



Implementation Household Solid Waste Management (HSWM) During The COVID-19 Pandemic

Devi Angeliana Kusumaningtiar¹, Prita Dhyani Swamilaksita², Gisely Vionalita³, Yulia Fariza⁴,
Nanda Aula Rumana⁵

^{1,3,4} Department of Public Health, Faculty of Health Sciences, Universitas Esa Unggul, Jakarta 11510, Indonesia

² Department of Nutrition, Faculty of Health Sciences, Universitas Esa Unggul, Jakarta 11510, Indonesia

⁵ Department of Medical records, Faculty of Health Sciences, Universitas Esa Unggul, Jakarta 11510, Indonesia

ABSTRACT: The existence of garbage that grows every day is very concerning. In addition, environmental impacts also vary, such as environmental pollution and the effect of waste on health. Second, the need for an appropriate and systematic waste management system can reduce the generation of existing debris. Therefore, management reduces the amount of waste processed for final disposal. The research design used in this study is descriptive qualitative to explore and describe the social situation in waste management. Data collection was carried out through interviews, observations, and document reviews. In this study, data triangulation from sources and techniques was carried out. The data analysis is carried out by collecting data obtained from informants, making transcripts of interviews, creating matrices, and conducting interpretations. The results of this study found that waste management in the housing and collection process still does not meet existing regulations, such as shelters and Temporary Disposal Sites (TPS) that have not met the requirements, then in the final disposal process at the Bantargebang landfill there is still minimal waste management so that it still uses an open dumping system.

KEYWORDS: Environmental Health, HSWM, Solid Waste, Waste.

INTRODUCTION

The development of the population and the activities of the people result in a large number of piles of garbage; human activities in daily life will cause waste, in the sense that waste, according to WHO (World Health Organization), is something that cannot be used, not used, not liked or something that is thrown away that comes from human activities and does not happen by itself, while according to the Waste Management Law Number 18 of 2008 states that waste is the rest of the activities human day and from natural processes of solid form [1]. The existence of waste that continues to increase every day is quite frustrating. Garbage is always considered annoying and useless when viewed by the eye and in terms of health. There are many types of waste, including solid waste and liquid waste. Accumulated waste can be affected by climate change due to the increase in the earth's temperature or what can be known as global warming. Global warming can occur due to the rise in greenhouse gases such as water vapor, carbon dioxide (CO₂), methane (CH₄), and nitroxide (N₂O) [2]

Waste has a far-reaching impact on the environment, which is associated with environmental pollution and its impact on the health of waste. Garbage will pollute the surrounding environment such as water polluted by human actions that litter into rivers, air pollution due to burning garbage, not infrequently polluted water causes diarrheal diseases to develop because drinking the water so that raw water must be brought from various sources [3]. Several factors cause the problem of waste in Indonesia. Poor waste management will cause an unpleasant environment for the people around it, and trash will cause unpleasant odors and less pleasing to the eye. Garbage is usually dusted in places far from settlements and community shelters. If the waste disposal site is close to community housing, the risk will cause pollution and disease in residential areas, there are also other problems, namely an increase in the amount of waste that is not followed by repairs and improvements in waste management facilities and infrastructure which results in waste problems becoming complexes such as garbage not being collected and illegal waste disposal occurs so that it can cause various diseases [4]

The increasing population has resulted in the amount of waste in Indonesia also continuing to increase. An article mentioned that the Ministry of Environment and Forestry (MOEF) admitted that in 2020 the total national waste production had reached 67.8 million tons. This means about 185,753 tons of waste daily are produced by 270 million people. Or each resident produces about



0.68 kilograms of litter per day. This figure is an increase compared to previous years. In 2018 alone, the national waste production of doen reached 64 million tons from 267 million inhabitants. These wastes ultimately contribute significantly to the increasing backlog of mountains in landfills. [5]

The waste management system appropriately and systematically will be able to eliminate the waste pile in the management itself because it reduces the accumulation of existing debris, with the aim of a clean and comfortable city and making the local environment comfortable. [6]. Household waste is waste from daily activities. The impact of household waste can pollute the surrounding environment, such as water, air, and soil. Household waste must be managed so that it does not cause pollution to the surrounding environment. [7]. Organic waste management can also be processed with magot, magot, which is the larva of the Black Soldier Fly (BSF) fly which can be used as a decomposer for organic waste and as feed for animals such as fish and chickens. The use of larvae from these insects can be a decomposer of organic waste that is commonly produced by households. The opportunity to decompose using BSF larvae is very promising because the harvested BSF larvae can be useful as a protein sum-ber for animal feed, so that it can be used as an alternative substitute for conventional feed.

