

# WASTE MANAGEMENT AND COMMUNITY PARTICIPATION IN HOUSEHOLD WASTE IN RW 06, KEBON KOSONG VILLAGE, KEMAYORAN SUBDISTRICT, CENTRAL JAKARTA

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## Abstract

This study aims to learn more about the waste management system and community participation in RW 06, which has been designated as a waste reduction pilot RW as part of the SAMTAMA program's waste management based on 3R. This study took place at RW 06 in Kebon Kosong Village, Jakarta. In this study, an evaluative descriptive method was used. According to the findings of this study, RW 06 implemented three waste management systems: waste management with waste bank savings, independent and productive waste management, and waste-transport waste management. The RW 06 community began participating in waste management based on the 3R model in the planning stage, attending meetings on waste management in the 3R model, performing organic and inorganic waste sorting, and waste reduction activities (3R), then at the community evaluation stage RW 06 community has been involved in monitoring and providing criticism/suggestions on 3R waste management. Although several communities have tried to manage their waste in a 3R manner, the community in RW 06 as a waste reduction pilot still uses the collection-transport-disposal waste management system.

**Key words:** Waste management, Community Participation, SAMTAMA Program

## INTRODUCTION

An increasing population and changes in people's consumption patterns are causing an increase in waste in Indonesia (Undang-Undang Republik Indonesia Nomor 18, 2008). According to the Ministry of National Development Planning/Bappenas, Indonesia's population in 2019 is estimated to be 267 million people, up from 265 million in 2018 (Badan Pusat Statistik Indonesia, 2020). As the population grows, the amount of waste generated becomes more difficult to manage. Changes in people's consumption patterns, in addition to population growth, have resulted in an increase in waste generation. The changing consumption patterns of society are inextricably linked to the level of income. People with high incomes will have an impact on high consumption patterns and generate more waste (The World Bank, 2018). People in urban areas' daily lives clearly demonstrate a shifting consumption pattern, such as the frequent consumption of fast food by urban communities, resulting in waste in the form of food containers, spoons and forks that can only be used once, and plastic packaging containers. This consumption pattern has a significant impact on waste generation, particularly in Indonesian cities.

The resulting waste generation necessitates proper handling and management. In Indonesia, waste handling and management are still inefficient. According to the most recent research conducted by Sustainable Waste Indonesia, up to 24% of waste is still not properly managed, 69% of waste is disposed of in landfills, and only 7% of waste is recycled (CNN Indonesia, 2018). In Indonesia, household waste is the primary source of pollution (Haswindy & Yuliana, 2018). Only 49,2% of households have sorted their trash at this time. This figure comes from a survey of 354 people in Jakarta, Bandung, Yogyakarta, Semarang, and Surabaya conducted by the Katadata Insight Center (KIC) (Tim Katadata, 2020).

The city of Jakarta, which is a metropolitan city, is ranked second in terms of waste generation in Indonesia (Badan Pusat Statistik Indonesia, 2020). In 2019, the city of Jakarta produced waste at a rate of 7,700 tons per day, up from 7500 tons per day in 2018 (Dinas Lingkungan Hidup, 2020). In terms of sources, the following are the most common waste types in Indonesia:

Tabel 1. Types of waste based on source and amount

Waste Source	Total Waste (%)
Household	48
Traditional Market	24
Commercial Area	9
Others	19

Source: Dinas Lingkungan Hidup 2020

For the City of Jakarta, waste handling and management is important because it is a necessity that is needed by the community with the government as a service provider, and it is backed up by a public awareness campaign. If waste is not properly managed, it will have a significant impact, such as the accumulation of garbage that cannot be controlled, resulting in environmental problems such as a decrease in the quality of the city's beauty, the pungent odor that arises from garbage decay, and public health can be disrupted due to polluted air as a result of burning waste (Daryanto, 1995).

