

Conference Paper

Covid-19 and Waste Management Law: Do Hard and Soft Laws Complement Each Other?

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ORCIDMyrna A. Safitri: <https://orcid.org/0000-0003-4948-0263>**Abstract.**

The Covid-19 pandemic has led to various health, economic, and environmental problems. Waste management is one of the environmental problems that have emerged during this pandemic. Countries worldwide are trying to overcome the increase in the quantity and type of waste during the pandemic, such as disposable masks, face shields, and gloves, whether from households, commercial areas, or quarantine homes. Then there is also much medical waste sourced from health service places and places where people do swab testing and Covid-19 vaccinations. Moreover, there are other problems like increasing plastic waste from food consumption in the household during work and school activities from home. These waste problems add to the complexity of waste management, especially in developing countries which still needs improvement in their law and policy, technology, capacity, and legal awareness of the community in waste management. An interesting legal phenomenon during the Covid-19 pandemic is the widespread use of soft laws in the form of protocols, circulars, instructions, and appeals. This paper aims to study various forms of soft law used by the Government of Indonesia to manage Covid waste and analyze their compliance with national laws. This paper consists of two main parts: describing the trends in the use of soft law in waste management during the Covid-19 pandemic, and an analysis of the relationship between “hard law” and “soft law” in handling COVID-19 waste.

Keywords: Covid-19, environmental impact, soft law, waste management

1. INTRODUCTION

The Covid-19 Pandemic hitting the world since the beginning of 2020 has caused multi-dimensional problems. Not only those related to health but also the economy and the environment. One of the environmental problems that arise during this global Pandemic is waste generation. Countries are trying to overcome the increasing quantity and type of waste that has emerged during the Covid-19 Pandemic, such as disposable masks, face shields, and gloves. The waste comes from households, commercial areas, or self-isolation places like hotels, apartments, and residential houses. There is also much medical waste sourced from health service places and places for carrying out swab testing and Covid-19 vaccination. Then, plastic waste generation from food consumption

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in the household during the enactment of regulation of work from home and schooling from home is increased too ([16], [26], [29]).

The waste generation during the Pandemic complicates waste management in developing countries that is generally still ineffective in terms of policy framework, technology, capacity, and societal awareness ([1], [4], [14], [18]). Despite the Covid Pandemic, Indonesia, for example, is struggling to cope with waste generation. National data shows that in 2020 waste generation reached 32.8 million tons, an increase of 13% from 2019, which was 29 million tons [13]. Covid-19 cases probably have added to the volume of waste. Data in July 2020 ranked Indonesia in the top 10 countries in Asia with the volume of used mask waste and other medical waste from Covid-19 sufferers [22].

Improper waste management will result in environmental pollution and environmental health disturbances. Therefore, special laws and policies are needed to ensure better waste management. The United Nations Agency for the Environment (UNEP) says that the right policies and laws will help every country have a clear and stable legal and institutional basis to respond to emergencies such as the Covid-19 Pandemic. Regarding waste management, UNEP mentions the importance of paying attention to national laws that contain provisions enabling the short-term and emergency actions or responses needed during the Pandemic. Clarity of law is needed on several matters like the type and source of waste, technology, and types of waste processing. In addition, policy arrangements are required related to anticipatory measures to prevent negative impacts on the environment or possible displacement of waste between countries [24]. Waste management governance related to the prevention and control of Covid-19 (from now on referred to as Covid-19 waste) must be in line with the agreed international legal instruments such as the Basel Convention on Supervision of Cross-Border Displacement of Hazardous Waste ratified by Indonesia through the Presidential Regulation Number 60 of 2005 and the World Health Organization guidance concerning Covid-19 waste management.

