



## **Legal Consequences of Disposal Mask Waste on Environment**

Based on Law No. 32/2009 Concerning Environmental Protection and  
Management

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### **ABSTRACT**

*The use of masks in an effort to prevent Covid-19 is indeed quite effective. Unfortunately, the potential problem from the use of disposable masks is the waste will have an impact on environmental pollution because the mask material is made of polypropylene which is a type of plastic that is difficult to decompose. Therefore, the objective of this research is to find out the importance of preserving the environment by paying attention to waste around the environment and to analyze important to dispose of waste through proper processes and management for preventing the negative impact on environment that will cause environmental damage and pollution. The method used is descriptive qualitative combined with normative legal research and statutory, conceptual, historical, and comparative approaches. The legal materials used in this research are primary legal materials, such as Law No. 32/2009 concerning the environment protection and management, Law No. 18/2008 concerning waste management, Government Regulation No. 101/2014 concerning the management of hazardous waste and toxic materials (B3) as secondary legal materials.*

**Keywords:** *Environment, Garbage, Masks, Waste*

## INTRODUCTION

Coronavirus (Covid19) is an infectious disease caused by SARS CoV 2 virus that infected people with moderate symptoms, and they will recover without the need for treatment and medical help. However, some people can severe symptoms that require the medical attention and assistance. The virus can be transmitted through small fluid particles from mouth or nose of an infected person through when they cough, sneeze, talk and breathe. These particles are in the form of larger droplets from respiratory tract to smaller substances.

The pandemic of Covid-19 have various global organizations recommend people to wear a mask in creating a physical barrier to break the transmission and spread of Covid-19. One of them is US Centers for Disease Control and Prevention (CDC) that recommends wearing a mask because it is considered as one of the most effective ways to inhibit and stop the virus from spreading. In addition, the Indonesian government has taken various steps to ensure that people use masks in preventing the virus.

The use of masks is an effort to prevent Covid-19 is quite effective since the masks can avoid the virus particles, it also reducing the transmission of Covid-10 disease during this pandemic. Because of that, the mask become an important requirement for the community and has been regulated by the government. However, there are potential problems that will arise from the use of masks, especially disposable masks that will have an impact on the environment since the disposable masks are made of polypropylene type of plastic which takes hundreds of years to decompose (Hanim, Tita, 2022). In contrast to plastic bottles, almost 25% of them are re-managed, but there are still no guidelines for re-management of mask waste, as a result, mask waste is disposed carelessly and irregularly. When disposable masks are not disposed for recycling like other plastic waste, single-use mask waste can end up in freshwater and marine systems which can cause water pollution and have a negative impact on ecosystems and marine life since the plastic are breaks down into small pieces. These micro pieces are known as microplastics and shrink back into nano plastics. When plastic breaks down into microplastics, it absorbs toxins and organic pollutants. It means that marine fauna can also be exposed to toxins when they accidentally ingest the microplastics. Mask waste not only has a negative impact on marine biota ecosystems, but also causes adverse impacts on human survival, such as environmental pollution (water, land, and air), ecosystem damage, and the misuse of used masks which can increase the risk of spreading Covid -19 in society. The objective of this research is to find out the importance of preserving the environment by paying attention to waste around the environment and to analyze important to dispose of waste through proper processes and management for preventing the negative impact on environment that will cause environmental damage and pollution.

The amount of mask waste due to the obstacles in handling the mask waste itself. The lack of education for the community and the lack of Covid-19 medical waste management in the household are factors that increase the accumulation of mask waste in environment.

## **RESEARCH METHODOLOGY**

This research is a normative legal research or commonly referred as research conducted by examining various legal library materials (secondary data). Normative legal research is commonly known as document study, uses qualitative methods in analyzing data, and uses secondary data sources, such as regulations, court decisions, books, legal theory, and doctrine (Efendi, Jonaedi & Ibrahim, 2016). The approaches in normative (dogmatic) legal research are statutory, conceptual, historical, and comparative approaches. Through regulatory a conceptual approach, an inventory of all applicable laws and regulations is implemented to reflect theoretically based on the legal concepts. The comparative law approach aims to obtain comparative sources that will support the discussion material. The legal materials used in this research are primary legal materials, such as Law No. 32/2009 concerning the environment protection and management, Law No. 18/2008 concerning waste management, Government Regulation No. 101, 2014 concerning the management of hazardous waste and toxic materials (B3) as secondary legal materials.

