waste that requires special treatment under the 2015 Minister of Environment and Forestry (PermenLHK) Regulation No. 56 on Hazardous Waste Disposal Methods and Technical Requirements from Medical Facilities. This indicates that the presence of used masks in the environment can pose a health risk due to the bacteria and viruses contained in the mask waste.

Various follow-up efforts associated with the disposal and control of single-use scientific waste consist of sterilizing it the usage of steam, burning it, or even chemically disinfecting it earlier than being taken to the Final Disposal Site (TPA). Based on the studies output of the Medical Waste Handling Sub-Sector withinside the Health Handling Covid-19 Task Force, the Covid-19 virus can live on at the pinnacle of the masks for 3-four to days. This may be a fitness risk for waste collectors & processing officers. The proper scientific waste control paradigm, particularly disposable masks for citizens, is predicted to offer the most efficient moves and steps for citizens to create a secure and wholesome environment.

II. Method

The research conducted is included in the realm of non-doctrinal legal research because the object studied is in addition to the law in a normative concept as well as the law in

[1] Begini Cara Kelola Limbah Masker di Masyarakat Untuk Cegah Penularan COVID-19. https://infeksiemerging.kemkes.go.id/warta-infem/begini-cara-kelola-limbah-masker-di-masyarakat-untuk-cegah-penularan-covid-19, Accessed March 10 2022

an empirical concept. So the approach chosen in this study is empirical juridical. The choice of this approach was taken because what will be studied in addition to the legislation is also the application of these rules in the management of Covid-19 medical waste in the city of Surabaya. This research was conducted by direct observation of the place under study to obtain the necessary data related to the problems studied, the data from the field research is primary data. The research subjects selected in addition to laws and regulations also involve several related agencies in the city of Surabaya.

III. Main Heading of the Analysis or Results

A. Covid-19 medical waste management in the perspective of Law No. 18 of 2008 concerning Waste Management

The increasing number of Covid-19 cases has an impact on the increase in the number of infectious waste Covid-19 in Indonesia, infectious waste is waste contaminated with pathogenic organisms (bacteria, viruses, parasites, or fungi) which in sufficient quantities can transmit disease to humans. In contrast to waste, waste is the remains of human daily activities and/or natural processes in solid form.[2] The types of waste as stated in Article 2 of Waste Management Act are divided into 3 types, the first is household waste, this household waste comes from daily activities in the household, excluding feces and specific waste. Specific waste as referred to in paragraph (1) letter c includes:

a. Garbage containing hazardous and toxic materials
b. Garbage containing hazardous and toxic waste
c. Garbage arising from disasters
d. Building demolition debris
e. Waste that cannot be processed technologically and/or
f. Garbage that arises periodically.

Waste management under the Waste Management Act includes waste reduction and disposal measures aimed at improving public health and environmental quality and

[2] Rani Ayu Wardani, R.Azizah. (2020). Management of Solid Medical Waste on One of the Covid 19 Referral Hospitals in Surabaya, East Java. Jurnal Kesehatan Lingkungan. Vol 12 No 1. September 2020. Page 38-44.

turning waste into resources. This activity is the duty of governments and local governments to ensure proper environmentally friendly waste management. There are several county/city government agencies that implement waste management, including organizing waste management at the county/city level according to the standards, procedures, and standards set by the central government.

In Government Regulation Number 81 of 2021 regarding Management of Household Waste and Types of Household Waste and is specific in Regulation of the Minister of Public Works Number 3 of 2013 regarding Management of Household Waste and Types of Household Waste, it includes:

a. Selection withinside the shape of grouping and isolating waste consistent with the type, quantity, and/or nature of waste
b. Collection withinside the shape of series and switch of waste from waste assets to brief shelters or incorporated waste processing sites
c. Transportation withinside the shape of sporting waste from the supply and/or brief waste garage location or the incorporated waste processing web website online to the very last processing web website online
d. Processing withinside the shape of converting the characteristics, composition, and quantity of waste
e. Waste processing withinside the shape of returning waste and/or residues and
f. Processing earlier than being disposed of correctly into environmental media.

The emergence of Covid-19 also affects the condition and composition of waste generated from households. The variety of waste generated increases with mask waste, even gloves, and disinfectant tissue waste. Because during this Covid-19 pandemic, everyone is forced to obey the Health protocol. Starting from wearing a mask, washing hands with water and soap, as well as with sanitizer or germ-killing liquid. The increase in waste during this pandemic has not been followed by the readiness to develop facilities and infrastructure for services and waste processing. This is of course a shared obligation of the government, the community, and families to be more concerned about this waste problem.