Several studies have found the tendency of countries such as China, England, Italy, Spain, and other European countries to use soft law during the Pandemic ([5], [6], [7], [10]). Soft law is preferred to break through the impasse of hard law enforcement [8]. The use of soft law today has also shifted a lot to national law. Indonesian State Administrative Law recognize that administrative officials have discretionary power to make policies in some situations, such as filling legal vacancies and carrying out emergency policies. The soft law in question in Indonesia is better known as policy rules [12].

During the Covid-19 Pandemic, the use of soft law in Indonesia is increasing. Yasin (2020) for instance identifies soft law through protocols, circulars, instructions, and

advisories [28]. Soft laws also occur a lot in waste management, even though Indonesia has some hard legal instruments. Law on Environmental Protection and Management Number 32 of 2009 provides umbrella provisions for waste management. Applicable provisions are provided by Law Number 18 of 2008 concerning Waste Management. Ministry of Environment and Forestry has a ministerial regulation concerning Procedures for Managing Hazardous Waste from Health Service Facilities (Regulation Number P.56/Menlhk-Setjen/2015). An example of Covid waste soft law is the Circular Letter of the Minister of Environment and Forestry Number SE.3/Menlhk/PSLB3/PLB.3/3/2021 regarding Management of Hazardous Waste from Handling Coronavirus Disease-19 (Covid-19). This article discusses the form and scope of the soft law in Indonesian Covid-19 waste management.

2. METHODOLOGY/ MATERIALS

The legal research that provided the data source for this article used a statutory approach to explain the characteristics and quality of legal provisions related to Covid-19 waste management. In conducting the analysis, UNEP's guidance for assessing the quality of regulations was a reference. The guide states that the quality of Covid waste regulation can be analyzed from three aspects: the type of legal instrument used, the scope of regulation, and monitoring and compliance (UNEP, 2020). This research was conducted by collecting primary, secondary, and tertiary legal material. The main legal material included Law No. 32 of 2009 on the protection and management of the environment, Government Regulation no. 22 of 2021 on the implementation of environmental protection and management, and Minister of Environment and Forestry Regulation no. P.56/Menlhk-Setjen/2015 on procedures for the management of hazardous waste from health services, and circular of the Minister of the Environment and Forestry number SE.3/Menlhk/PSLB3/PLB.3/3/2021 on the management of hazardous waste from the treatment of coronavirus disease -19 (COVID-19). Secondary legal materials included articles from relevant journals related to waste management, particularly books on Covid-19 waste and environmental and administrative law. During this time, the tertiary legal material used was the environmental encyclopedia. This article describes the preliminary results and analysis of the research.

3. RESULTS AND DISCUSSIONS

3.1. Soft Law in Covid-19 Handling: A literature Review

Covid-19 waste research is typically conducted in non-legal disciplines. Studies have revealed the increase in waste generation and its impact on environmental health. For developing countries, where waste management infrastructure was also not well-developed before the Covid-19 Pandemic, the Covid-19 waste increase has complicated their waste management problems ([4], [1], [18], [26]).

Adequate security measures and waste management strategies are required to ensure the virus does not spread unchecked by disinfecting waste, followed by appropriate sorting, housing, and good intermediate storage. Waste recycling is possible if managed with high safety standards [9]. In addition to solid political factors, strong public awareness is also essential to let the community engage in waste management. According to a study, in Selangor, Malaysia, public awareness of sorting household waste is relatively high. However, that does not always occur in practice, especially for residents of shared apartments occupying vertical housing [3]. In this sense, there has been a gap between knowledge and behaviour.