## **RESULT AND DISCUSSION**

### **The Definition of Environment**

The environment in Law No. 32 of 2009 concerning PPLH stated that the environment is a unitary space with all objects, power, conditions and living things including humans and their behavior which affect the nature itself, the survival and welfare of mankind and other living things. According to Munajat Danusaputro, the environment is all objects and its conditions, including humans and their behavior that affect the humans' and other living bodies' welfare (Sood, 2019). Meanwhile, according to Otto Soemarwoto, the environment can be interpreted as a room inhabited by living things and non-living things in it (Rizal, 2016). According to Emil Salim, the environment can be defined as objects, conditions, circumstances, and influences that exist and affect the living things, including human life (Luc Hens, Bhaskar Nath, 2022).

### **Type of Environment**

The experts divide the environment into several types, the human environment can be classified into three types:

- a. Physical environment

The physical environment is everything in the form of inanimate objects, such as houses, vehicles, mountains, water, sunlight, and others things.

b. Biological environment

The biological environment is everything that surrounds humans in other living things, except humans themselves, animals, plants, microorganisms, and others.

c. Social environment

The social environment is another human around the society, such as neighbors, friends, and others.

### **The Definition of Mask**

A mask is a tool or object used to cover the nose and mouth to protect oneself from various things that can threaten the person's health, such as sunlight, air pollution, and germs or viruses that spread through the air (Brooks & Butler, 2021).

As for medical masks, also known as surgical masks are designed to be worn by health services during surgery and treatment to ward off the bacteria contained in droplets and small substances. These masks are not designed to protect from inhaling airborne bacteria or viral particles, and are inferior to respirator masks such as N95 or FFP masks which provide better protection due to their material, shape, and its effectiveness.

### **The Definition of Waste**

Waste is a unused material which will have a negative impact on the community when it is not handled properly. Waste is the residue from production comes from nature or as a result of human activities. The decree of Minister of Industry and Trade Republic Indonesia No. 231/MPP/Kep/7/1997 Article 1 concerning the procedure for importing waste explains that waste is leftover used goods or materials produced from production activities or processes. Based on Government Regulation no. 18/1999 Jo.PP 85/1999, waste is defined as residue from business or human activities. In other words, waste is leftover goods produced by an activity that is no longer useful or has no economic value.

### **Waste characteristics**

Physical waste are divided into solids, odor, temperature, color and turbidity. The chemical waste consist of organic matter, BOD (Biological Oxygen Demand), DO (Dissolved Oxygen), COD (Chemical Oxygen Demand), pH (Puissance d'Hydrogen Scale), and heavy metals. Then, biological waste are used to measure water quality, especially water that consumed as drinking and clean water.

### **Type of Waste**

Waste is grouped based on its source and type of compound. The waste grouping by source are domestic or household waste from household and commercial activities such as markets, restaurants and office buildings and industrial waste from industrial processes. Agricultural waste originating from

agricultural or plantation activities, mining waste generated from mining activities like metals and rocks, tourism waste from vehicles, oil and oil spills dumped by ships and motorboats in marine tourism areas. Then, health waste or medical waste in the form of medicine and chemicals.

### **Waste grouping according to its compound**

This waste is grouped into 3 types including organic, inorganic, hazardous and toxic waste (B3)

a. Organic waste

This waste comes from natural living things that are easily biodegradable, such as leaves, egg shells, tree bark, animal waste, human waste, plant remains, and animal bones.

b. Inorganic waste

Inorganic waste is difficult to decompose naturally through microorganisms, such as laundry soap residue, plastic bag, cloth, industrial waste, oil waste, plastic bottle, used drinks, and metal waste.

c. B3 waste

Hazardous and toxic (B3) waste is a type of waste that can pollute the environment, health and survival living things because of its compounds. The B3 waste management requires special handling since it contains explosive, toxic, dangerous, irritating and corrosive compounds. B3 compounds include heavy metals such as Al, Cr, Cd, Cu, Fe, Pb, Mn, Hg, and Zn, as well as chemicals such as pesticides, cyanides, sulfides, phenols, and others. B3 waste is generated not only in industry, but also as a result of several types of economic activities, such as floor cleaners, gas stoves, glass cleaners, plastics, rat poison and scouring powder, detergent, floor cleaner, dye, and sewer clog remover.