Magarjaya Village South Bekasi. Garbage officers carry out as many as twice a week to be transported to landfills, while transportation from house to house is carried out as much as once every two days. In transporting waste, sometimes there are several obstacles that occur such as accommodation for the transportation of problematic waste ranging from punctured tires or breaking down of garbage transportation equipment. Meanwhile, households do not separate organic and inorganic waste so that waste is accumulated into one. In the collection of waste that has been carried out, there are stages such as housing, transportation where each stage has its own way as in the transportation, the community disposes of waste into the bins / bins that have been provided, for waste collection will be united in one location, namely the TPS where the waste will be stockpiled from various household waste before being transported to the landfill while the waste management itself should be carried out sorting between organic and inorganic so that they do not merge, but there are still weaknesses in the sorting that the end of the waste will be combined into one. Not only the problems that are felt in one direction from the community to the community, but from the community to the cleaning party also accept the obstacles, the obstacles felt by the community are regarding the problem of transporting waste from home to TPS, the constraints of officers to take garbage and the lack of initiative of the community to throw garbage directly into the TPS resulting in garbage accumulating in the shelter so that an unpleasant smell appears and invites a vector that making it uncomfortable in the area of housing / around people's homes.

METHOD

This research is a descriptive qualitative research, which is to provide an overview of the problem that will be studied thoroughly, broadly, and in depth. The variables of this study are waste storage, waste collection, waste transportation, and final disposal. The data collection method used in this study is primary data and secondary data using in-depth interview instruments by asking questions to informants related to custody, collection, transportation, and final disposal with interview guidelines using the 4 M method (Man, machine, method, dan material), then field observations related to the storage, collection, transportation, and final disposal and can be assessed from 4 M (man, machines, method, dan material), and further review documents related to housing (list of the number of cleaners, jobdesk for cleaners, waste disposal schedules, and SOPs for waste management), waste collection (list of collection facilities, jobdesk for cleaners, and schedules for garbage collection), garbage transportation (list of transportation facilities, jobdesk for cleaners, and schedule for transportation of waste), and final disposal. The information needed is to find out an overview of waste management in every implementation process in waste management on jalan letjend sarbini, Margajaya, South Bekasi. The research informants are parties related to the sarbini road margajaya and who are involved in the implementation of waste management. The selection of this informant uses purposive sampling techniques. The Key Informants in this study were the head of the RT, the main informant was the person in charge of organic waste and one janitor, while the supporting informant was a resident who lived on jl. Letgen Sarbini. In this study, the data was carried out by triangulation of data, namely from the results of triangulation of sources with several informants and triangulation of techniques was carried out by comparing the results of informant interviews with the results of observations. Data analysis in this study used a matrix / table of interview results to provide a clear picture.



RESULT

Overview of the Waste Disposal Process

The initial stage of waste management in Margajaya, South Bekasi is a process of housing. In this process, the researcher wants to see the human resources, the procedure for monitoring, and the parasana facilities used in the interviewing using interview guidelines, observation checklists. Based on the results of in-depth interviews with all informants, information was obtained that Margajaya village only has janitors for transportation, namely 2 officers, while for the detention, it is only carried out by households without any officers. In its implementation, waste management in Margajaya village only has SOPs for organic waste management but it is not written, organic waste management uses magot containers for decomposition while inorganic waste is only collected in one container which will then be disposed of in a Temporary Disposal Site (TPS). In the shelter, the community already has their own trash cans at home and there are also trash cans that have been provided by the local administrator in front of the house, but there is no difference in places according to the type of garbage, and the garbage will be mixed together even though there has been an appeal from the cleaners to distinguish the waste according to its type. The following is an excerpt of the results of an in-depth interview that researchers have conducted with informants:

"If for the janitor, there are two rts, and here there are 5 RTs so there are 10 janitors" (key informant).

