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WASTE MANAGEMENT FOR THE COVID-19 ESSENTIALS KIT: WHAT ROLE DOES GOVERNMENT PERFORM?

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ABSTRACT

This paper aims to study the environmental impact of Covid-19 Essentials Kit's Waste, such as one time use face mask, and hand 1most importantly in the economic sector. Yet, even beyond matters of health and the economy, the impact of the Covid-19 virus is significant to the environmental sector. One time face mask and hand sanitizers have been continuously being use by the citizens as it is compulsory by the government and has been become an essentials kit and almost every people has it with them. Further than that, contaminated protective equipment that being use by the common person might not have been disposed properly. Proper disposal is need to reduce the contamination made by those essentials kit to the soil, water, and air. Government cooperation with other concerned parties is essential to the creation of mutual security and comfort for the surrounding environment. In conclusion, the government can promote various programs, such as making the public aware of the importance of discarding their masks in the trash and utilizing what is left in the recycling process.

INTRODUCTION

An outbreak of an unknown cause that took place in Wuhan, Hubei province in China during December of 2019 was completely unprecedented. Covid-19 was identified as the virus responsible for the novel coronavirus, and it was later known as COVID-19 by the World Health Organization (WHO). Although similar to SARS and MERS, COVID-19 has been associated with SARS-CoV-2, which infects the lower respiratory tract and causes pneumonia in humans. Even though we've put a lot of effort into trying to contain and quarantine the spread of COVID-19, the incidence of the virus is still increasing. At this point, there are over 90,000 laboratory-confirmed cases and more than 3,000 deaths caused by COVID-19 worldwide. We have summed up the most up-to-date information about COVID-19 in response to this global outbreak.

A new coronavirus in the same family as the SARS-CoV and the MERS coronavirus has spread worldwide, prompting the World Health Organization to announce a global pandemic. SARS-CoV-2, the 2019 coronavirus disease (COVID-19), can cause a disease that includes flu-like symptoms, but which has the potential to be more severe in those who are more vulnerable (Pascarella et al., 2020). Covid-19 has had a very negative impact on multiple parties, ranging from governments to private corporations to the general public. It is mandatory for the government to address problems that arise because of Covid-19, including issues that affect the community's health and the economy.

Covid-19 has been successful in hitting various countries all over the world, including Indonesia. The Covid-19 outbreak is a country-wide problem on top of which has grown into a

worldwide issue. Covid-19 is a common insecticide found in the Wuhan area of China. Covid-19's spread is swift and lethal; it is transmitted through contact with the skin, eyes, and nose. Covid-19 has a social impact as well as an economic one. Covid-19 contamination of services and efforts to contain the contamination. A crisis arose as a result of the outbreak of the Covid-19 virus. This lowered the people's and the country's economy, and in turn this hurt the country's economy. Covid-19 can be stopped if the federal government, community, and religious leaders work together to help each other and remind each other to interact and learn more about Covid-19. Another major effect of Covid-19's escalation is the likelihood of a massive increase in the number of unemployed (Nurwati, 2020).

Covid-19, which is contagious, will have a dramatic effect on the public and health. It follows that it is imperative to take preemptive measures against these types of infectious diseases as soon as possible. As a rule of law, infectious disease outbreaks cannot be prevented in Indonesia. Covid-19 is an urgent concern, and implementation regulations of Law Number 6 of 2018 concerning Health Quarantine are in place (Telaumbanua, 2020).

There has been a significant increase in medical waste during the Covid-19 pandemic. According to data from the Ministry of Environment and Forestry (KLHK), the figure has reached 20,110,585 tons per cubic meter from March 2020 to August 2021. Medical waste is a collection of waste from health care facilities, self-isolation centers, Covid-19 vaccinations, Covid-19 detection test centers, and households. As a result, there will be left of used hand sanitizer bottles, medical gloves, and other Personal Protective Equipment (PPE).

