



NATIONAL CHAPTER
INDONESIA

4th Quarter Edition

LOCAL CHAPTER LEGAL WRITINGS

contact@alsaindonesia.org

LEGAL WRITINGS
ALSA LOCAL CHAPTER
UNIVERSITAS PADJADJARAN

A Closer Look to Indonesia's Medical Waste Regulation: Can It Maintain Environmental Sustainability Post COVID-19 Pandemic Era?

Written by: *Adeline Anindya Rusdianto*

ALSA National Chapter Indonesia

Local Chapter Universitas Padjadjaran

I. Introduction

The pandemic of CoronaVirus (COVID-19) was first started back in Wuhan, China, in the year of 2019. It was suspected that the virus may have come from wild animals, some of them are bats and snakes, which were sold at the markets and consumed by many people in China. The virus transmission did not stop there, it turned out to be an outbreak all over the world, causing an international urgent matter. The outbreak of COVID-19 has caused many changes and to many aspects, that included economic, social-politics, medical and health, educational, to the environmental aspect, also legal aspect. These changes forced the living beings, humans, to adapt to the situation. When it comes to economic aspect, for example people working in the business world had to fire their employees to maintain their company due to the drastically reduced incomes, or maybe people who usually works in the office, had to adapt somehow to keep their jobs but at the same time take care of their health, hence they were allowed to Work from Home (WFH). The same thing happened from the educational aspect where school activities had to be done from home as well. In order to prevent the virus transmission, legal aspects also took a role when the government created regulations and policies about social-distancing, mask-wearing, staying at home, and others. These changes and ways of adapting were related to the medical and health aspects of the COVID-19 outbreak.

COVID-19 often seen from the perspective of the medical and health aspects, where it has two different kinds of effects and those are direct effects and indirect effects. The direct effect for example is that the virus affected people causing symptoms like dry cough, high fever, feeling weak, and other fatal symptoms.¹ Whereas the indirect effects included cancellation of any organized programs at the temples and mosques, music concert, public events, restricted traveling caused by the sealing of inter-state and intra-state borders, and many others.² These are the obvious effects of the COVID-19 outbreak that affected us instantly.

Other than causing changes to the economic aspect, medical and health aspects and so on, one of the things that has not been the talk of the town is about how COVID-19 also effected and brought big changes to our environment. WHO stated that 140 million test kits produced is as equal to approximately 2.600 tonnes of non-infectious waste (mainly plastic) and 731.000 liters of chemical waste (equivalent to one-third of an Olympic-size swimming pool), added with over 8 billion doses of vaccine producing 144.000 tonnes of additional waste in the form of syringes, needles, and safety boxes, have been shipped globally.³ In Indonesia, it is recorded by the data from Indonesia's Ministry of Environment and Forestry in October 2020 has shown that the production of medical waste during the pandemic is 1.662,75 tonnes,

¹ Maurya, Nancy. Dwarg, Devendra., 'Legal and Environmental Implications of COVID-19 Outbreak in India' [2021] 13(1) Journal of Global Infectious Diseases <10.4103/jgid.jgid_72_20> accessed 4 January 2023

² *Ibid.*, accessed 5 January 2023

³ World Health Organization, 'Tonnes of COVID-19 health care waste expose urgent need to improve waste management systems' (*World Health Organization*, 1 February 2022) <<https://www.who.int/news/item/01-02-2022-tonnes-of-covid-19-health-care-waste-expose-urgent-need-to-improve-waste-management-systems>> accessed 5 January 2023

which is around 30% to 50% from the before-pandemic production rate⁴, which then increased up until February 2021 to a total of 6.418 tonnes of waste. That alone contributes to roughly 1,3% to the total of the estimated medical waste globally. Jakarta is the city that produced most of the waste with a total weight of 4.630 tonnes per February 2021. Even the medical waste from the vaccination program started in February 2021 in Indonesia was not included in this number.⁵ The health care or medical waste management needs to be taken seriously. Dr Michael Ryan, Executive Director of WHO Health Emergencies Programme said that it is vital to have effective management systems in place, at the same time, including guidance for health workers on what to do with Personal Protective Equipment (PPE) and health commodities after they have been used.⁶