The legal and political aspects are research subject that recently attracts attention. UNEP and the Economic Research Institute for ASEAN and East Asia (Eria) agree on the urgency of a robust legal framework to ensure that COVID-19 waste management does not affect **the** health and the environment ([25], [14]). UNEP has established guidelines for legal and policy analysis relating to the management of waste from Covid-19, which covers three aspects: the type of legal instruments used by the government, the scope of regulation, and the supervisory aspects [24]. A comparative study of Covid-19 waste management policies in Indonesia and Malaysia, conducted by Panjaitan (2021), concluded that Indonesia and Malaysia indeed have many similarities in the form of policies adopted regarding Covid-19 waste management. Both countries use the Environment Act as a regulatory framework. The difference lies in the private sector's involvement in managing this Covid waste. Indonesia allows private companies still in the licensing process to start operations, while Malaysia only allows private companies that have received permits. Another difference is that some parts of waste management in Malaysia use robots, while in Indonesia, it still relies on human labour. Both countries have suitable oversight mechanisms through inspections and complaints services. However, in Malaysia, law enforcement is stricter and implemented using an electronic monitoring system [20].

Several researchers that have conducted legal and policy studies on Covid-19 waste management in Indonesia are generally descriptive in explaining various legal and

policy instruments used by the government to regulate the management of Covid-19 waste ([15], [21]). The prosecution aspect of companies that do not manage waste properly has been conveyed by Wijaya and Haryanto (2021) [27]. Meanwhile, Nugraha (2020) explained policy implementation by local governments [19]. Muhjad, *et al.* (2021) criticized the Minister of the Environment and Forestry circular on waste management. According to these researchers technical regulations for the destruction of medical waste should adopt technological developments that are safer for health. They recommended a revision of the Minister's circular [16].

Philipus M. Hajon, *et al.* (2005) argue that political rules are a means of state administrative law. A political rule is a product of discretionary administrative measures of the state. According to Hajon, this policy can also be defined as pseudo-law [12] or soft law, according to Daly (2021) [8]. Discretionary regulations are not laws and regulations. Therefore, it is not legally binding, but it has legal relevance. Discretionary regulations make it easier for government officials to exercise their governing powers. When a disaster occurs, officials can issue discretionary regulations in various forms such as circulars, directives, warnings, and miscellaneous [12].

3.2. Hard Law and Soft Law in Indonesian Covid-19 Waste Management

Covid-19 waste management laws in Indonesia refer to Law No. 32 of 2009 on Environmental Protection and Management and its operational regulations like Government Regulation No. 22 of 2021 on the Implementation of Environmental Protection and Management and Regulation of the Minister of Environment and Forestry No. 56 of 2015 on Procedures for the Treatment of Hazardous and Toxic Waste from Health Care Institutions. A circular from the Minister of Environment and Forestry regarding B3 waste and solid waste management from the handling of Covid-19 completes the laws by providing operational directives to regional governments in managing Covid waste. In addition, there is also a Decree of the Minister of Health No. 01.07. 2020 regulating how to treat medical waste from healthcare facilities and places for isolation or self-quarantine activities.

The Environmental Law (Law No. 32 of 2009) stipulates that anyone who generates hazardous and toxic waste (B3) must treat the generated waste properly. The B3 waste management must obtain authorization from the Minister, the Governor, or the Regent/Mayor. B3 waste with specific characteristics that are disposed of directly into the environment without going through the disposal process may pose a hazard to

the environment, human health, and other living beings. Thus, there must be a better treatment of that waste.

B3 waste management includes government identification and exclusion of B3 waste, reduction, storage, collection, transport, use, treatment, landfill, and waste disposal. The management of B3 waste also includes establishing an emergency response system (ERS) to manage and finance B3 waste (Art. 275 GR 22/2021). The ERS is a new policy, and its implementation will relate to disaster management. Much of Covid waste can be classified as B3 waste, but the Covid B3 waste has not yet been treated with the ERS policy. The Indonesian government is using soft law more to regulate Covid waste.

The soft laws regulate B3 waste management procedures depending on the source of the waste, whether it comes from health facilities such as service clinics, community health centers, hospitals, or households. Disposal of healthcare facility waste is done by collecting infectious waste in a yellow container, which is then taken to waste storage area B3.

