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## THE NEW NORMS FOR HOUSEHOLD SOLID WASTE MANAGEMENT IN TIME OF COVID-19: MALAYSIAN LEGAL PERSPECTIVE

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### Abstract

Many countries, including Malaysia, have been affected by the Covid-19 pandemic which was newly discovered at the end of 2019. Malaysia is taking steps to enforce Movement Control Order starting March 2020 and, the latest is the enforcement of the Recovery Movement Control Order until the end of this year. Covid-19 poses new challenges to waste management whereby a failure in managing wastes in the time of facing this pandemic will cause adverse effects on public safety and health as well as the environment. Hence, the relevant authorities and the public should manage waste carefully and effectively. The households may generate household hazardous solid waste such as contaminated face masks or other household solid wastes during the pandemic which must be properly disposed of. By employing a library research method and interview, this paper discusses from the legal perspective, the new norms for household solid waste management in the time of Covid-19. The findings seem to suggest that the new norms in respect of the household are seen in terms of the increased practice of 3R and separation of waste and the implementation of Standard Operating Procedures in managing household solid waste by the relevant authorities. It is recommended that households should be provided with a comprehensive guideline on household solid waste management during the pandemic of Covid-19.

*Keywords: Household Solid Waste Management, Covid-19, Legal, New Norms*

### Introduction

Wastes are generated through human activity and can be classified as solid, liquid, and gaseous. They are normally grouped by legal and regulatory instruments based on whether they are municipal or industrial, including agricultural and mining, and their qualities of being non-hazardous, hazardous, and ultra-hazardous (Sands et al., 2012). The sources of solid waste are normally based on factors such as economics, culture, heritage, industrialization, and seasons and in general they include domestic waste, commercial waste, hospital waste, and hazardous waste (Hwa, 2007). Prevalent types of solid waste in Malaysia include food waste, electric and electronic waste, household hazardous solid waste, plastic waste, industrial waste, construction waste, diapers, and paper cartons. Solid waste management may be defined as “discipline associated with the control of generation, storage, collection, transfer and transport, processing and finally disposing of solid wastes in a manner that is following the best principles of public health, economics, engineering, conservation, aesthetics, and environmental considerations” (Pariatamby, 2001).

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Clinical waste is a type of solid waste that is classified as scheduled waste under the Environmental Quality (Scheduled Wastes) Regulations 2005. The Department of Environment (DOE) is responsible for all aspects of its management (Department of Environment, 2009).

Table 1: Quantity of clinical waste by state, Malaysia, 2015-2019

Negeri State	2015	2016	2017	2018	2019
<b>Malaysia</b>	<b>25,523.3</b>	<b>23,844.9</b>	<b>28,375.2</b>	<b>31,397.8</b>	<b>33,757.0</b>
Johor	2,700.8	2,834.2	2,806.0	3,097.5	<b>3,173.6</b>
Kedah	1,265.7	1,284.4	1,405.6	1,466.3	<b>1,609.2</b>
Kelantan	1,169.1	1,183.7	1,162.3	1,225.7	<b>1,355.5</b>
Melaka	1,138.7	1,101.5	1,195.8	1,186.7	<b>1,895.0</b>
Negeri Sembilan	1,078.2	904.0	1,210.9	1,242.9	<b>1,364.4</b>
Pahang	1,190.4	1,232.6	1,265.0	1,315.9	<b>1,429.9</b>
Perak	1,775.3	1,765.2	2,193.5	2,345.1	<b>2,644.2</b>
Perlis	212.2	224.4	245.4	251.3	<b>262.9</b>
Pulau Pinang	2,092.6	1,949.0	2,052.3	2,344.7	<b>2,360.3</b>
Sabah	1,406.8	1,586.4	1,762.6	1,849.3	<b>1,900.0</b>
Sarawak	1,431.0	1,443.5	3,086.9	3,348.6	<b>3,683.8</b>
Selangor	5,425.4	4,495.5	4,370.7	6,035.0	<b>7,343.2</b>
Terengganu	644.4	687.5	753.0	818.2	<b>846.3</b>
W.P. Kuala Lumpur <sup>1</sup>	3,944.5	3,094.7	4,808.1	4,808.1	<b>3,822.4</b>
W.P. Labuan	48.4	58.4	57.2	62.5	<b>66.3</b>

Source: Department of Environment

As indicated in Table 1 above, in 2019, the volume of clinical waste was 33.8 thousand tonnes, up 7.5 percent from 31.4 thousand tonnes in 2018 (Department of Statistics Malaysia, 2020). It was reported that clinical waste increased to 27% in April 2020 as compared to only 17% in February 2020 (Hakim, 2020). Currently, with the increase in cases of covid-19, clinical waste is expected to rise (Department of Statistics Malaysia, 2020). The clinical waste management guidelines offer comprehensive guidance on the proper handling and disposal of clinical waste generated by hospitals and other health facilities (Pariatamby, 2020).

