
REGULATIONS FOR WASTE MANAGEMENT OF DISPOSABLE MASK DURING THE COVID-19 PANDEMIC

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ABSTRACT: Corona Virus Disease 2019 that has not ended, has an impact including the use of disposable masks in the world is increasing. Although there are calls to use masks such as cloth masks to coat medical masks when doing U.S. activities outside the home, in fact the public prefers to use disposable medical masks. Disposable masks are feared to be more and more in number if not managed properly. The issues studied in this scientific article are the settings related to the management of disposable mask waste and the implications of waste management of disposable mask in the community. This research method uses juridical-normative writing methods with a statutory approach. The result of this study is the waste management of disposable medical masks entering the realm of special arrangements (lex specialis) consisting of guidelines of the Ministry of Environment and Forestry of the Republic of Indonesia and the Ministry of Health of the Republic of Indonesia. Waste management of disposable medical masks can be done with a thorough approach when a product produced in the community is indicated as waste until the product has been managed in landfill so that the output of waste management becomes environmentally friendly by using a new approach. through the activities of waste management of medical masks used in the community in accordance with existing guidelines.

Keywords: management, waste, masks, pandemic, covid-19

INTRODUCTION

Based on Worldometers data as of August 5, 2021, Indonesia as the country with the highest corona death cases in ASEAN with details of the number of Covid-19 positive patients 3,532,567 cases, the number of Covid-19 patients died 100,636 people and the number of Covid-19 patients who were declared cured amounted to 2,907,920 cases.¹ Coronavirus Disease Pandemic 2019 to date has an impact on the community, namely the use of disposable masks in the world that is increasing. In order to reduce the rate of Virus Disease 2019, it

¹ https://health.detik.com/berita-detikhealth/d-5670879/kasus-kematian-corona-ri-tertinggi-se-asean-ini-daftarnya?_ga=2.105695171.1162368273.1628439569-1299324201.1586259359 , Corona Ri Death Case is highest in ASEAN this list

encourages the Government to issue rules related to the implementation of health protocols including the Decree of the Minister of Health of the Republic of Indonesia on Public Health Protocols in Public Facilities to prevent Covid-19 in the community. One of the contents of the decision is related to the use of masks by the community if they are doing activities outside the home.

The decision of the Minister of Health is one of the government's commitments to reduce the rate of spike in cases and as a form of reduction of Corona Virus Disease-19 delta Indonesia variant. The government's appeal to protect the public from Corona Virus Disease-19 is the use of double masks by the community when doing activities outside the home. Therefore, necessary equipment that can be used to prevent and protect yourself from Covid-19 that must be ensured to be completely safe such as the use of face shields, double-masks, gloves, etc. One of the personal protection tools (APD) is a disposable mask that can usually only be used disposablely. Although there are appeals to use masks such as cloth masks that are recommended to coat the use of medical masks when doing activities outside the home that can be recycled, people prefer to use disposable masks and after use the disposable masks are not managed properly in the community. It is feared that the use of disposable masks is increasing in the community, resulting in a buildup of solid medical waste.

Since the increase in the spread of the Delta variant of Covid-19, masks have become one of the essential items that cause serious problems around the world. However, this is an opportunity for manufacturers to produce in large quantities various types and variants of disposable masks to meet the needs of the community for disposable masks and protect the public from the Covid-19 virus. Like a coin on one side of the mask can help the community protect itself from the Covid-19 virus, but on the other hand the mask waste is very dangerous for the environment. The number of masks and personal protective equipment (APD) included in hazardous and toxic waste (B3) in Indonesia during the pandemic from March to September 2020 reached 1,662.75 tons.²

Disposable medical masks if used by the population of Indonesia which reaches about 271 million people produce waste masks on average every month amounting to 8 billion. This condition makes garbage masks into a new wave of the largest daily community waste contributor after pollution due to plastic and waste health service facilities. Medical masks are mostly made of polypropylene part of one type of plastic because it is considered by some to be practical because of the maximum filtering of bacteria but can be a problem for the environment globally.³

In Indonesia itself many medical masks are simply thrown away by the community in any place without special treatment first. Medical makers that are mainly made of plastic take a long time to decompose. Improper and optimal waste management of masks has the potential to cause water pollution. Medical mask waste in the community is sometimes mixed with organic waste or even left alone can also cause serious problems such as endangering ecosystems on land and waters can even ensnare animals in the sea that cause death for marine life.