"For the janitor of the complex, there are two people, and the car has 4 people." (main informant).

"If for SOPs in processing waste that I live in this simple form, which can be said to be the processing of organic waste such as fruits and vegetables, we will process it using magot" (key informant)"

"SOP, I don't understand it" (main informant).

"The obstacle may be for residents, namely still like to litter or dispose of mixed waste between organic and inorganic, although we have urged and given the place, but residents have not been able to change their attitudes, that is the second obstacle, maybe for transportation the problem is that we still use motorbikes while the waste in the residents is quite a lot." (key informant).

"No, so we have a waste problem, we just hope that the residents will only do sorting, we only provide organic and inorganic sorting" (the main informant).

"Every day, every morning it's picked up, maybe the night or the morning it's tucked in that trash can." (key informant)

"One day, It's just a lot of service so on that day it's sharing for" (support informant 1).

"No, it's just a waste" (support informant 2)

In the process of implementation, the community in Margajaya village, especially RT002, is still not participating in waste management, such as not sorting waste between organic and inorganic, the waste generated by households is still mixed. But local officials continued to urge people to separate the waste according to its type. The following is an excerpt from the results of in-depth interviews that have been conducted by researchers and informants:

"We urge residents to dispose of the garbage in its place, but maybe residents are not used to separating organic and inorganic waste." (key informant).

"Pewadahan, place huh? Usually from residents we have urged to sort out from plastik waste separated from organic waste which organic waste will be taken by the ecovillage to be processed with magot, there are only residents who mix organic waste and inorganic waste." (main informant).

"The obstacles are like that, residents have not understood and have not sorted waste from home" (key informant).

"It's not as big as I am." (support informant 1).

It can be concluded that the results of the in-depth interviews related to the pedawadahn process can be seen that the cleaners in Margajaya village are 10 people and for the removal of household waste is only carried out by the community. In waste management, there is no complete SOP and there is only for organic waste as an unwritten SOP. The collection of household waste by the community is carried out every day and as much as once every two days it is transported to the TPS by officers. In the community, there is still a lack of participation in sorting waste according to its type while local officials and cleaners have urged them to separate waste according to its type.

In the results of the interview, a documentation review has also been carried out where Margajaya village does not yet have a complete SOP for waste management, but there are cleaners who have their respective duties according to a predetermined schedule. The following are the results of the review of waste disposal documents that have been carried out by researchers:



Table 1. Waste Management Document Review1

Document	There is	No there	Information
List of the number of janitors		✓	Only the public is doing the disrepute
Jobdesk janitor		✓	no jobdesk because there are no janitors
Garbage disposal schedule	✓		done daily by the community
Waste management SOP		✓	

From the results of the interview and review of the document, it has also been proven by direct observation where there are no cleaners and there are only magot managers who will take organic waste for further processing. In carrying out the monitoring carried out every day by the community, and the waste bins are already owned by their respective communities and some are provided by local officials, besides that waste management does not have a complete SOP and there are only SOPs for organic waste and there is a lack of community participation in sorting waste according to its type. The following are the results of observations of waste retention that have been carried out by researchers:

Table 2. Observations of Waste Retention2

No	Assessed Components	There is	No there	Information
	Each house has a disaggregated bin (organic, inorganic, and residual)		✓	the litter is mixed together.
	The available bins are made of waterproof material, strong, closed, not easy to rust, easy to clean, and the bins are labeled and marked		✓	Trash can still open
	Littering is carried out once a day	✓		
	people do not litter and must maintain the cleanliness of the market together	✓		
	There is a Waste Management SOP		✓	Only directions from maintainers

It can be concluded from the results of interviews and reviews of documentation and observations related to waste management and management in Margajaya village in 2022 that waste management in Margajaya village does not yet have an SOP. In its implementation, the representation is only carried out by the community. This waste storage is carried out every day and the officers only take the garbage that has been containerized on the day of transportation of the waste, but the place of storage is still inadequate because it is still open and there is no difference in the place of storage of organic or inorganic waste. As well as the lack of community participation in the storage of waste and still stamping waste into one tampa place there is a sorting of waste according to its type.