Medical waste is divided into two categories: liquid and solid. However, liquid medical waste is limited to health care institutions so that it may be managed more easily. The handling of medical waste from health facilities is governed by Regulation of the Minister of Environment and Forestry Number 56 of 2015 concerning Procedures and Technical Requirements for the Management of Hazardous and Toxic Waste from Health Service Facilities. Covid-19 medical waste is created by a variety of sources, including Covid-19 referral hospitals and special facilities for Covid-19-related patients. Personal Protective Equipment (PPE) is required when dealing with Covid-19, which spreads rapidly and easily (Prasetiawan, 2020). PPE, which normally consists of masks, gloves, clothing, and headgear, is mostly constructed of plastic and has a single use period. As a result, the generation of medical waste from old PPE has increased dramatically. Furthermore, Covid-19 medical waste might take the form of specimens, used pharmaceutical ingredients, used medical devices, and used food/drink packaging for Covid-19 patients. The increased usage of masks and gloves in the home necessitates specific consideration. Furthermore, household medical waste has the potential to be mixed with other household waste, posing a risk to waste transport officials, who typically work without or with inadequate PPE (Prasetiawan, 2020).

To ensure the proper management of medical waste throughout Indonesia, the government has issued circulars to the appropriate parties, including the following: Letter of the Minister of Environment and Forestry Number 167 of 2020 Concerning the Management of Medical B3 Waste at the Covid-19 Emergency Health Facilities; Minister of Environment and Forestry Circular Letter Number 02 of 2020 Concerning the Management of Medical B3 Waste at the Covid-19 Emergency Health Facilities. In essence, the circular is an attempt to maximize the capacity of medical waste management in Indonesia, regardless of whether it is performed by health facilities or licensed B3 waste management businesses. SE MENLHK No. 02 of 2020 authorizes health facilities to treat B3 waste without obtaining a permit if they use an incinerator with a minimum temperature of 800 oC or an autoclave fitted with a shredder.

Regrettably, there are still numerous barriers to maximizing the processing or annihilation of medical B3 waste on a practical level. One of them is that there is a disconnect between the growing volume of trash and the availability and capacity of medical waste treatment facilities. Until far, Indonesia has just ten licensed medical waste management firms with a combined capacity of roughly 170 tons per day and 87 hospitals with their own incinerators capable of treating approximately 60 tons per day of medical waste.

RESEARCH METHODS

To explain the phenomena that is experienced by the object of study, this

qualitative research aims to use various scientific methods to formulate descriptive statements (J., 2014). Secondary data consists of data that is already gathered by other sources. The information in this work is all derived from printed books, official websites, journals, and articles that the author found, and which contained information regarding the mask waste's impact on ecosystems.

This research uses normative research, namely research whose data sources come from legal norms contained in legislation, court decisions and existing laws in society (Ali, 2009).A qualitative description pattern is used for data processing. where the findings are in the form of meaningful sentences describing specific understandings (Leksono. S, 2013).

RESULT AND DISCUSSION

From 2021 on, Covid-19 will continue to be problematic due to the lack of a law which allows it to be enforced. This occurs because the implementation of health protocols regulated by the Minister of Health Regulation, which is not the source of Indonesian positive law, has an element of bias. Second, recent legal regulations regarding health protocols are out of sync with the legal hierarchy in Indonesia. Also, because they were not ready to control the Covid-19 masses, the police did not use their authority according to the Criminal Code, and so they triggered several interpretations and became a subject of public debate. The study concluded that the Indonesian government should issue a government regulation instead of a health protocol and give regional heads (governors and regents/mayors) additional authority to make decisions on health emergency scenarios as well. Regent / Mayor and Governor regulations will be proposed to the DPR by the provincial and district governments, and these will be made regional regulations by the DPR.

The constitution of the Indonesian state clearly defines public health insurance. The people of Indonesia can now have the same legal rights as other people in the eyes of the law, for the benefit of their country. With regard to the worldwide pandemic surrounding the Covid-19 virus, Indonesia itself is among the countries affected. Also, in addition, the existence of Covid-19 causes a coordination problem at the core and between the subregions which impacts the Covid-19 virus's spread in Indonesia.