² <http://lipi.go.id/berita/lipi/-butuh-strategi-sinergi-multi-pihak-untuk-pengelolaan-limbah-masker/22340>
PASTE Need a Multi-Party Synergy strategy for Mask Waste Management

³ Fadare, O. O., & Okoffo, E. D. (2020). Covid-19 face masks: A potential source of microplastic fibers in the environment. *The Science of the total environment*, 737, 140279. <https://doi.org/10.1016/j.scitotenv.2020.140279>

Based on the Regulation of the Minister of Environment and Forestry on Procedures and Technical Requirements of Waste Management B3 from Health Care Facilities, disposable waste is included in the category of medical waste that requires special handling. Until now, the community views disposable mask waste as an item that has lost function and use so that the community does not think about processing and managing appropriately and optimally. Waste management takes several stages including garbage collected first in the environment, then transported by janitors and janitors who are responsible for dumping to the nearest landfill. Medical waste such as disposable masks can be processed by processing ordinary medical waste, but to ensure that garbage that has been contaminated with the Covid-19 virus does not pose a danger to the community, follow-up efforts are needed.

Various follow-up efforts related to the disposal and management of disposable medical waste include sterilized first with steam, burned, even chemically disinfected before being taken to landfill. Based on the results of research subfield of Medical Waste Handling In the Field of Health Handling Task Force Covid-19, the Covid-19 Virus was able to survive on the surface of the mask for 3-4 days. This can be a health threat to garbage collectors and processors.⁴ The paradigm of medical waste management, especially disposable masks in today's society, requires optimal action and steps in the community in order to be returned to the environment safely.

PROBLEM

Based on the background above, the problem that will be examined in this scientific article is (1) How is the regulation related to the management of waste masks during the Covid-19 pandemic in Indonesia? (2) What are the implications of waste management of disposable masks in the community?

RESEARCH METHODOLOGY

Writing methods in this study use juridical-normative writing methods that put the law as a basic reference in shaping norms. The approach used in this writing is a conceptual approach with the current prevailing statutory approach.

DISCUSSION

A. Mask Waste Management Arrangements in the Covid-19 Pandemic

Environmental problems lately have undeniably received international attention, especially related to environmental issues after the increasing number and new variants of Covid-19. The rate of increase in the number and cases of Covid-19 in various worlds is increasing with the emergence of various types of new variants causing new environmental problems that result in a decrease in the quality of the environment itself. The quality of the environment in an area becomes important because the quality of the environment will affect the quality of human life directly and should be wary of potentially causing environmental problems in the future.

⁴ <https://www.tribunnews.com/corona/2021/02/19/masker-bisa-jadi-media-penularan-begini-cara-kelola-limbah-masker-orang-sehat-yang-benar> Masks can be media. Transmission, Here's How to Manage The Right Healthy People Mask Waste

The issue of environmental pollution is a problem that continues to be faced, especially by the Indonesian nation every year. Various issues of environmental pollution such as climate change as a result of greenhouse gases, increased domestic and industrial waste, depletion of natural resources to the increasing extinction of biodiversity due to human activities become some environmental issues that grab the attention of the surrounding environment. One of the environmental problems in Indonesia is related to waste. Based on data from the Ministry of Environment and Forestry (KLHK) in 2020, Indonesia has a variety of waste types of 67.8 tons /year.⁵ Various ways are done by the government such as the use of paid plastics in various supermarkets, recycling waste into power generation contributions, as well as various other ways have not been able to reduce the amount of waste nationally.

The covid-19 pandemic is currently still infecting people in various countries, not least Indonesia. This makes the government make various efforts to deal with covid-19 in Indonesia such as PPKM (Enactment of Restrictions on Community Activities), the use of double masks if doing activities outside the home, the application of lockdown in some regions and other forms of efforts to minimize the increase in the number of cases and new variants of covid-19 in the community. The declining environment plus the impact on the economy and local communities is a real example of the impact of this pandemic. The positive impact of the covid-19 pandemic includes air quality in Indonesia to be cleaner, people are more concerned in maintaining personal hygiene and following health protocols recommended by the government. While the negative impact of the covid-19 pandemic includes some hospitals overwhelmed to treat covid-19 patients to the increasing amount of medical mask waste, latex gloves, personal protective equipment (APD) and other medical equipment that is feared to be an agent of disease spread.