Overview of the Waste Collection Process

The second stage of waste management in Margajaya village is the collection process. In this process, researchers want to see human resources, collection procedures, and infrastructure used in waste collection using interview guidelines, observation checklist sheets, and document review checklist sheets. Based on the results of in-depth interviews with all informants, information was obtained that waste collection was carried out once a day by the local community and collection was carried out once in two days by cleaners by cleaning by bringing garbage from the source of garbage or community houses that had been carried out and transported to the TPS using motorbike carts that were sheltered to make it easier for cleaners to carry garbage from the complex area to the TPS. The following is an excerpt from the results of in-depth interviews that researchers have conducted with informants: *"If it is for the collection of waste to the polling station, the community is quite enthusiastic, yes, you can say it is the thinnest."* (key informant)
"It's not that caring, so it has to be officers and administrators"(main informant)



"If this is the procedure from home, it is directly disposed of at the TPS from the TPS in transport by vehicle to the bantargebang landfill"(key informant)

"The first step to sort it first is also not all residents want it, for their organic waste to be twisted into ecovillage and the inorganic waste is disposed of at the TPS"(main informant)

"If you go from home to the polling station it's collected every day, from the polling station to the landfill it's about a week once." (key informant)"

"For the collection, first, the garbage fork, the garbage fork continues to dustpan, for the officers, it may be a mask with plastic gloves." (lead informant)

In the implementation of waste collection, there is still a lack of community participation, especially in waste sorting. Where people still don't understand in waste management in their place of residence. Here's an excerpt of an in-depth interview the researcher has conducted with the informant:

"For obstacles like the one that said earlier, residents have not been able to understand the sorting of waste, which is generally from the kitchen, whose problem is that waste is still mixed." (key informant)

"A lot of ya broken tires, a lot of engines"(support informants 2)

"at least we'll take it to people's homes" (support informant 1)

It can be concluded from the results of interviews related to the waste collection process, it can be known that the collection of waste to the TPS is carried out once and two days by cleaners using motorbike carts by bringing household waste to the TPS which has been carried out. From the results of the interview, it has also been carried out with a review of documents where in the process of collecting waste there has been a collection schedule and a waste collection schedule. The following are the results of a review of waste collection documents that have been carried out by researchers:

Table 3. Review of garbage collection documents³

Document	There is	No there	Information
List of means of garbage collection	✓		Motor carts
Jobdesk janitor	✓		2 officers
Garbage collection schedule	✓		Carried out 3 times a weekkali

Furthermore, from the results of interviews and document reviews, it has also been proven by direct observation where the waste collection process is carried out by collecting household waste and then transported to the TPS and has been carried out once or two days by cleaners who already have a schedule using a motor cart unit. The condition of the TPS in Margajaya village must require repairs because it does not meet the requirements such as the TPS is not waterproof, there is no sorting available, and the TPS is very close to people's homes. The following are the results of observations of waste collection that have been carried out by researchers:

Table 4. Waste Collection Observations⁴

No	Assessed Documents	There is	No there	information
1	Collection in the form of picking up and transferring garbage from the source of garbage to temporary shelters	✓		Appropriate
2	There are TPS that are disaggregated between organic, inorganic, and residual waste		✓	Garbage at the TPS station is mixed together
3	Powerful TPS available	✓		appropriate



4	TPS is resistant to water.		✓	Because TPS needs improvement
5	TPS is easy to clean.	✓		Appropriate
6	Easy to reach garbage haulers.	✓		Appropriate
7	TPS is not a nesting place for infectious vectors		✓	There are vector diseases such as flies
8	The TPS is not on the main residential line and must be at least 10 meters away from the house		✓	TPS is 6 meters away from home
9	There are waste collection facilities in the form of garbage motors, garbage carts, and garbage bikes	✓		Motor carts available
10	There is a janitor jobdesk	✓		2 janitors
11	Transportation of garbage is carried out 1 time per day for disposal to the TPS		✓	Appropriate
12	people throw garbage directly into the TPS		✓	Lack of community participation and relying solely on janitors