The New Normal

Indonesia is looking to emerge as a milestone in the country's economic revival, and the new normal is one of the options on the table. As part of the new normal policy to aid economic recovery, the government has decided to institute a new normal practice. Despite that, the Covid-19 pandemic is still going strong. In the past, Covid-19 was handled by following social distancing to social restrictions applied to large groups of people. Nevertheless, the implementation of this new policy appears to hurt the Indonesian economy, and thus the government's next step is to implement a new normal. In order to enforce this new work policy, the government has issued rules on how much work employees should do. The most obvious manifestation of increased economic activity will be reduced unemployment and an increase in the number of available jobs. This means that when the Covid-19 pandemic struck, people's purchasing power should have returned to normal. Two sides of a coin have become the new normal amid the Covid-19 pandemic. On the one hand, the rising prosperity could be increased; On the other hand, however, the chances of the Corona virus causing positive cases are increased.

This particular policy functions as the government's response to complaints about the economy. COVID-19 and future preparedness necessitate the emergence of a new normal (Currie, 2020). Thus, in order to avoid having the government get swamped when the new normal for future risks is implemented, the government's preparedness is very important.

All living things need clean and healthy environments in order to survive and thrive. It was not only during the pandemic that the need for community waste produced disposable masks, medical gloves, and PPE clothing, but rather was to protect the public from the Covid-19 virus, whether in the form of disposable masks, hand sanitizer bottles, medical gloves, or PPE clothing. Environmental management that relies on ecosystem services, including promoting and propagating infectious diseases, reducing air pollution, and regulating climatic factors, has a relevant part to play in exposing and disseminating infectious diseases, reducing pollutants, and keeping climatic factors in check (Espejo et al., 2020). While humans, one of the living things in an ecosystem, obviously require the presence of other organisms, the presence of other organisms is also required for humans. As

humans strive to meet their own needs, they also engage in a number of activities that harm the environment (Muhajir Haris & Priyo Purnomo, 2016). Proper disposal of medical waste effectively controls the source of infection (Sangkham, 2020).

The Serious Environmental Impact of Medical Waste

The operations of decreasing, storing, collecting, transporting, utilizing, processing, and/or landfilling are included in the scope of B3 waste management. When it comes to B3 waste treatment in health facilities, there are various choices to consider: a) managed directly by the government; b) carried out by a third party; and c) the hospital has an incinerator to assure the independent destruction of B3 trash. The regional government has the authority to establish and enforce B3 waste policy, out of all of these choices. As a result, local governments play a vital role in guiding rules for B3 waste management that are as risk-free as possible (Sitompul, 2021). To avoid the accumulation of B3 waste in the Health Facilities during COVID-19, the West Java Provincial Government advised that the Health Facilities collaborate with PT Jasa Medivest, a Regional Owned Enterprise (BUMD) that provides waste management services (HuMas West Java, 2020). Article 32 of West Java Provincial Regulation No. 23 of 2012 provides that local governments can collaborate with commercial organizations, both domestically and internationally, in the management of B3 trash in line with the rules of the regulation. The partnership relationship is formalized through an agreement and/or agreement between the Regional Government and the corporate entity in question.

Proper disposal of medical waste is a huge challenge for the government sector. Ignoring the seriousness of this issue could result in the release of massive quantities of microplastics to landfills and waterways, greatly affecting the animals and plants who live there. The main personal protective equipment to control the spread of the virus is masks (PPE). As such, use of face masks has significantly increased in conjunction with the COVID-19 pandemic, which has increased the incidence of pandemics. Plastic or other plastic derivatives are often used in many of these masks. To put it another way, the widespread use of these face masks means that in no time millions of tonnes of plastic waste has ended up in the environment (Selvaranjan et al., 2021). According to data from Indonesia's Ministry of Environment and Forestry in October 2020, the increased production of medical waste during the pandemic is 1.662,75 tons, which is approximately 30 to 50 percent more than the pre-pandemic production rate.