Current medical mask waste collection in the community is needed an approach starting from the manufacture of products that have the potential to become garbage such as medical masks, latex gloves, personal protective equipment (APD) has been used to change function until the time the product has become a waste that requires proper management in order to return to the environment safely and friendly. Waste management covid-19 is currently required to reduce and handle waste optimally in the community.

Some regulations related to Medical Mask Waste in the Covid-19 Pandemic Period are regulated today, in which there are general rules underlying the management of medical mask waste and special rules (*lex specialis*). Here is the classification of general rules and special rules related to the management of medical mask waste in the covid-19 pandemic.

⁵ <https://indonesia.go.id/kategori/indonesia-dalam-angka/2533/membenahi-tata-kelola-sampah-nasional>
Improving National Waste Governance

Regulation Table on Waste Regulation of Disposable Medical Masks

General Rules	Special Rules (<i>lex specialist</i>)
The Constitution of the Republic of Indonesia of 1945 is contained in : a. Article 5 (1) b. Article 20 c. Article 28 H (1) d. 33 (3) and (4)	Circular Letter of the Minister of Environment Number Se.2/MENLHK/PSLB3/PLB.3/20 20 of 2020 on Management of Infectious Waste (Waste B3) and Household Waste from Handling Corona Virus Disease (Covid - 19)
Standard Norms and Regulations Number 4 of 2021 on The Right to Health	Circular Letter of the Minister of Environment Number 167 of 2020 on Medical B3 Waste Management from Covid -19 Emergency Facilities
Law Number 39 of 1999 on Human Rights	Letter of the Director General of Waste, Waste, and B3 Management Number 156 of 2020 on Waste Management B3 Emergency Period handling Covid -19
Law Number 18 of 2008 on Waste Management	Guidelines for Managing Waste Masks from the Community
Government Regulation Number 81 of 2012 on Household Waste Management and Household Type Waste	Guidelines for Waste Management of Referral Hospitals, Emergency Hospitals and Health Centers that Win Covid-19 which include: 1. Wastewater management 2. Domestic solid waste management 3. Medical B3 waste management
Law Number 36 of 2009 concerning Health a. Article 4 b. Article 6	
Government Regulation Number 27 of 2020 on Specific Waste Management	
Regulation of the Minister of Public Works Number 03/PRT/M/2013 on the Implementation of Infrastructure and Facilities for The Establishment and Handling of Household Waste and Household Waste	

B. Implication Waste Management Disposable Masks in the Community

In order to minimize the exposure, transmission, and number of patients confirmed positive for covid-19 in Indonesia, the government urges people to wear double masks when doing activities outside the home. Although the use of cloth masks can be recycled, people prefer to use double medical masks which will certainly result in higher piles of mask waste. In order to minimize the increasing spread of Covid-19, management and education are needed to the public related to disposable medical mask waste.

Based on the Circular Letter from the Ministry of Environment and Forestry related to the Management of Infectious Waste (Waste B3) and Household Waste from handling Corona Virus Disease (Covid-19), which must be done by the community against medical masks a soften as to be discarded will be presented in the table below.

Table of Stages of Management of Disposable Medical Masks Based on Circular Letter of the Minister of Environment and Forestry Number Se.2 / MENLHK / PSLB3 / PLB.3 / 2020 Year 2020

Stages	Information
Disposable Medical Mask Collection	<ol style="list-style-type: none"> 1. The increase in Covid-19 cases recently makes the use of masks, incredibly disposable medical masks, increasing. This condition is related to the alertness of the community with the increase of new types of Covid -19; it has a positive impact due to the increasing public awareness to protect itself by using disposable masks that are good enough. 2. The increased use of disposable masks in the community can be at risk of being used as an opportunity for some people by recycling disposable medical masks that will be resold to the community. 3. All stakeholders must play an active role in efforts to manage disposable medical masks.
Disinfectant	Disinfection that can be done on disposable medical masks is to soak masks that the public has used with disinfectant/chlorine /bleach.
Change shape	The stage of changing the shape that the community on disposable medical masks can do is to collect disposable medical masks that have been used in a safe container /plastic. Especially for medical masks used by the public can be changed shape by damaging the rope and tearing in the middle of the mask so that disposable medical masks cannot be reused.
Throw in the domestic trash	Medical masks thrown in domestic bins
Hand-washing movement	After doing a series of disposable medical waste management, people are encouraged to use hand sanitizer that contains alcohol levels of at least 60% and clean hands using soap under running water if there is no means to wash hands around it.