In Article 5 of Waste Management Act, it is stated that the Government and Regional Governments must ensure the implementation of good and environmentally sound waste management by the objectives referred to in the Act. So that the government's role is very large in terms of managing COVID-19 medical waste. Where the government's task is to facilitate waste management, especially in the household realm. Because as we all know, the hospital itself has an incinerator, which is a tool to process COVID-19 medical waste or other infectious waste. While in the community itself there is no such tool. So that there is also a need for education to the public to be able to manage this COVID-19 medical waste properly. This can be done by actively providing information on how to manage waste that is classified as infectious.

In addition to the active role of the government in managing COVID-19 medical waste, the role of the community and family also plays an important role in breaking the chain of Covid-19 spread. From the guidelines issued by the Ministry of Health and the Ministry of the Environment, the management of Covid-19 medical waste, especially for disposable masks in the household, can be done by disinfecting the masks before they are disposed of. To prevent used masks from being used by irresponsible persons by reselling them, then used masks before being disposed of they can be damaged first. Then this waste is put into a special plastic bag for used masks with a label. Or use a yellow plastic bag and not mixed with other household waste. Waste management is a systematic, comprehensive, and sustainable activity that includes waste reduction and management. Therefore, community interest is key to successful waste management.

B. Covid-19 Medical Waste Management in the perspective of Law No. 32 of 2009 concerning Environmental Protection and Management

In Article 1 paragraph 16 of UUPPLH it is stated that environmental destruction is an act that can result in changes in environmental conditions, both changes that can be seen directly or indirectly in the chemical, physical and biological conditions of the environment. Pollution that occurs to the resilience of the environment, whether done intentionally by humans or done intentionally, will have an impact on the survival of the environment. Pollution caused by chemical waste will certainly have an impact on the survival of those in it. The environment can be said to be a unitary space that includes

space, earth, and the bowels of the earth. The three become an inseparable series, where if one side is polluted, the impact will affect other spatial units.[3]

The precautionary principle or early prevention is known in environmental law, if this principle is proven scientifically, it can prevent environmental damage. This precautionary principle is regulated in Article 2 of UUPPLH to prevent or anticipate an impact or risk that may come from a certain activity as a result of human activities.

Waste in line with the provisions in UUPLH in Article 1 quantity 20, waste is the residue of a commercial enterprise and/or activity. Infectious waste is waste as a result of fitness provider facilities, which encompass fitness provider clinics or the like, network fitness facilities in addition to hospitals. Infectious clinical waste generated consists of used PPE clothes, fast take a look at syringes, clinical masks, clinical gloves, and the entirety associated with the usage of Covid-19. If this waste isn't dealt with and processed properly, it may circuitously transmit the Covid-19 virus due to the fact Covid-19 infectious clinical waste is reactive. Because of this, what is wanted in proper and accurate waste management with the aid of using hospitals is to split the disposal of infectious clinical waste ex-Covid-19 and normal waste.

According to Article 1, Number 23 of UUPLH, B3 waste management is an activity that includes storage, collection, collection, reduction, transportation, treatment, and landfill. Therefore, based on the above understanding, the B3 waste disposal procedure includes the disposal of Covid19 medical waste. To manage medical waste from COVID 19, the government has issued Circulaire No. SE 2 / MENLHK / PSLB3 / PLB.3 / 3/2020 through the Minister of the Environment. The issuance of this circular is intended to control the disposal of COVID19 medical waste and prevent it from being directly disposed of in the environment.

In health service facilities (Fasyankes), the implementation of infectious waste treatment can be carried out with the following steps:

a. By storing the infectious waste in a closed place with a maximum period of 2 days from the end of the use of the tool

[3] Hesti, Y. (2020). Upaya Penanganan Limbah B3 Dan Sampah Rumah Tangga Dalam Mengatasi Pandemi Corona. *Jurnal Pro Justitia*, 60–67.

b. Carry out the process of transportation and/or destruction concerning the processing of B3 waste. With an incinerator with a minimum combustion temperature of 800 degrees Celsius and a complete autoclave accompanied by a shredder

c. The results of incineration or shredding from the autoclave are placed in a bag, marked with a "toxic" symbol using a hazardous material label, and transferred to a TPS (intermediate storage) for hazardous waste disposal.