Since the pandemic hit, the government had to take cautious steps regarding the health care or medical waste management. For example, back when the first COVID-19 outbreak in Indonesia, the government had two options in the context of medical waste management, those were whether burning the waste without proper waste segregation to reduce the spread of the COVID-19 virus or segregating the waste and have a higher risk of spreading the COVID-19 disease.⁷ Health matters were prioritized, hence, option one was taken. Now that the *Pemberlakuan Pembatasan Kegiatan Masyarakat* (PPKM) in Indonesia has been revoked by the government, indicates that the pandemic euphoria is somewhat getting better. Although the COVID-19 pandemic seems to be at the edge of its era, that doesn't mean that the effects and changes it

⁴ Bahraini, Amanda, 'How Indonesians Handle the COVID-19 Infectious Waste' (Waste 4 Change, 22nd July) <<https://waste4change.com/blog/how-indonesians-handle-the-covid-19-infectious-waste/>> accessed 5 January 2023

⁵ ENVIHSA FKM UI, 'Pengolahan Limbah Medis Pada Masa Pandemi' (ENVIHSA FKM UI, 25th October) <<https://envihsa.fkm.ui.ac.id/2022/10/25/pengolahan-limbah-medis-pada-masa-pandemi/>> accessed 5 January 2023

⁶ World Health Organization, *Loc. Cit.*

⁷ Bahraini, Amanda, *Loc. Cit.*

brought are gone in a snap of a finger. We can be sure that the effect it has towards the environment is inevitable. The management of medical waste is an emergency matter that must be a prioritized concern because medical waste that is not managed properly can cause environmental impacts such as environmental pollution.⁸

It is important to enforce the law and implement the regulations when it comes to maintaining environmental sustainability. This writing will observe the medical waste management in Indonesia, based on Indonesia's national regulations, *Peraturan Pemerintah Nomor 22 Tahun 2021 tentang Penyelenggaraan Perlindungan dan Pengelolaan Lingkungan Hidup (PP 22/2021)* and *Surat Edaran KLHK SE.2/MENLHK/PSLB3/PLB.3/3/20*. This writing aims to see if the implementation of environmental protection and management in Indonesia can maintain the sustainability of the environment post pandemic era. The writer also wishes to particularize further regarding the regulations' relevancy to the post pandemic medical waste situation.

II. Legal Analysis

The medical waste is categorized as *limbah B3 (Bahan Berbahaya dan Beracun)* or **hazardous and toxic waste** because it can harm people's health, even their safety.⁹ According to PP 22/2021, hazardous and toxic materials defined as the produced residue from a certain activity that contains hazardous and toxic substances. PP 22/2021 Article 276 Verse (1) stated that anyone that produces the waste that contains hazardous and toxic materials is required to manage the waste that they produced. So, by any means, every person that generates medical waste is responsible to manage them, whether they are the health workers, civil servants, scientists, even people who stay at home that

⁸ ENVIHSA FKM UI, *Loc. Cit.*

⁹ Purwanto NR and others, 'Pengaturan Pengelolaan Limbah Medis Covid-19' [2020] 23(2) Jurnal Yustika 67

produces medical waste. The hazardous and toxic waste management includes activities such as reducing, storing, collecting, utilizing, processing, and/or hoarding.¹⁰ Since the medical waste is categorized as the hazardous and toxic waste, it cannot be treated the way that domestic waste is managed, which can be disposed of at the *Tempat Pembuangan Akhir* (TPA) or the final processing site. It needs to be managed carefully, to be done based on four principles. First, all waste generators are legally and financially responsible for using safe and environmentally friendly waste management methods. Second, prioritizing high vigilance. While the third and fourth principles are specifically regarding the COVID-19 waste which regulate the principles of health and safety and the principle of proximity in handling hazardous waste to minimize the risk of transfer.¹¹

Adjusting with the COVID-19 outbreak situation, in reference to the regulation of PP 22/2021, the government made a follow-up action regarding the infectious medical waste management that needed to be taken seriously. The government then released a formal order regarding the medical waste management in March 2020 through *Surat Edaran KLHK SE.2/MENLHK/PSLB3/PLB.3/3/20* which then readjusted in March 2021 due to the increasing medical waste with the government's formal order *Surat Edaran KLHK SE.2/MENLHK/PSLB3/PLB.3/3/21*.¹² The formal order is issued with the aim of controlling waste management COVID-19 infectious medical waste, so that it will not be disposed of directly into the environment.¹³ The formal order stated that the COVID-19 outbreak produces hazardous and toxic waste and waste. Hazardous and toxic COVID-19 waste includes medical waste that

¹⁰ Peraturan Pemerintah Nomor 22 Tahun 2021 Penyelenggaraan Perlindungan dan Pengelolaan Lingkungan Hidup. 2 Februari 2021. Lembaran Negara Republik Indonesia Tahun 2021 Nomor 32.