### **The Impact of Disposal Mask Waste on Environment**

The impact of disposal mask waste is causing environmental pollution. According to Article 1 No. 14 of Law No. 32/2009 regarding Environmental Protection and Management stated that environmental pollution is the inclusion of living things, substances, energy, and other components into the environment by human activities that exceed the environmental quality standards.

During this pandemic, masks have become a major need for the community since it can protect and prevent the spread of COVID-19 disease. In addition, the use of masks is also mandatory and regulated by the government. However, there are potential problems that will be caused by the use of these masks, especially disposable mask waste that will have a bad impact on environment, because the material of disposable masks is made of polypropylene which is a type of plastic (Hashfi Hawali Abdul Matin, 2022). This disposable mask waste is same as plastic waste which is difficult to decompose and will have a negative impact on the

environment. Plastic can be harmful to the environment because it is difficult to decompose and takes a long time to decompose completely within 100 years to 500 years.

Because of plastic bottles that about 25% of it are recycled, there are still no guidelines for recycling masks that caused improper disposal waste. When this phenomenon is not handled according to proper processes and methods for plastic waste, the single-use masks can end up in freshwater systems and contaminate the ocean since it will turn into pieces called microplastics and become nanoplastic

During the degradation process, plastic becomes microplastic which absorbs toxins and organic pollutants. That means marine life is can be poisoned when it ingests microplastics. The mask waste also has a bad impact on humans besides its negative impact on marine biota ecosystems.

The danger of plastic is not only in its long decomposition time, the process of decomposition of plastic in the soil will also cause soil pollution, contaminate soil, contaminate the artesian, animals or creatures underground. The toxins from plastic particles in soil is kill soil-decaying animals like worms, block the passage of water into soil, and reduce soil fertility since the plastic blocks air circulation in soil and space for organisms to fertilize the soil.

Nowadays, plastic waste is still become a big problem for society. Along with the increasing demand and the use of masks during pandemic, it is undeniable that environmental pollution caused by plastic products is unavoidable. As a result, the environmental pollution caused by mask waste can endanger the existence of humans, animals and plants. In addition in polluting the environment, disposable mask waste also has the potential to spread Covid-19 virus when it not handled properly.

### **The Cases of Mask Waste Occurred at TPA (Final Processing Site)**

The high use of masks during COVID-19 pandemic has made mask waste at TPA (final processing place) scattered without any clear management. This case of mask waste accumulation occurred at Kaliabu TPA, Madiun, East Java was caused by the large number and mask production masks since Covid-19 outbreak. However, the large number of masks used has not been accompanied by local government's anticipation in providing special trash bins for used masks. Then, it is feared that the uncontrolled masks used by public will cause environmental pollution, become a source of disease transmission and even trigger the spread of Covid-19 virus.

Another medical waste also comes from households, especially disposable masks (surgical/non-surgical masks) that most residents do not separate mask waste from other waste. When the majority of residents do not sort the mask waste, there are millions of mask waste mixed with other waste scattered in garbage dumps every day. In fact, the disposal of used mask waste must go through a proper management process and sort out specifically.

**Legal Consequences of Disposal of Waste Masks on Environment**

Legal consequences or legal sanctions is intended for people, as well as industries or companies that intentionally or unintentionally dispose, create, and produce waste which ultimately causes damage and pollution to the environment. In Law Number 32/2009 concerning Environmental Protection and Management, there are regulations regarding the legal consequences or sanctions of waste disposal that cause environmental damage and pollution.