The order of the Minister of Health regulates the disposal of Covid-19 waste from healthcare establishments, isolation, and self-quarantine activities in the community. This decree regulates, for example, the methods of managing Covid-19 waste in liquid and solid waste. This decree is the basis for implementation by governments at different levels to deal with Covid-19 infectious waste. The Minister of Health's decree also guides infectious medical waste management in public health facilities and isolation rooms at home.

Another guidance on Covid-19 waste management is the circular of the Minister of the Environment no SE.3/Menlhk/PSLB3/PLB.3/3/2021 on B3 waste and the management of solid waste from Covid-19. This circular was issued to respond to various sources generating B3 waste linked to Covid-19, the increase in Covid-19 detection tests, and the introduction of vaccination.

This ministerial circular regulates the types and sources of Covid-19 waste, their management, and the role of local authorities. The covid-19 waste consists of B3 waste and solid waste. The B3 waste covers waste generated by the care of confirmed Covid patients and from random tests and vaccination. The Covid B3 waste group also includes expired medicines or medicine residues from Covid patients. Covid patients produce infectious waste in various forms. Some of them are used masks, medical gloves, head shields, eye shields (Google), face shields, reused medical gowns (hazmat), used needles, food scraps, and other waste that has come into contact with the patients' droplets.

Under this circular, the definition of Covid solid waste means face shields, masks, and gloves that do not come from Covid patients. The waste can come from households, commercial areas, industrial areas, social facilities, and public facilities as long as it does not relate to Covid suspects.

Local governments play an important role in managing Covid waste. This ministerial circular obliges local authorities to provide facilities for the collection/collection of garbage and rubbish and bins/deposit boxes dedicated to masking waste. In addition, local authorities are encouraged to record and report the implementation of waste management. The report is done by registering for the collection of Covid-19 B3 waste from all deposits/boxes, health services, and isolation/quarantine places by the district/municipality and reporting it to the province at least once a week. The provincial government then summarizes and sends the reports to the Ministry of the Environment and Forestry.

Observing the three aspects mentioned by UNEP in establishing a robust regulatory framework for managing Covid-19 waste, this Ministerial Circular has satisfied the proper type of regulations. The decision to issue a ministerial circular addressed to local governments would be appropriate to give local authorities an operational direction in Covid waste management. However, in terms of regulatory scope, this circular regulates few about prevention that can include community education which the local government must carry out. The local government should provide facilities and inform the public, especially patients, about managing COVID-19 B3 waste. The supervisory aspect is another issue that requires clearer formulation. The provincial government needs to supervise the district/municipal governments. Likewise, the capacity to adequately control the waste management of street-level officers under the district/municipal government should be continuously enhanced.

The soft laws are not the only determining factor in the successful Covid waste management. We need infrastructure that supports the implementation of regulations and supportive community behavior. Thus, laws, infrastructure including technology, adequate knowledge, and public awareness to carry out waste management will collectively determine the robust Covid waste policy.

4. CONCLUSION AND RECOMMENDATION

The use of soft law in the fight against Covid-19 in several countries shows that hard law often has difficulties in implementation in situations requiring rapid reaction and action. "The law often lags behind the community". This reinforces the conclusion that

strict laws falter in the face of emergencies like the Covid-19 pandemic. As a result, soft law becomes the right choice to meet the needs of building adaptive regulations. The preliminary results of this study show that in managing Covid-19 waste in Indonesia, the existence of soft laws strengthens the implementation of waste laws.

The waste characteristics linked to Covid-19 make it possible to realize the importance of good specific waste management. Nevertheless, that sort of management is not explicitly governed by existing laws and regulations, so the existence of non-binding laws such as a ministerial circular is beneficial in making it easier to implement the regulation. However, the existence of this non-binding law is not the only determining factor in the applicability of the law. Another thing that is also important to note is the infrastructure that supports the implementation of regulations and community behavior. These two issues are outside the scope of this study. However, other studies have proven that having the proper Covid-19 waste management infrastructure, adequate knowledge, and public awareness to carry out waste management will enhance the strength of the law.

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