¹¹ ENVIHSA FKM UI, *Loc. Cit.*

¹² Bahraini, Amanda., *Loc. Cit.*

¹³ Purwanto NR and others, *Op. Cit.*, at 74

has an infectious characteristic shown with a code of A337-1 waste (ex: hazmat, worn gloves, goggle, etc.), expired pharmacy products shown with a code of A337-2, lab equipment that is contaminated with hazardous and toxic substances shown with a code of A337-4 (ex: swab applicator, cassettes, pipette, etc.), the packaging of any pharmacy products with a code of B337-1.¹⁴ According to the formal order, these types of medical waste came from the health service facilities such as hospitals, clinics, health laboratories, isolation/quarantine centres, vaccination centres, and others. Waste, according to the formal order, includes face shields, masks, and gloves that are produced by the domestics, commercial districts, industrial areas, social facilities, public facilities, and other facilities.

The formal order stated the ways to manage the medical waste. Health services can be carried out with the following handling steps:¹⁵

1. By storing infectious waste in closed containers for a maximum of 2 days after use of the tool
2. Carry out the process of transportation and/or destruction with respect to processing of hazardous and toxic waste
 - 1) Incinerator facilities with a minimum combustion temperature of at least 800°C; or
 - 2) Complete autoclave with shredder.
3. The results of burning or shredding from the autoclave are then packaged and then marked with the symbol "Toxic" using a hazardous waste label which will then be placed at the *Tempat Pembuangan Sampah* (TPS) or temporary storage for the hazardous waste manager.

While for the waste management produced by the domestics, commercial districts, industrial areas, and others, it has to be done with the steps of procedures, which are:

¹⁴ Surat Edaran KLHK SE.2/MENLHK/PSLB3/PLB.3/3/21

¹⁵ Purwanto NR and others, *Loc. Cit.*

1. To reduce waste generation, it is encouraged to use a recyclable three-layers masks; and
2. After using a disposable mask, before it is disposed of, the mask must be sprayed with any disinfectant spray and be cut off/ripped.

It is also stated that the formal order is valid until the COVID-19 pandemic status as a national disaster in Indonesia is revoked. It means that there are not yet any regulations to manage the medical waste post-pandemic era. There are not yet policies regarding the ways to maintain sustainability of the environment after the whole pandemic situation.

III. Conclusion

The COVID-19 outbreak changes not only the way we have to take care of our health, but also the way on how to take care of our environment due to the massive medical waste it produces. The pandemic era has almost come to an end. Although Indonesia already has regulations regarding the waste management, a further formal order of waste management amidst the COVID-19 outbreak, the implementation of the regulations do not accommodate 100% on the sustainability of the environment post pandemic era. This is also because the government is focusing more on the ways to break the transmission of the virus but is forgetting about the short-term and long-term impacts to the environment. Actions to manage the waste to maintain the sustainability of our environment are needed, especially the legal enforcement through environmental law. The law-making regarding waste management must consider environmental sustainability. Every person needs to take a role to be more cautious and aware towards the medical waste matter. Enforcing the environmental law is crucial to decide the future of a sustainable environment.