It can be concluded from the results of interviews, observations, and reviews of documents related to waste collection in Margajaya South Bekasi in 2022, there is a collection schedule, a list of facilities used, and a schedule for cleaners in collecting waste from home to TPS which is carried out once in two days by 2 cleaners using motorbike carts and can easily carry out garbage collection, The process of collecting waste is carried out first in each house then transported to the TPS and from the TPS in the transport to the landfill. The condition of the TPS is no longer feasible because of the water reflux that can come out and vectors can also be found such as flies around the TPS, and the TPS is not closed and causes an unpleasant odor and there is no waste sorting at the TPS so that the waste is merged into one between organic and inorganic, and measurements have been taken the distance from the community's home to the TPS is only 6 meters away. Furthermore, there is a lack of community participation in disposing of waste from home to TPS and relying only on cleaners.

Overview of the Waste Transportation Process

The third phase of waste management at Margajaya, South Bekasi is the transportation process. In this process, researchers want to see human resources, transportation procedures, and infrastructure used in the transportation of waste using interview guidelines, checklist sheets, observations and document review checklist sheets. Based on the results of an in-depth interview with all informants, the process of transporting this waste was carried out by the cleaners once in two days by means of garbage at the polling station in transport and then disposed of into the landfill by 1 truck driver along with 5 driver companions. However, sometimes garbage trucks suffer damage such as punctured tires or break down which causes constraints on the transportation of garbage. The following is an excerpt from the results of in-depth interviews that researchers have conducted with informants:

"For the obstacles that we have applied for, namely for the disposal of garbage, our vehicles only use motor carts As for the reactors that have been damaged, if there can be a healthy reactor, maybe we will be more active in taking garbage from residents." (key informant)

"At best it's leaking so you can't take it"(support informant 1)

In carrying out this waste management, the cleaners have been provided with PPE by local officers such as gloves, uniforms, boots, and hand soap. The following is an excerpt from the results of in-depth interviews that researchers have conducted with informants:

"Nothing, from the government there is no ppe and pure we give PPE." (key informant)

"Yes, PPE was a mask, rubber gloves, dustpan." (lead informant)

"PPE such as boots, hand soap, gloves"(key informant)

"There are, as many boots as well as a raft" (support informant 1)



It can be concluded from the results of the interview related to the waste transportation process, it is known that the facilities used in the transportation of garbage are trucks with 1 driver and 5 companions to carry out disposal to the landfill, in the implementation of waste management that the cleaners have been provided with PPE in the form of uniforms, gloves and boots and there are obstacles in transporting to the landfill, namely the officers do not carry out disposal or do not have dakang at the scheduled time

From the results of the interview, it has also been carried out with a review of documents that in the process of accounting for this waste there is a list of infrastructure, schedules of cleaners, and schedules for transporting waste. The following are the results of a review of the waste transportation docume that has been carried out by researchers.

Table 5. Waste Transportation Document Review5

Document	There is	No there	Information
List of means of transporting garbage	✓		1 unit garbage truck
obdesk janitor	✓		1 driver with 5 driver companions
jadwal transport sampah	✓		Done 3 times a week but often does not come and garbage becomes piled up

From the results of the interview and review of the document, it is also proven by direct observation by researchers where transportation in Margajaya village is carried out by bringing waste from the TPS to the landfill 3 times a week, but there are often obstacles so that the transportation is carried out once a week which makes the garbage accumulate. The following are the results of observations on waste transportation that have been carried out by researchers:

Table 6. Observations of Waste Hauling6

No.	Assessed Components	There is	No there	Information
	Transportation in the form of carrying garbage from the source and/or from temporary garbage shelters to the final processing site.	✓		Appropriate
2.	There is a garbage conveyance that is strong, easy to clean, and easy to move.	✓		Appropriate
3.	There are transportation facilities in the form of garbage trucks 1 unit	✓		Sometimes trucks have problems
4.	Waste is transported 1 x 24 hours to the landfill		✓	Done 3 times a week and sometimes 1 time a week so that the litter accumulates
5.	There is a janitor jobdesk	✓		1 truck driver and 2 driver companions
6.	There is a janitor PPE in the form of gloves, boots, hats, and uniforms	✓		Appropriate
7.	Task of hygiene wearing the full PPE that has been provided	✓		Appropriate

It can be concluded that nahwa from the results of interviews, observations, and reviews of documents related to transportation in waste management at Margajaya village, south Bekasi in 2022 that there is data on the transportation list which



includes infrastructure, jobdesk of cleaners, and waste transportation schedules. In transporting waste where transportation is carried out 3 times a week in the schedule, there should be delays and garbage transportation is carried out once a week so that the garbage in the TPS accumulates. Transportation is carried out by 1 driver and 2 driver companions to be disposed of to the landfill with the number of trucks 1 unit. In the transportation of this garbage, there are sometimes obstacles such as trucks breaking down and puncturing tires

Overview of the Final Disposal Process

The last stage in the waste management stage in margajaya village, south Bekasi is the final disposal. In this process, researchers want to see human resources, final disposal procedures, and infrastructure used in final disposal using interview guidelines, observation checklists, and document review check sheets. Based on the results of in-depth interviews with all informants, it was found that garbage from household activities would be disposed of in the landfill by cleaners using trucks, here are excerpts from in-depth interviews with all informants:

"If the participation is clear from the Bekasi city government through the cleaning service, and he is the one who brings garbage from the TPS to the landfill" (key informant)

"The process is, maybe more or less, I don't understand but here there are dues that must be paid by residents for the transportation of waste hammering RT. If you are in the landfill, the facilities are only truck cars, exafators. That's more or less it. (key informant)

It can be concluded that from the results of the discussion related to the waste transportation process, it can be seen that the waste from the household of Margajaya Village, South Bekasi, was thrown into the Bantargebang landfill by the department of conservation, the waste in the landfill was in the form of household waste and there was still B3 waste from households that was not sorted, at the Bantargebang landfill also still using an *open dumping system*.

From the results of the in-depth interview, a document review has also been carried out that in this waste disposal process there is a waste management profile in the field of waste management and B3 DLHK South Bekasi which contains operational technicians and waste infrastructure and problems in waste management. The following are the results of the final disposal document review that has been carried out by the researcher.

Table 7. Final Disposal Document Review7

Assessed Components	There is	No there	Information
Waste management profile in the field of waste and waste management B3 DLHK South Bekasi	✓		The existence of operational technical and waste infrastructure and waste management problems

From the results of the interview and review of the document, it can also be proven by direct observation where waste from households located in margajaya village, South Bekasi, is thrown into the landfill three times a week by cleaners, in the TPA it is also explained that there is household waste and B3 waste from households, but there is no effective waste management and still uses an open dumping system. The following are the results of the final containment observations that have been carried out by the researchers:

Table 8. Final Disposal Observations8

No.	Assessed Components	There is	No there	Information
	Waste from community activities is disposed of in the landfill	✓		
	Waste that can enter the landfill is household waste, similar to household waste	✓		Appropriate



	Waste that is prohibited from being treated in landfills includes (Minister of Public Works of the Republic of Indonesia, 2013): a. liquid waste derived from household activities. b. B3 waste. c. medical waste from health services. d. Residues are also not categorized as hazardous and toxic materials or contain hazardous and toxic waste materials	✓		Appropriate
	In the landfill, there must also be operational facilities consisting of: heavy equipment and transport trucks	✓		Truck cars and other heavy equipment available
	Equipment or means used in the transportation of garbage must have a technical life of equipment of 5-7 years.	✓		Appropriate
	Garbage must be covered during transportation, so that garbage does not splatter on the road	✓		appropriate
	Does not leak, so that leachate does not splatter during transportation	✓		Appropriate
	Waste treatment available at landfills		✓	None because waste management at the Bantargebang landfill still uses <i>an open dumping system</i>