To deal with the waste problem, the government and the community must collaborate. Reducing the rate of population growth and altering people's consumption patterns in order to reduce waste production is less effective (Haswindy & Yuliana, 2018). In addition to good waste management, increasing community participation as the primary source of waste is thought to be important for reducing waste generation. Community participation in waste management is still the most important factor, and it should be one of the future benchmarks for waste management success (Menengkey, 2012). The community's waste management has so far been limited to disposal, and it is not yet at the stage of more useful waste management. Garbage is still widely regarded in the community as goods that have outlived their usefulness, rather than as a resource. As a result, waste management necessitates efforts to shift society's old paradigm of (collect-transport-dispose) to a new paradigm based on the 3R concept (reuse, reduce, recycle) (Soekama, 2010).

One program that has been developed for a long time is waste management through a waste bank which is usually managed by the surrounding community at the neighborhood to Urban village level. This waste bank program is one of the programs or efforts that support 3R-based waste management (*reduce, reuse, recycle*). The role of the waste bank program is very important, because it implements a waste sorting system. In addition to the waste bank program, there is a new program created by the Jakarta government, namely SAMTAMA

(Sampah Tanggung Jawab Bersama), this movement was created with the aim that all communities have the responsibility to process their waste in a 3R manner, both for people who are members of the waste bank or those who are not become a member of the waste bank. The SAMTAMA activity has two parts, namely the laskar samtama and the samtama village. Laskar Samtama is a section for residents who voluntarily register themselves as volunteers, while the Samtama village is filled with local RWs that are considered to have good waste management, these RWs will become pilot RWs in terms of waste reduction. The SAMTAMA (Sampah Tanggung Jawab Bersama) program was developed to reduce the accumulation of waste to the TPST (Integrated Waste Disposal Site) which is known as the Bantargebang TPST. The Bantargebang TPST is a garbage collection site for the Jakarta and Bekasi areas. According to Anies Baswedan, as the Governor of DKI Jakarta, the Bantargebang TPST will not be able to accommodate any more waste, if there is no reduction in the waste entering Bantargebang (Tirto.id, 2021).

Kebon Kosong Village, with a total area of 1.16 km<sup>2</sup>, is one of the villages in Kemayoran District, Central Jakarta. The Jakarta Environment Agency designated RW 06, one of the RWs in the Kebon Kosong Village, as a pilot RW for waste reduction in the city of Jakarta as part of the SAMTAMA (Sampah Tanggung Jawab Bersama). This RW was chosen because it believed it already had a waste bank, the Hijau Selaras Mandiri Waste Bank, that was advanced enough to help run the SAMTAMA program. This waste bank plays an important role in disseminating information and inviting people who are not members of the waste bank to reduce waste generation as well. The Waste Bank Hijau Selaras Mandiri was founded in 2013 and has received awards for three years in a row in the program for the best waste bank supervisor in the green and clean category in 2016 and 2017, as well as an award in the category of environmental savior in the implementation of the appreciation program for the caring community in 2018. Besides that, the Hijau Selaras Mandiri waste bank is the second waste bank in Jakarta that Pegadaian has entrusted with the task of converting waste into gold savings. In terms of waste reduction, the waste reduction pilot RWs will later become guidelines for non-pilot RWs.

So therefore, RW 06 which was chosen as a waste reduction pilot, should have good waste management, particularly based on the 3Rs (reduce, reuse, recycle), followed by a

public awareness campaign, in order for waste reduction to run smoothly.

Based on this description, the researchers are interested in conducting a more in-depth study of waste management and community participation in the RW 06 area designated by the Jakarta government as a pilot RW for waste reduction as part of the SAMTAMA (Sampah Tanggung Jawab Bersama) program.

## RESEARCH METHODS

This study uses a descriptive evaluative method. The object of the study was carried out on the community of RW 06 waste reduction, Kebon Kosong Village, Central Jakarta in managing household waste. The indicators in this study will be related to the waste management system that is used and the stages of participation, namely:

- a. Planning stage, which includes community participation in strategic planning of a program/activity so that it is as expected,
- b. The implementation stage includes the involvement/participation of the community in providing donations in the form of materials and personnel in terms of 3R waste management,
- c. The evaluation/monitoring phase includes community involvement in monitoring and providing feedback (evaluation) for program implementation (Sulistiyaningrum et al., 2015).