Meanwhile, household solid waste is defined as “any solid waste generated by a household, and of a kind that is ordinarily generated or produced by any premises when occupied as a dwelling house, and includes garden waste” (Section 2 of the Solid Waste and Public Cleansing Act 2007 (Act 672)). Household hazardous solid waste is generally classified as ‘special solid waste’ which is defined as “any kind of controlled solid waste as may be prescribed which is or may be dangerous to public health or is difficult to treat, keep or dispose of, that special provisions are required to deal with it” (Section 2 of the Solid Waste and Public Cleansing Management Act 2007 (Act 672)).

According to the World Health Organization (WHO) (2020), Covid-19 is an infectious disease caused by a newly discovered coronavirus strain that could cause human respiratory infections. Before December 2019, when an outbreak of an unspecified cause of pneumonia occurred in Wuhan, China, this new strain was unknown. Covid-19 is transmitted from a person to another person via droplet. The World Health Organization declared Covid-19 as a pandemic. The symptoms of Covid-19 include fever, dry cough, and fatigue, and its sign develops 1-14 days (WHO, 2020; Chan et al., 2020).

In January 2020, Malaysia announced its first Covid-19 cases (The Borneo Post, 2020) and this marked the first wave of infection in Malaysia (WHO, 2020). After 11 days recorded with no case, Malaysia faced the second wave of infection which was on 27 February 2020. It was reported that more than 35% Covid cases were directly related to the mass gathering at Sri Petaling on 27 February 2020-1 March 2020 (Che Mat et al, 2020). On 9 October 2020, the Health Director-General of Malaysia confirmed that Malaysia is now entering the third wave of the Covid-19 pandemic (Bernama, 2020).

The issue of waste management during the pandemic of Covid-19 has become of great importance because according to the Institute for Global Environmental Strategies (2020), Covid-19 poses new challenges in waste management. Inadequate management of healthcare waste and household solid waste may have severe implications for public health and the environment. In respect of household solid waste, the challenges include increased mixed waste volume including infectious waste as a consequence of low levels of source separation, increased volume of waste from plastic due to lockdowns and suspension of the reusable items in markets, infectious waste mixing such as, tissues, gloves, masks, and gauze with other types of wastes which may cause exposure to virus transmission, lack of estimates on the amount of generated household hazardous waste, increased cases of littering, illegal dumping, and open burning, and lack of awareness concerning waste management (Institute for Global Environmental Strategies, 2020).

In Malaysia, the issues related to household clinical or hazardous waste management in the time of Covid-19 include a great number of masks are not sufficiently disposed of by the public, and some clinical wastes such as Personal Protective Equipment (PPE) and face masks have ended up in the landfills of solid waste (Pariatamby, 2020). Hence, this paper will discuss from the legal perspective, the new norms for household solid waste management in the time of Covid-19.

### **Movement Control Order (MCO)**

The most important measure taken by the Malaysian Government in facing the pandemic is the enforcement of movement control orders under the Prevention and Control of Infectious Diseases Act 1988 (Act 342) and the Police Act 1967 (Act 344) from 18-31 March 2020 as part of its efforts to suppress the number of new cases and break the Covid-19 infection chain. Under Act 342, MCO was

implemented together with the Prevention and Control of Infectious Diseases (Declaration of Infected Local Areas) Order 2020 and the Prevention and Control of Infectious Diseases (Measures within the Infected Local Areas) Regulations 2020. The Order comprises the complete restrictions of the movement and assembly nationwide, travel for all Malaysians going abroad, foreign visitors and tourists; and closure of all kindergartens, public and private schools, public and private institutions of higher learnings, all government and private premises except those involved in essential services. Solid waste management continues even during MCO because it is regarded as essential services under the Solid Waste and Public Cleansing Management Act 2007 (Act 672) read together with the Prevention and Control of Infectious Diseases (Measures within Infected Local Areas) (No.2) Regulations 2020 (National Solid Waste Management Department, 2020).

The first extension was from 1-14 April 2020 under the Prevention and Control of Infectious Diseases (Declaration of Infected Local Areas) (Extension of Operation) Order 2020 dated 26 March 2020 and the Prevention and Control of Infectious Diseases (Measures within Infected Local Areas) (No. 2) Regulations 2020 dated 31 March 2020. Then, as a part of precautionary measure, MCO was extended from 15-28 April 2020 under the Prevention and Control of Infectious Diseases (Declaration of Infected Local Areas) (Extension of Operation) (No 2) Order 2020 dated 14 April 2020 and the Prevention and Control of Infectious Diseases (Measures within Infected Local Areas) (No 3) Regulations 2020 dated 14 April 2020.