Bibliography

Regulations

Peraturan Pemerintah (PP) Nomor 22 Tahun 2021 tentang Penyelenggaraan Perlindungan dan Pengelolaan Lingkungan Hidup. 2 Februari 2021. Lembaran Negara Republik Indonesia Tahun 2021 Nomor 32 (Government Regulation Number 22 of 2021 about Implementation of Environmental Protection and Management)

Surat Edaran KLHK SE.2/MENLHK/PSLB3/PLB.3/3/21

Journals

Maurya N and Dwarg D, "Legal and Environmental Implications of COVID-19 Outbreak in India" (2021) 13 Journal of Global Infectious Diseases 27 <<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8054795/>> accessed 2023

Purwanto NR and others, "Pengaturan Pengelolaan Limbah Medis Covid-19" (2020) 23 Jurnal Yustika <<http://journal.ubaya.ac.id/index.php/yustika>> accessed 2023

Online Sources

Bahraini A, "How Indonesians Handle the COVID-19 Infectious Waste" (*Waste4Change* August 9, 2022) <<https://waste4change.com/blog/how-indonesians-handle-the-covid-19-infectious-waste/>> accessed 2023

"Pengolahan Limbah Medis Pada Masa Pandemi" (*ENVIHSA FKM UI 2022* 2022) <<https://envihsa.fkm.ui.ac.id/2022/10/25/pengolahan-limbah-medis-pada-masa-pandemi/>> accessed 2023

“Tonnes of Covid-19 Health Care Waste Expose Urgent Need to Improve Waste Management Systems” (*World Health Organization*)
<<https://www.who.int/news/item/01-02-2022-tonnes-of-covid-19-health-care-waste-expose-urgent-need-to-improve-waste-management-systems>> accessed 2023

HOW PANDEMIC CAN EXPEDITE THE WORLD TOWARDS ENVIRONMENTAL LAW WITH AIM UPON SUSTAINABLE DEVELOPMENT BUILD UPON RENEWABLE ENERGY

Written by : Rafky Kurnia Baktiar

ALSA National Chapter Indonesia

Local Chapter Universitas Padjadjaran

I. Introduction

A. Background

By definition sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs. The importance of sustainable development also intersect with basic human rights which all humans are dependant on the environment that we live in. A safe, clean, healthy and sustainable environment is integral to the full enjoyment of a wide range of human rights, including the rights to life, health, food, water and sanitation. Without a healthy environment, we are unable to fulfil our aspirations. We may not have access to even the minimum standards of human dignity. therefore it is crucial to notice the importance of sustainable development.

One of the many ways that can assist the establishment of sustainable development is to build it upon the renewable energy sector. Renewable energy by definition is energy derived from natural sources that are replenished at a higher rate than they are consumed. Sunlight and wind, for example, are such sources that are constantly being replenished. Renewable energy sources are plentiful and all around us. Fossil fuels - coal, oil and gas - on the other hand, are non-renewable resources that take hundreds of millions of years to form. Fossil fuels, when burned to produce energy, cause harmful greenhouse gas emissions,

such as carbon dioxide. Greenhouse gas emissions are dangerous for the reason that they cause climate change by trapping heat, and they also contribute to respiratory disease from smog and air pollution. Extreme weather, food supply disruptions, and increased wildfires are other effects of climate change caused by greenhouse gases.

The importance of sustainable development is higher than ever before considering the condition that are happening throughout the past few year that produce more and more greenhouse gas emission which is harmful for the environment. therefore in order to expedite the world towards sustainable development the shift towards renewable energy must be accelerated and also incentivised so that the private sector can also shift towards a more sustainable development. hence why the environment law must be able to support the sustainable development.

B. Legal issue

The issue that seems to be visible and held a significant amount towards the environment is the international law did not regulate the carbon emission or pollution that is regulated with the same international regulation which will enable the declining rate of carbon emission to be much more controllable and also attainable. Where in this case if we take a look at the content of the of Paris Agreement 2015 regarding of Article 3 where it is written “As nationally determined contributions to the global response to climate change, all Parties are to undertake and communicate ambitious efforts as defined in Articles 4, 7, 9, 10, 11 and 13 with the view to achieving the purpose of this Agreement as set out in Article 2. The efforts of all Parties will represent a progression over time, while recognizing the need to support developing country Parties for the effective implementation of this Agreement.” where its actually did not contain any form of regulatory form of law from the united nation or the paris agreement

itself and it is more of a guidelines towards how each and every parties that participates in the convention create an environmental law based on the paris agreement which also gives the freedom to each party or nation that participates with whatever they are willing to sacrifice for the sake of sustainable future.