The location in this research is RW 06, Kebon Kosong Village, Kemayoran Sub-District, Central Jakarta. The population in RW 06 is 3,026 people which are divided into 14 RTs.

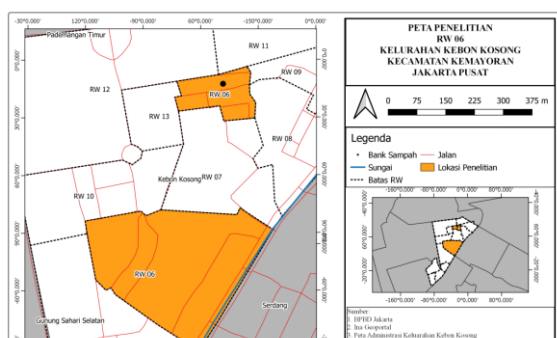


Figure 1. RW 06, Kebon Kosong Village, Kemayoran Sub-District, Central Jakarta (Research Location Map)

The number of samples that will be used as objects of this research based on the slovin formula is 98 people, divided into two samples, namely all members of the waste bank totaling 44 people and 54 non-members of the waste

bank whose sample characteristics prioritize a family head, if the head of the family is not present, can be represented by his family who are adults or over 18 years old.

Data was collected through interviews, tracing and field observations. The data to be collected consists of primary data and secondary data. Primary data collection was carried out through interviews using interview guidelines, the results of which would be analyzed using triangulation and qualitative analysis as well as direct observations in the field. This secondary data is in the form of demographic data obtained through related agencies and other libraries that aim to support this research.

## RESULTS AND DISCUSSIONS

Waste management requires serious consideration, particularly household waste, which ranks first among the types of waste generated by Jakarta residents. Household waste management is the primary goal in removing waste from population centers with the goal of reducing waste volume and/or pollution caused by waste. The government has pursued a variety of programs to reduce waste generation, ranging from the waste bank program, which only requires waste bank members to minimize waste, to a new program called SAMTAMA (Sampah Tanggung Jawab Bersama), which aims to engage the entire community in waste reduction. In the RW 06 Waste Reduction Pilot, Kebon Kosong Village, the existing waste management system is a waste bank savings system, a productive independent system, and a collection-transport-disposal system.

### Waste management with a waste bank and a productive, self-contained system

The RW 06 community, who are members of the waste bank membership, manages waste through a waste bank savings system, whereas the independent and productive system is run by several communities who are not members of the waste bank membership. The waste bank's savings system has been in place since the Selaras Mandiri Green Waste Bank's inception, but the independent productive system only began in 2019 when RW 06 was chosen as a waste reduction pilot RW as part of the Shared Responsibility Garbage program (SAMTAMA). These two systems have something in common: they both want to implement a 3R waste management system (reduce, reuse, recycle) in order to reduce waste to TPST. The role of community participation in this 3R waste

management system is critical. Community participation is critical because it is a key component of the overall 3R-based waste management program, particularly in RW 06, which was selected as a model RW for waste reduction in Jakarta as part of SAMTAMA (Sampah Tanggung Jawab Bersama). No matter how good the city government's waste management program is, it will be useless if the community does not participate. At the planning, implementation, and monitoring evaluation stages, the forms of participation used by the community of RW06, both members of the waste bank and non-members of the waste bank, to maximize the 3R-based waste management program and reduce waste accumulation, namely:

a. Planing Stage

As part of the Joint Responsibility Waste Program, the community of RW 06, both members and non-members of the waste bank, will hold a meeting to discuss 3R-based waste management (SAMTAMA). Waste management meetings for waste bank members are held 1-2 times a month at the Hijau Selaras Mandiri waste bank, while non-member waste bank meetings are held once a month at the RW 06 community hall and are accompanied by the waste bank manager

b. Implementation Stage

At this point, the role of the RW 06 community in providing donations in the form of materials and personnel for 3R waste management is explained. The following are some of the RW 06 community's participation activities in support of 3R waste management:

- Participation in the form of labor

**Reduce Activities**

- Using *reusable bags* for shopping
- Reduce purchases of unneeded items
- Make efforts to minimize the addition of plastic packaging waste and disposable cutlery (spoons, forks, plastic straws) when buying food/beverages
- Prioritizing the use of cloth / cloth napkins rather than *tissue*