It can be concluded from the results of interviews, observations, and reviews of documents related to final disposal on waste management in Margajaya Village, South Bekasi in 2022 that there is a waste management profile document and B3 DLHK South Bekasi which contains operational technicians and infrastructure for waste problems and waste management problems. In this final disposal process, waste from household waste will be disposed of at the bantargebang landfill by cleaners using a garbage truck that will be transported to the landfill. The waste in the bantargebang landfill is in the form of household waste and other waste, it is explained that there are also adequate facilities to move and collect waste in the landfill. In this final waste disposal there has been no more flattery management afterwards and there is only a reduction in waste that can be recycled.

DISCUSSION

Based on the results of the research, the description of the waste management process in margajaya village, South Bekasi, is carried out directly from the source, namely households, where the rental is carried out by the local community once a day by disposing of waste into containers or trash cans that have been provided. In the settlement in Margajaya has not been cleaned because there is no separation of waste between organic and inorganic so that the waste is mixed together. The results of the research above are in line with the study conducted by [8], that waste management in households does not meet the requirements of housing such as still annexing various types of waste (organic and inorganic) and the absence of waste sorting carried out in household waste. According to the regulation of the Minister of Um. Of The Republic of Indonesia number 03 / PRT / M2013 concerning the implementation of infrastructure and waste facilities in handling household waste and household type waste that in sorting and housing must be labeled or marked according to the type of waste, distinguished materials, shapes and colors of containers in order to provide differences between various types of waste and must use closed containers. This is also in line with Government Regulation (PP) Number 81 of 2012 concerning the management of household waste and household type waste which says that



waste sorting or rental must use facilities that meet the requirements such as materials, shapes and colors of containers in accordance with the category of waste (organic and inorganic and B3) [9].

The purpose of the SOP is to realize the commitment of workers in their fields as a tool for effective and efficient performance assessment, the need for SOPs, namely as a guideline in carrying out work sutu [10]. In carrying out waste management, it was found that in waste management, they have not used SOPs or written procedures, and in the interview results, information was obtained that there were only unwritten SOPs and in the results of observations that had been made also that cleaners could easily carry out the waste management process. In this representation process, it can also be known that household communities are still lacking in participation in managing waste such as not sorting waste according to its type, and only a few household communities sort waste before it is disposed of in the containers provided. The results of this study are in line with the study conducted by [11], that there is still a lack of community participation in carrying out waste management by such as sorting, the community only throws waste into one container without sorting as has been urged by the cleaners. It can be concluded that the waste storage process is still not in accordance with existing policies, where the available household housing places do not have disaggregated trash cans according to their types such as wet garbage and kerisng waste mixed into the same container, and the trash cans are also inadequate in accordance with applicable regulations, namely they must be closed. In its implementation, waste management also does not have a written SOP in its management which can cause a lack of waste management. Therefore, to overcome existing problems, local management should add housing facilities so that they can sort according to the type of waste, provide direction to the community to sort and dispose of waste according to its type, and make written SOPs for waste management so that a process in carrying out work can run well.

The results of the study above are in line with the study conducted by [12], that the collection of waste in Margajaya is not qualified due to the non-routine transportation of waste to the final shelter (TPA) of waste, as well as the absence of sorting between organic and inorganic waste. As well as the close distance to the settlement becomes a source of disease caused by vectors. It can be concluded that the collection process carried out by the cleaners is in accordance with existing regulations, namely waste that has previously been carried out from the source is then transported and collected to temporary disposal sites (TPS), but in this case the lack of community participation in collecting waste directly to the temporary disposal sites (TPS), it assumes that it is only the duty of the cleaners, in addition to the lack of community certainty, there are also problems at the TPS that are not in accordance with existing policies such as TPS needing improvement because it is open and a lot of waste comes out of the TPS, there is no sorting of waste according to its type and the TPS in Margajaya is only 6 meters away from community settlements which should be a minimum distance of 10 meters from settlements. and TPS is also found to be a lot of disease-carrying vectors such as flies. Therefore, to overcome the existing problems, you should make a submission for TPS repairs so that the TPS meets the requirements as determined and socialization is carried out to the community regularly so that it can contribute to waste management, especially disposing of waste directly to the TPS.