These kind of law is able to give each nation freedom and also let every party decides based on how much emission can they reduce without sacrificing the interest of each party and also saving their economy, which in return also leave a considerable amount of loopholes regarding each country environmental law which we can see that the paris agreement gives much freedom and without a considerable amount of restrictions towards how much pollution can each party or country should be reducing. hence why the carbon emission that previously expected to be declining that was caused by the concern of the depletion of ozone layer also the rising of global temperature that triggers the world that we should be having an environmental agreement that leads to paris convention 2015 creates an agreement which doesn't regulate the amount of carbon emission that each country should be restricted by some sort of parameter but instead it uses a system which is called nationally determined contribution ("**NDC**") where it could still be a viable option but with the following conditions which is each nation contribute by making their environmental laws based on Paris Agreement that uses NDC with the principle of sustainable development. But the problem doesn't stop there, it also needs the government of each party to be able to follow the guidelines without any kind of personal interest getting in the way, which is quite impossible. Based on the data that was collected from the world bank on CO₂ emission "the carbon emission that the world produce from the last decade tend to be stable at around more than 4 metric tons per capita." and also another data that was gathered which was sourced from climate watch and also world research institute which was written and published online at OurWorldInData.org by Hannah Ritchie, Max Roser and Pablo Rosado (2020) on "CO₂ and Greenhouse Gas Emissions" shows that 73.2% of greenhouse gas

emission came from the energy sector which the biggest contributor is road transport at 11.9% of the world greenhouse gas emission and also based on the data that was gathered in the website “emissions from the burning of petrol and diesel from all forms of road transport which includes cars, trucks, lorries, motorcycles and buses. Sixty percent of road transport emissions come from passenger travel (cars, motorcycles and buses); and the remaining forty percent from road freight (lorries and trucks). This means that, if we could electrify the whole road transport sector, and transition to a fully decarbonized electricity mix, we could feasibly reduce global emissions by 11.9%.” by the data itself it just shows how much greenhouse emission that are produced just by commuting with personal form of transportation such as petroleum cars.

But the question are, is the transformation towards electric cars going to reduce greenhouse gasses? well in 2020 during the peak of the pandemic situation we could see a glimpse of what could happen if greenhouse gas emissions are reduced that are caused by the pandemic itself. and the pandemic caused a plunge of greenhouse gasses emission by 4.6 percent based on an article that was released by the international monetary fund.¹with these data with these data the transformation towards renewable energy such as going full electric on transportation seems to be a very promising option and another viable option is to create a railroad across the country that is powered by electric so carbon emission can be reduced furthermore.

But the new problem arises after that, which is how do the governments convince the public and also expedite the use of renewable energy? well the indonesian government answer the paris agreement with a ratified law regarding to paris agreement through law number 16 of 2016 which consist of the

¹ international Monetary Fund. “Greenhouse Emissions Rise to Record, Erasing Drop During Pandemic.”
<https://www.imf.org/en/Blogs/Articles/2022/06/30/greenhouse-emissions-rise-to-record-erasing-drop-during-pandemic>

recognition of the paris agreement and also several indonesian law which regulate most of the sectors that have an impact towards the environment.

C. Regulation

Paris agreement is a legally binding international treaty on climate change.² The Paris Agreement was held in 2015 which aims to respond to the urgent traits of climate change with the basis of the best available scientific knowledge. And also recognize the fundamental priority of safeguarding food security and ending hunger, and the particular vulnerabilities of food production systems to the adverse impacts of climate change. in indonesia itself the Paris Agreement is being ratified through law number 16 of 2016 which aimed to controlled the climate change for the sake of the prosperity and well being of the nation.³ Law number 16 of 2016 also stated that paris agreement 2015 also supported by several indonesian law which consist of :

1. law number 5 of 1960 On Basic Agrarian Principles
2. law number 5 of 1990 Conserving Conservation of the living natural resources and it's ecosystem
3. law number 6 of 1994 on ratification of United Nations Framework Convention on Climate Change
4. law number 41 of 1999 on forestry
5. law number 22 of 2001 about oil and natural gas
6. law number 17 of 2004 on ratification of Kyoto Protocol to the United Nations Framework Convention on Climate Change

² United Nations, "The Paris Agreement," United Nations (United Nations, November 4, 2016), <https://www.un.org/en/climatechange/paris-agreement>.