There is a lack of effort to classify and select waste at the community level. Wet waste (organic waste) is still mixed or combined with inorganic waste and even household medical waste such as masks, gloves, and other household waste. Therefore, the government must make efforts to further raise public awareness of the importance of separating waste before dumping it in the trash. Waste separation is one of the first steps in determining the success of a waste management system.[4]

Referring to Article 88 of the PPLH Law where it is stated there is absolute responsibility for everyone who in his actions, business or activities uses or produces or manages B3 waste and can pose a serious threat to the environment, then he is absolutely responsible for the losses caused without the need for proof of error. If it is associated with compensation, then Article 104 of Law no. 32 of 2009 which reads "Everyone who dumps waste and/or materials into environmental media without a permit as referred to in Article 60, shall be punished with imprisonment for a maximum of 3 (three) years and a fine of a maximum of Rp. 3,000,000,000.00 (three billion rupiah)." So it is clear that there are sanctions for someone who disposes of medical waste directly into the environment without carrying out previous waste management procedures. However, this regulation does not mention in detail about the hospital.

However, the 2019 Health Minister No. 7 rule on hospital environmental hygiene provides for waste management, including B3 waste, and Article 12 (4) relates to the promotion and supervision of hospital environmental hygiene. And administrative sanctions in the form of oral or written warnings may be issued by the head of the county/city health department of each institution to a non-functioning hospital.

[4] Ambina, Dipo Gina. April 2019. "Tinjauan Pemilahan Sampah Menurut UU no 18 Tahun 2008 Tentang Pengelolaan Sampah." *Jurnal Bina Hukum Lingkungan* Volume 3 Nomor 2: hlm. 173.

IV. Conclusion

Referrals to the management of Covid-19 medical mask waste have been stated in the waste management law, where the Covid-19 medical mask which is classified as infectious waste requires special handling. the hospital itself already has an incinerator as a waste treatment tool, for the community itself still needs a lot of socialization and the participation of the government, community, and family in its management.

Good management certainly has an impact on environmental sustainability, where the garbage that is currently piling up can damage the environment and can even affect the transmission of the covid-19 virus that comes from the Covid-19 medical mask waste. In the law on environmental protection and management itself for the management of COVID-19 medical waste, which is classified as B3 waste, the government issued a circular letter No. SE 2/MENLHK/PSLB3/PLB.3/3/2020 in which the circular hopes to control the management of the environment. Covid-19 medical waste so that it is not disposed of directly into the environmentdescribe the results of the research. Give a clear explanation regarding the possible application and/or suggestions related to the research findings.

References

Ambina, Dipo Gina. April 2019. "Tinjauan Pemilahan Sampah Menurut UU no 18 Tahun 2008 Tentang Pengelolaan Sampah." *Jurnal Bina Hukum Lingkungan* Volume 3 Nomor 2: page. 173.

Hesti, Y. (2020). Upaya Penanganan Limbah B3 Dan Sampah Rumah Tangga Dalam Mengatasi Pandemi Corona. *Jurnal Pro Justitia*, 60–67.

Wardani, Rani Ayu, R.Azizah. (2020). Management of Solid Medical Waste on One of the Covid 19 Referral Hospitals in Surabaya, East Java. Jurnal Kesehatan Lingkungan. Vol 12 No 1. September 2020. Page 38-44.

UU No 32 Tahun 2009 Tentang Perlindungan dan Pengelolaan Lingkungan Hidup

UU No 18 tahun 2008 Tentang Pengelolaan Sampah

Kepmenkes RI No.1204/Menkes/SK/X/2004 Tentang Persyaratan Kesehatan Lingkungan Rumah Sakit

Surat Edaran No SE.2/MENLHK/PSLB3/PLB3/3/2020 tentang Pengelolaan Limbah Infeksius (Limbah B3) dan Sampah Rumah Tangga dari Penangganan Corona Virus Disease (COVID-19)

KLHK : Ada 6.417,95 ton timbunan limbah COVID-19 sampai awal Februari, https://www.antaranews.com/berita/1983525/klhk-ada-641795-ton-timbulan-limbah-covid-19-sampai-awal-februari , Accessed March 10 2022

Begini Cara Kelola Limbah Masker di Masyarakat Untuk Cegah Penularan COVID-19. https://infeksiemerging.kemkes.go.id/warta-infem/begini-cara-kelola-limbah-masker-di-masyarakat-untuk-cegah-penularan-covid-19, Accessed March 10 2022

Pedoman Kementerian Kesehatan Republik Indonesia tentang Pengelolaan Limbah Masker dari Masyarakat

Pedoman Pengelolaan Sampah Masker Sekali Pakai