The third extension was on 29 April-12 May 2020 under the Prevention and Control of Infectious Diseases (Declaration of Infected Local Areas) (Extension of Operation) (No 3) Order 2020 dated 28 April 2020. This is known as the Conditional Movement Control Order (CMCO). Next was on 13 May-9 June 2020 under the Prevention and Control of Infectious Diseases (Declaration of Infected Local Areas) (Extension of Operation) (No 4) Order 2020 dated 12 May 2020 and the Prevention and Control of Infectious Diseases (Measures within Infected Local Areas) (No 6) Regulations 2020 dated 12 May 2020.

The fifth time, known as the Recovery Movement Control Order (RMCO) which was enforced from 10 June-31 August 2020 under the Prevention and Control of Infectious Diseases (Declaration of Infected Local Areas) (Extension of Operation) (No 5) Order 2020 dated 9 June 2020 and the Prevention and Control of Infectious Diseases (Measures Within Infected Local Areas) (No 7) Regulations 2020 dated 9 June 2020 (Lingam, 2020). The latest is the extension of RMCO until 31<sup>st</sup> December 2020 (Babulal et al., 2020).

### **Household Solid Waste Management: Relevant Laws in Malaysia**

The Solid Waste and Public Cleansing Management Act 2007 (Act 672) was passed by the Parliament in 2007. Before Act 672 was passed, solid waste management was under the duty of local and state governments as provided in the Local Government Act 1976 (Act 171). At that time, specific legislation on solid waste management was absent. The only relevant statutes were the Environmental Quality Act 1974 (Act 127), the Local Government Act 1976 (Act 171), and the Street, Drainage and Building Act 1974 (Act 133) which only relate to the prevention and control of environmental pollution (Moh & Latifah, 2017).

With the enforcement of Act 672 in 2011, the federal government took over solid waste management with some state governments conceding their executive powers on it. The respective states were Perlis, Kedah, Negeri Sembilan, Malacca, Pahang, Johore, and the Federal Territories of Kuala Lumpur and Putrajaya. Other states in Peninsular Malaysia have yet to accede to the Act and continue to apply the Street, Drainage and Building Act 1974 (Act 133), the Local Government Act 1976 (Act 171), and various by-laws. The Federal Territory of Labuan applies the same statutes as above together with the Perbadanan Labuan Act 2001 (Act 609). There are only general provisions concerning the management of solid waste in the abovementioned statutes such as the provision on the power of local authorities to

establish, maintain and carry out sanitary services for all kinds of refuse. As far as Sabah is concerned, the relevant laws include the Local Government Ordinance 1961, the Public Health Ordinance 1960, and Uniform (Anti-Litter) By-laws 2010, Uniform (Beauty and Health Care Centre) By-laws 2014, Uniform (Compounding Offences) By-laws 2013, and Uniform (Segregation and Disposal of Organic Waste) By-laws 2016. In Sarawak, laws on solid waste management include the Natural Resources and Environment Ordinance 1993, the Local Authorities Ordinance 1996, and the Protection of Public Health Ordinance 1999.

### **The New Norms in Managing Household Solid Waste in Malaysia**

The term ‘new norms’ is defined as a new way of living and going about our lives, work, and interactions with other people (Y.L.M., 2020). The pandemic of Covid-19 has caused the emergence of new norms in many aspects of life such as concerning movement control, physical distancing, and self-protection.

According to Institute for Global Environmental Strategies (2020), household-generated healthcare waste including infected masks and gloves should be treated as contagious waste, separately disposed of, and processed by municipal specialists or waste management operators in the private sector. Other considerations include the separation of contaminated waste from other household solid wastes, the mapping of sources of waste generation to identify changes in waste amounts and flows and increase resource use efficiency, and the practice of waste minimization and recycling.

In Malaysia, wearing face masks in crowded public places and on public transport was made mandatory from 1 August 2020 onwards (Farik Zolkepli, 2020). Hence, an abundance of used face masks for disposal is expected. It was reported that the environmentalists warned against the emergence of a new type of plastic pollution which includes used face masks. This, they said could deteriorate the environment and marine litter crises. It is most likely attributable to the improper disposal of used face masks (Tharanya Arumugan, 2020). In Penang, after the introduction of mandatory use of face masks in public areas came into force, around one million face masks are being disposed of daily in the state (Mohamed Basyir, 2020). Since this is reported for Penang only, the whole amount of disposed face masks for the whole country daily is unimaginable.

In respect of household hazardous solid waste in Malaysia, the lack of provisions to deal with the management of household hazardous solid waste or special solid waste is confirmed by Muharrir Kamarudin (2016) who notes that although household hazardous solid waste is supposed to be sent to the Department of Environment for special disposal handling, it is still being directly disposed of together with other non-hazardous types of household solid waste. Moreover, Nadzri Yahaya (2017) agrees with this issue by stating that “hazardous solid waste is under the Department of Environment, and though the concession companies may manage their collection from houses there is a lacuna regarding the disposal or “where to send” such waste. This is still unresolved”.