**The legal consequences of disposing of waste masks containing B3**

As described in chapter II, used masks are included in infectious B3 waste category, but are not included in type of medical waste. The used masks are included in domestic waste type generated by household activities. In this case, the mask is included in B3 waste category 2. Based on the explanation of Article 3 paragraph 2 letter b in Government Regulation Number 101/2014 concerning B3 waste management, category 2 B3 waste has no negative impact directly to humans and environment and have sub-chronic or chronic toxicity. Thus, the legal consequences of disposing mask waste containing B3 based on Law Number 32/2009 concerning PPLH are regulated in article:

Article 102 of Law Number 32/2009:

Everyone who manages B3 waste without a permit as referred to in Article 59 number 4 shall be punished with minimum of 1 year and a maximum of 3 years imprisonment and a penalize of at least Rp. 1,000,000,000,00 (one billion rupiah) and a maximum of Rp. 3,000,000,000,00 (three billion rupiah).

Article 103 of Law Number 32/2009 :

Everyone who produces B3 waste and does not conduct the management as referred to in Article 59, shall be punished with a minimum of one year and a maximum of 3 years imprisonment and a penalize of at least Rp. 1,000,000,000.00 (one billion rupiah) and a maximum of Rp. 3. 000,000,000.00 (three billion rupiah).

Article 104 of Law Number 32/2009 :

Any person who disposes of waste and materials in environmental without a permit as referred to in Article 60 shall be punished with a maximum of 3 years imprisonment and a penalize of maximum of Rp.3,000,000,000.00 (three billion rupiah).

**The legal consequences of mask waste that causing environmental pollution**

The Republic Indonesia 1945 Constitution states that a good and healthy environment is a human right and constitutional right of all Indonesian citizens . Therefore, the state, government and all stakeholders have an obligation to protect and manage the environment in the implementation of sustainable development for the Indonesian environment can always be a source of life and support for its people, the Indonesian nation, and other living creatures.

Meanwhile, in Law No. 32/2009 Article 2, the environmental protection and management is implemented on the basis of principles. As stated in Article 2 a of Law Number 32/2009 concerning legal aid, this principle is a state responsibility that contains:

- a. The state guarantees that the use of natural resources will provide the greatest benefit to the welfare and life quality of its people, both present and future generations.
- b. The state guarantees the rights of citizens to a good and healthy environment.
- c. The state prevents the use of natural resources from causing pollution and/or environmental damage.

Article 2 is a mandate from article 33 of 1945 Republic Indonesia Constitution TAP MPR No. XVI/1998 concerning human rights, in article 28 it is stated that everyone has the right to a good and healthy environment. In addition, the results of second amendment to 1945 Constitution Article 28 H Paragraph 1, 2000 stipulates that everyone has the right to live physically and mentally in a good and healthy place and to obtain the health services. Thus, in addition to guarantees the obligation of the State, there is also an obligation for everyone to preserve the environment for the pollution and environmental damage do not occur (Prasetijo Rijadi dan Sri Priyati, 2020).

The imposition of the right to a good and healthy environment is the broadest form of legal protection, creating a legal basis for lawsuits in good and healthy environment. For example, the implementation of legal provisions regarding the right of good and healthy environment (Article 28H paragraph 1) of 1945 Constitution and Article 28 of Human Rights Charter (Tap MPR No. XVII/MPR/1998) and Article 65 of Law No. 32/2009), government based on law is embodied in Article:

Article 87 paragraphs 1 to 4 of Law Number 32/2009:

- (1) Everyone who is responsible for a business or activity that violates the law in the form of pollution and environmental destruction that harms other people or the environment is obliged to compensate for the loss or provide the certain actions.
- (2) Any person who transfers, changes the nature and a company form or business entity activities against the law does not relinquish the responsibilities or obligations of the legal entity.
- (3) The court may determine the payment of a mandatory amount for each day of delay in the implementation of court's decision.
- (4) The amount of *dwangsom* is decided based on the laws and regulations

The description in Article 87 paragraph 1 that the provisions in this paragraph are to realize the principle of environmental law or known as polluter pays principle. In addition to being prosecuted, polluters and environmental destroyers can also be



provided in conducting certain legal actions to protect the environment based on judge decision:

- a. Establish or repair the waste treatment unit for the waste complies with specified environmental quality standards
- b. Restoring the environmental functions
- c. Eliminate or destroy the causes of pollution and environmental damage.