In its implementation, the transportation of waste has problems, namely the frequent destruction of trucks that will transport garbage, resulting in delays in the transportation of waste due to lack of fleet. In addition to the problem of trucks that often experience damage, there are cleaners who are incomplete in wearing PPE that has been provided by the manager such as boots, rubber gloves, hand soap, masks, where there are still many shortcomings in PPE and only use boots. The results of this study are also in line with that there are still many officers who do not use PPE with uncomfortable bases, and explain that the waste management system is not yet qualified and the cleaners in Margajaya are not complete in wearing personal protective equipment.

According to [13], the potential dangers that can be caused by not using PPE can cause work accidents and occupational diseases so it is highly recommended to use PPE to prevent unwanted things from happening. Meanwhile, according to the regulation of Law (UU) Number 1 of 1970 concerning work safety in article 13, it is explained that whoever will enter a workplace, is required to obey all work safety instructions and wear the required personal protection equipment [14]. Janitors certainly have risks such as getting infections that allow gastrointestinal infections, typhoids, fever, and so on, therefore it is very important to use complete PPE when working to protect officers from doing their work.

It can be concluded that in the process of transporting waste in Margajaya is in accordance with the transportation procedures, it's just that there are still many shortcomings such as transportation which is often late due to fleet limitations so that it is very necessary to add a fleet and repair a fleet that has been damaged besides that the PPE equipment that has been provided is not used as appropriate by cleaners such as masks, boot, and rubber gloves. Therefore, to overcome the existing problems, the manager



should conduct a routine check on the waste management fleet located in Margajaya and if there is a problem, it can be reported to the authoritative party, then do not forget to give a reprimand to the cleaners to use complete PPE as provided by the root to avoid work accidents and occupational diseases.

Landfill is a place to process and return waste to environmental media. In another sense, landfill is a landfill and a landfill in landfill so as not to cause pollution to the surrounding environment and it is hoped that waste will be managed properly. Environment and Hygiene Service of south Bekasi. In the final disposal in Bantargebang, there are various areas, one of which is RT002 RW002, which carries out final disposal there using an *open dumping system*. The results of the study are also in line with the results of the study conducted by [15] that in landfills using an open dumping system is a step that is widely done by disposing of waste openly without further management that is more friendly to the environment which results in causing discomfort ranging from rotten to environmental aesthetics and giving rise to vectors that make the source of the disease occur.

It can be concluded that in this final disposal process, the waste in the Bantargebang landfill is not suitable because there is still waste that should not be disposed of in the landfill such as B3 waste and still uses an *open dumping system* where disposal is carried out openly which results in pollution for the surroundings of the bantargebang environment. Therefore, a solution to the problem for the disposal of final waste is planned so as not to pollute the surrounding environment and cause disease problems for the surrounding community and not become environmental pollution and public health emergencies around the landfill area.

CONCLUSION

Based on the results of research from the waste retention process, it can be concluded that the implementation of the housing has not been in accordance with existing policies. The problems contained in waste collection, namely the condition of the TPS close to community homes, the presence of disease vectors such as flies and rarely community houses with TPS only 6 meters. And the lack of participation of the community to collect waste independently to the TPS so that it only relies on cleaners who date every two days to do waste collection.

ACKNOWLEDGMENTS

This research is supported by the Ministry of Education, Culture, Research and Technology and the Education Fund Management Institute through the 2021 Scientific Research Program Funding.

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Cite this Article: Devi Angeliana Kusumaningtiar, Prita Dhyani Swamilaksita, Gisely Vionalita, Yulia Fariza, Nanda Aula Rumana (2023). Implementation Household Solid Waste Management (HSWM) During The COVID-19 Pandemic. International Journal of Current Science Research and Review, 6(3), 2072-2083