While based on guidelines from the Ministry of Health-related to The Guidelines for The Management of Waste Masks from The Community, several stages will be summarized in the table below:

Table Management of disposable medical masks from the public based on Ministry of Health Guidelines

Stages	Information
Disposable Medical Mask Collection	The increase in Covid -19 cases recently makes the use of masks, incredibly disposable medical masks, increasing. This condition is related to the alertness of the community with the increase of new types of Covid -19; it has a positive impact due to the increasing public

	<p>awareness to protect itself by using disposable masks that are good enough.</p> <p>The increased use of disposable masks in the community can be at risk of being used as an opportunity for some people by recycling disposable medical masks that will be resold to the community.</p> <p>All stakeholders must play an active role in efforts to manage disposable medical masks.</p>
Disinfectant	Disinfection that can be done on disposable medical masks is to soak masks that the public has used with disinfectant/chlorine/bleach.
Change shape	The stage of changing the shape that the community on disposable medical masks can do is to collect disposable medical masks that have been used in a safe container /plastic. Especially for medical masks used by the public can be changed shape by damaging the rope and tearing in the middle of the mask so that disposable medical masks cannot be reused.
Throw in the domestic trash	Medical masks thrown in domestic bins
Hand-washing movement	After doing a series of disposable medical waste management, people are encouraged to use hand sanitizer that contains alcohol levels of at least 60% and clean hands using soap under running water if there is no means to wash hands around it.

Based on the above guidelines, steps and actions that the community can take against disposable medical masks that have become solid medical Waste include:

1. Disposable medical masks used as sick and patients who have been confirmed positive for Covid-19 or have the status of Patient in Supervision (PDP) and Persons in Supervision (ODP), then the used medical mask is managed in the category of Waste B3 (Hazardous and Toxic Materials) infectious. Medical masks can be thrown into the trash by first being given a description/sticker "Infectious" if the medical mask of former patients treated at the nearest health care facility, solid waste management of the mask has been integrated with the management of solid medical Waste contained in the hospital with due regard to current protocols.
2. Disposable used masks derived from patients under supervision (ODP) and patients under supervision (PDP) based on the Circular Letter of the Minister of Environment on The Management of Infectious Waste (Limbah B3) and Household Waste, used medical masks should be separated from other types of household waste. Medical mask waste is encouraged to be packed using a container/plastic that is tightly closed and labeled with the caption "Infectious Waste" in the garbage crepe. Based on the Circular Letter of the Minister of Environment, Infectious Waste is not only a disposable medical mask, but there are also latex gloves, personal protective clothing (APD) that must be managed in the previously mentioned manner. Related to the application of infectious Waste, coordination is needed, among others, coordination is needed with the nearest health care facility officer and a sanitarian officer from the nearest health care facility from the patient's area who is a Person under Supervision (ODP) and Patient Under Supervision (PDP).

3. Used medical masks are used by healthy people who, in this case, can be used as a society to minimize the amount of solid waste medical masks in the surrounding environment, the need for support from the community to socialize the use of cloth masks that must be washed rather than just dried and reused in the use of cloth masks as outer layer masks from the use of double masks. In addition, if forced to use a double medical mask, the community must be more educated and raise awareness to do good waste management to overcome abuse in the garbage.

CONCLUSION

1. Waste management of disposable medical masks is done in a way before the production of a product that will be a variety of types of Waste to the stage of the product has been used by the community which will boil down to various types of Waste that certainly require proper management in order to be environmentally friendly Waste management masks from upstream to downstream. So it is a long process that sometimes becomes a problem in our law enforcement.
2. Waste management of disposable medical masks as part of public health rights becomes a shared responsibility by all parties, including the central government, provincial government, district, city government, private parties, and waste management institutions. In addition, it becomes a shared responsibility by all communities in their management.
3. Public awareness is needed to be related to the management of medical mask waste starting from the environment where he lives to separate, sort, and manage the medical mask waste to help environmental sustainability and sustainability of natural biota.

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