Not only is waste mismanagement the Achilles' heel during simple lockdowns, but inadequate waste management can impede any security strategy. There was a general decrease in the rate of selective collecting during the SARS- COV-2 outbreak in Italy (-15 percent in one city with a well- developed door-to-door collection system). Waste management guidelines are delayed, which means that waste collection operators who may be infected with a disease may not receive immediate treatment. Disposable face and hand protection, contrary to expectations, does not play a significant role in waste management, accounting for less than 1% of the municipal solid waste that is still collected each year. Nevertheless, leaving protective masks and gloves outside the building increases the environmental hazards. Waste management and the protection of waste operators are discussed in this chapter. Finally, waste treatment guidelines that are considered most appropriate are provided and assessed. The information in this paper reveals that in the urban solid waste management sector, successful solutions have been found to help mitigate COVID-19. However, the knowledge of these solutions is not disseminated widely enough (Ragazzi et al., 2020).

PPE use and production, and COVID-19 pandemic disposal are increasing plastic waste, which presents a threat to the environment. That amounts to approximately 129 billion facemasks and 65 billion pairs of disposable plastic gloves used and disposed of every month in the world (Aragaw & Mekonnen, 2021). To help prevent disease transmission and environmental pollution, there is a need to institute appropriate waste management policies and also to increase public awareness about the protection methods to combat COVID-19 infection. We predict that (Islam et al., 2021).

The government is urged to treat waste management, including medical, household, and other hazardous waste, as an urgent matter in light of the continuing coronavirus disease (COVID-19) pandemic and its increasingly

adverse impacts on both human health and the economy. Additional medical and hazardous waste is created during such an outbreak, including infected protective equipment, such as masks, gloves, and other equipment, as well as uninfected supplies of the same nature. When inadequate waste management produces unexpected "direct" effects on human health and the environment, it is said to be a form of poor stewardship. As a result, waste management is critical to an effective emergency response.

Plastic pollution control has become a prominent issue in China's political discourse. As part of its plan to deal with environmental pollution problems, China announced a phase-out of various types of single-use plastics over a six-year period beginning in January 2020. But there now appears to be a new obstacle blocking the implementation of a total ban on single-use plastic products: The emergence of the new, more virulent strain of COVID-19. It has become an important and proper part of daily life to use online ordering, contactless delivery, and wearing masks in order to meet basic needs and to contain the spread of SARS-CoV-2 in the face of routine epidemic prevention and control in China. Although the nation-wide quarantines do prevent people from using many types of plastic bags, lunch boxes, and disposable masks, the rampant use of plastic bags, lunch boxes, and disposable masks still adds hundreds of millions of pounds of plastic waste every day. It is important that environmental pollution caused by single-use plastic products is a source of concern during the pandemic. As the pandemic situation develops, environmental protection and anti-pandemic efforts must both be handled by the Chinese government (Liu et al., 2021).

Safe waste management methods have been developed in South Korea after the spread of several infectious diseases, including Severe Acute Respiratory Syndrome (SARS), Middle East Respiratory Syndrome (MERS), and Ebola virus. She predicts (Rhee, 2020). because of this, it is imperative that the problem of disposing of so many disposable medical masks is studied and resolved by various regions and countries around the world (Chen et al., 2020). As a result of the COVID-19 pandemic, people have come to wear masks when they perform daily activities, like driving or going to school. The rising demand for masks produces an increasing amount of mask waste, and this has an adverse effect on the environment (Hartanto & Mayasari, 2021).

CONCLUSSION

The government must work with various parties to keep the surrounding environment clean and healthy for mutual comfort and safety. It is possible that the government could develop an extension program on the topic of disposable mask waste, especially when disposing of them in an appropriate place to prevent mask waste from contaminating land or the ocean. A waste recycling program can also be created by the government to avoid the spread of the Covid-19 virus.

AUTHORS' CONTRIBUTIONS

Dewi Sekar Kencono: Conducting research with the literature review stage, collecting data and analyzing the data that has been collected. The author also plays an active role in making journal article manuscripts starting from the background, literature review to narrating data. The author analyzes the data and elaborates the relevant theoretical literature. The author is also actively involved in the formulation of research problems and adds a variety of relevant literature to strengthen the analysis and findings in the article.

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