To minimize the amount of waste to be handled in a special way, a small portion of hazardous waste should always be kept separate from other waste streams (Schertenleib & Meyer, 1992). In the time of pandemic particularly, this should be resolved due to the adverse effect that household hazardous waste may cause to public health and the environment.

Apart from the issue of disposal, the Waste Management Association of Malaysia (WMAM) reported an increase in the waste generated in residential areas by 20% to 30% during MCO (Trisha, 2020). A detectable new norm during MCO is the increased use of delivery services which also means more plastics to be used and more solid waste generated (Badrum, 2020). Vaghefi (2020) also agreed that the implementation of MCO increased activities of online shopping and food takeaways which can be resulted to incline of plastic and packaging wastes. Nevertheless, the increasing numbers of household waste make up for declining numbers of commercial, industrial, and institutional waste (Teoh, 2020).

Although there is an increase in solid waste generation, there is also increased awareness and support for the practice of 3R (Reduce, Reuse, Recycle) and mandatory separation of solid waste at the source (Musa, 2020). In Johor, from March to April 2020, it was reported 176, 380 kg of recyclable waste collected with a 27.4% recycling rate. Similarly, In Kuala Lumpur, there was an increase of 30% recycling rate with 307.63 tonnes of recyclables collected in May 2020 as compared to 163.15 tonnes in May 2019. This indicates the emergence of a new norm that is an increased practice of 3R during MCO until now (Bernama, 2020). In 2019, due to the mandatory separation at source, the recycling rate in Malaysia was 28.1 % which exceeded the set target of national recycling rate, which is 22.0% in 2020 as shown in Table 2 provided below (Department of Statistics Malaysia, 2020).

Table 2: Recycling rates, Malaysia, 2015-2019

Indikator Indicators	Tahun Year	2015	2016	2017	2018	2019
Kadar kitar semula <sup>1</sup> Recycling rate (%)		15.7	17.5	21	24.6	28.1

Source: National Solid Waste Management Department

With regard to solid waste management by the relevant authorities during the pandemic of Covid-19, the Ministry of Housing and Local Government issued a number of Standard Operating Procedures (SOP) which include *SOP Perkhidmatan Kutipan Sisa Pepejal dan Pengurusan Pembersihan Awam Sewaktu Pandemik Covid-19 dan Perintah Kawalan Pergerakan (PKP)*, *SOP Bagi Pengoperasian Kemudahan Pengurusan Sisa Pepejal Sewaktu Pandemik Covid-19 dan Perintah Kawalan Pergerakan (PKP)*, and *SOP Perkhidmatan Kutipan Sisa Pepejal dan Pengurusan Pembersihan Awam Pasca Perintah Kawalan Pergerakan (PKP)*. These SOPs are imposed in the States which apply Act 672. *SOP Perkhidmatan Kutipan Sisa Pepejal dan Pengurusan Pembersihan Awam Sewaktu Pandemik Covid-19 dan Perintah Kawalan Pergerakan (PKP)* aims to provide guidance to concessionaires under the Ministry of Housing and Local Government for solid waste and public cleansing management during pandemic of Covid-19 and MCO. The contents include provisions of Personal Protective Equipment (PPE) and other equipments and standard operating procedures. This SOP complements the existing SOP or operations manual related to solid waste collection services and the management of public cleaning that has been adopted by concessionaire / Contractor Company. The SOP is provided for the use of government agencies, staff and employees involved with solid waste collection services and public cleansing management during pandemic of Covid-19 and PKP.

**Conclusion**

From the discussion above, several key findings emerge, that is there is an increased generation of household solid waste during the pandemic. Nevertheless, the enforcement of MCO has a positive impact in terms of enhancing the practice of 3R among the society which is supported by the practice of separation of waste at source. Another significant observation of this study is that there are new norms in managing household solid waste by the relevant authorities with the issuance of Standard Operating Procedures by the Ministry of Housing and Local Government. It has already been seen in the discussion that an issue that should be given attention is the disposal of used face masks. There is also the issue of handling household hazardous solid waste or special solid waste in Malaysia. It is

recommended that there should be proper coordination between SWCorp, the concession companies, and the Department of Environment in this matter. It is also proposed that the households should be provided with a comprehensive guideline on household solid waste management including household hazardous waste during the pandemic of Covid-19. In particular, households should be aware of the need to separate the contaminated waste from other household wastes. In conclusion, the proper management of solid waste generated by households in the time of Covid-19 is vital since the consequences of this may be dire, particularly for the public and waste collectors.

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