³ Natalia Yeti Puspita, & Aloysius Deno Hervino. (2023). IMPLEMENTASI RATIFIKASI PARIS AGREEMENT OLEH INDONESIA DAN PENGARUHNYA TERHADAP KEBIJAKAN PEREKONOMIAN INDONESIA. *Jurnal Komunikasi Hukum (JKH)*, 9(1), 704–728. Retrieved from <https://ejournal.undiksha.ac.id/index.php/jkh/article/view/56403>

7. law number 30 of 2007 on energy
8. law number 18 of 2008 regarding waste management
9. law number 4 of 2009 on mineral and coal mining
10. law number 31 of 2009 on Meteorology, Climatology, and Geophysics
11. law number 32 of 2009 on Environmental Protection and Management
12. law number 18 of 2013 on The prevention and eradication of forest

II. Legal Analysis

the environmental law that is agreed on upon the paris agreement 2015 would make the respective participants to be able to compose their own environmental law while also being able to shape their future with law that could operate and go hand in hand with their best interest. therefore if it is used to an extent that puts forward the principle of sustainable development the country that successfully applied it could prevail. in every country the environmental law are shaped based on the country interest and ability to shape the environment that can suit them the most. while the paris agreement is a regulation which are made as a guideline for the world in indonesia it is ratified by the Law number 16 of 2016 which also supported the paris agreement with several indonesian law consist of :

1. law number 5 of 1960 On Basic Agrarian Principles
2. law number 5 of 1990 Conserving Conservation of the living

natural resources and it's ecosystem

3. law number 6 of 1994 on ratification of United Nations Framework Convention on Climate Change
4. law number 41 of 1999 on forestry
5. law number 22 of 2001 about oil and natural gas
6. law number 17 of 2004 on ratification of Kyoto Protocol to the United Nations Framework Convention on Climate Change
7. law number 30 of 2007 on energy
8. law number 18 of 2008 regarding waste management
9. law number 4 of 2009 on mineral and coal mining
10. law number 31 of 2009 on Meteorology, Climatology, and Geophysics
11. law number 32 of 2009 on Environmental Protection and Management
12. law number 18 of 2013 on The prevention and eradication of forest

although it may look like the Indonesian law has every sectors covered by various environmental law to ensure a sustainability within its development and also an eco friendly execution within the regulated procedures according to Indonesia environmental law but the regulation which regulate the environmental law can also be enhanced by further regulation regarding an incentivize and enhanced law which accelerate the growth of renewable energy in aim upon the reduction of carbon gas emission.

III. Conclusion

The environmental law is regulated by paris agreement via a system called nationally determined contribution which is not regulated strictly on how much carbon emission is maximally produced by each nation, furthermore the system of The NDC let each country or party to create their own environmental laws.. The pandemic seems to be able to gives us a glimpse of what happens if carbon gas emission is reduced and how good it is for the future of humanity. Therefore, although the indonesian government is already doing a good job on their environmental law towards sustainable development there are still some regulation to be made regarding the renewable energy sectors which can also benefitted the nation towards a better environmental benefit and also can expedite the nation towards a sustainable energy that are based upon renewable energy.

IV. Bibliography

United Nations, "The Paris Agreement," United Nations (United Nations, November 4, 2016), <https://www.un.org/en/climatechange/paris-agreement>.

Law No.16 of 2016 Confirmation of Paris Agreement UNFCCC

international Monetary Fund. "Greenhouse Emissions Rise to Record, Erasing Drop During Pandemic."
<https://www.imf.org/en/Blogs/Articles/2022/06/30/greenhouse-emissions-rise-to-record-erasing-drop-during-pandemic>

[The World Bank. "CO2 emissions \(metric tons per capita\)."
https://data.worldbank.org/indicator/EN.ATM.CO2E.PC?end=2019&start=1990&view=chart](https://data.worldbank.org/indicator/EN.ATM.CO2E.PC?end=2019&start=1990&view=chart)

[Hannah Ritchie, Max Roser and Pablo Rosado \(2020\) - "CO₂ and Greenhouse Gas Emissions". Published online at OurWorldInData.org. Retrieved from:
https://ourworldindata.org/co2-and-other-greenhouse-gas-emissions'](https://ourworldindata.org/co2-and-other-greenhouse-gas-emissions)



**NATIONAL CHAPTER
INDONESIA**

contact@alsaindonesia.org