Meanwhile, the purpose of Article 87 paragraph 3 is to charge the daily payments to postpone the implementation of court orders for certain actions to preserve environmental functions.

Article 90 paragraphs 1 and 2 of Law Number 32/2009:

- (1) Government agencies and local governments that are responsible for the environmental sector may file certain demands and actions against businesses and activities that pollute and damage the environment resulting the environmental losses.
- (2) Other provisions relating to environmental damage as referred to in paragraph 1 shall be stipulated in ministerial regulation.

In the interpretation of Article 90 point 1, environmental damage is defined as a loss caused by pollution and environmental destruction which is not a personal gain. Some of these actions are efforts to prevent, control the pollution and damage as well as restore environmental functions for the negative impacts on the environment do not occur.

Pasal 91 ayat 1 sampai 3 Undang-Undang Nomor 32 Tahun 2009 :

Article 91 paragraphs 1 to 3 of Law Number 32/2009:

- (1) The community has the right to file a group lawsuit for individual interests or for the community benefit when they suffer losses due to pollution and environmental destruction.
- (2) The lawsuit can be filed when there are similarities in facts or events, legal basis and types of legal actions between group representatives and group members.
- (3) The provisions relating to community's right to sue are made according to law.

Article 92 paragraphs 1 to 3 of Law Number 32/2009:

- (1) In order to conduct the responsibility for environmental protection and management, environmental organizations have the right to file lawsuits for preserving the environmental functions.
- (2) The right to sue is limited to take certain actions without any other claim than the actual expenses.
- (3) Environmental organizations can file a lawsuit if they meet the requirements
  - a. Form a legal entity

- b. Affirmed in its association articles that the organization was established for the purpose of preserving environmental functions
- c. Has carried out real activities in accordance with the articles of association for a minimum of 2 years.

Based on these provisions, it is clear that every activity of an individual or group, and an industry or company that intentionally or unintentionally produces a waste that has the potential to cause pollution and environmental damage has been obliged to implement the legal sanctions that have been regulated in article of Law Number 32/2009 concerning Environmental Protection and Management in accordance with legal provisions that have been violated by the individual or company. This obligation is an effort to reduce the potential environmental risks in pollution and environmental destruction.

## **CONCLUSION**

The existence of Covid-19 caused people are required to wear masks for they can be protected from the spread of Covid-19 virus, and it also been required by the government. The obligation to use masks during this pandemic, the use of masks from day to day is increasing and producing masks on a large scale that lead to a buildup of waste from the remnants masks used by the public. When the mask waste is not disposed properly through the correct process, there will be the potential for misuse of used masks and cause pollution and environmental damage.

In an effort to prevent the accumulation of waste that has the potential to cause pollution and environmental damage, the disposal mask waste need to pay attention in the management and disposal arrangements as regulated in Law Number 32/2009 concerning Environmental Protection and Management, especially in Article 58 point 1 to 2, Article 59 points 1 to 7, Government Regulation No. 101/2014 concerning B3 waste management, especially in Article 3 points 1 to 4, Article 10 points 1 to 4, and Article 11 points 1 to 2 and Law No. 18/2008 concerning waste management which is regulated in article 19, article 20 numbers 1 to 5, article 21 numbers 1 to 2, article 22 numbers 1 to 2, and article 23 numbers 1 to 2. Every activity related to B3 waste are obliged to implement the B3 management as an effort to reduce the potential risk of pollution and environmental damage since B3 has a large enough potential to cause adverse impactson environment (Kementarian Hukum dan Hak Asasi Manusia, 2008).

Since masks are included in the type of B3 waste, the legal consequences are aimed at people, industries or companies that intentionally produce B3 waste that threatens the environment. In this case, the legal consequences or sanctions that can be imposed on people or a company that cause environmental pollution and damage can be in the form of a criminal lawsuit and compensation.

Criminal lawsuits as contained in Law Number 32/2009 concerning Environmental Protection and Management, especially in article 102, article 103

and article 104. Meanwhile the compensation are regulated in article 87 numbers 1 to 4, article 90 numbers 1 to 2 , Article 91 points 1 to 3, and Article 92 points 1 to 3 of Law Number 32/2009 concerning Environmental Protection and Management.

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