**Reuse Activities**

- Save the use of plastic bags by folding the plastic neatly, which will be reused later
- Reuse the bottles to be used as a container of cooking oil, soap dish and vase

**Recycle Activities**

- Management of organic waste

In RW 06, management is composting. The composting process is the decomposition of organic biodegradable materials by microorganisms. Organic waste is usually converted into compost for plants during the composting process. The drum composter technique was used in RW 06 for composting. Before beginning the composting process, it is necessary to sort organic waste properly. If inorganic waste enters the drum during the composting process, it will complicate the process and lower the quality of the compost produced. Some people, both members and non-members of the waste bank, will usually only distribute sorted organic waste to the waste bank manager or place it in the composter drum in every RT without making compost. The composting process will be carried out by the waste bank's management and RW 06's manager using organic waste collected by the community in the composter drum.

- Management of inorganic waste

Several communities in RW 06 are involved in management inorganic waste activities such as specific waste sorting, waste compaction, waste distribution, and waste recycling. Members of the waste bank usually deliver their trash to the Hijau Selaras Mandiri waste bank, where it is weighed and deposited into their savings, which can be either money or gold. They must, however, properly sort the inorganic waste before distributing it to the waste bank so that it does not mix with organic waste and condense the inorganic waste that has been collected. Waste compaction is done to reduce the volume of waste so that more inorganic waste can be counted and weighed in a single container.

Several non-members of the waste bank did the same thing, starting with sorting inorganic waste, compacting it, and then distributing the inorganic waste to collectors hired by RW 06's manager to transport inorganic waste. Several people in RW 06, both members and non-members of the waste bank, also turn inorganic waste into craft materials for daily use or sale, such as plastic coffee bags, tissue holders, and newsprint plates.

- Community Service

Each RT performs this activity once a week. Everyone who participates in the community service will sort their trash into the designated areas for each RT and then deliver it to the RW 06 community hall.

c. Evaluation/monitoring

At this point, several communities have offered advice and input on 3R waste management, inviting other communities to participate in 3R waste management efforts, including efforts to reduce waste, reuse items that can still be used, waste sorting, and recycling. Reprimand and reprimand others for not properly disposing of waste in accordance with the 3R trash cans.

**Waste management using a collection-transport-disposal system**

Waste management in RW 06, which consists of 14 RT, is managed not only with a waste bank savings system and productive independent that has been working on the 3R (reduce, reuse, recycle), but also with waste management for waste that cannot be recycled and for some people who do not want to sort waste. The following are the collection and collection activities in RW 06 using the collect-transport-disposal system:

a. Onside Storage

Individual and communal patterns of accommodation are used in this study. Individual and communal housing patterns can be found in the RT 01-09, RT 11-14 area. For the individual pattern, there is a personal trash can on each face of the house, while for the communal pattern, there are 3R trash bins (reuse, reduce, recycle) in some corners of the complex. Another area, the village in RT 10, only uses a communal pattern with the presence of garbage containers to collect garbage from nearby houses.

b. Collection

The pattern of waste collection used by the community in RW 06 is a direct individual pattern for the area of RT 01-06, RT 08-09, RT 11-14, an indirect individual pattern for the RT 10 area and a mixed pattern between direct individual patterns and direct communal patterns for the area. RT 07. The individual pattern begins with direct collection by janitors who collect garbage from house to house and 3R trash bins in several corners of the complex, which are then collected by trucks and transported to

transfer depots and TPS3R. A single truck is used to collect garbage in 1-3 RT areas. The janitor will collect waste in an indirect individual pattern by visiting the garbage container that collects waste for the RT 10 area.

Despite the fact that RW 06's waste management system is 3R-based, the community still uses the collection-transport-disposal waste management system. This can be seen in the table of waste amounts in RW 06 (table 2), where the total amount of waste increases year after year. The waste sorting that is done does not result in a significant reduction in the amount of waste that is transported. When the waste bank opened in 2013, waste sorting began. From 2014 to 2018, the trend in waste sorting has always been downward. Then, when RW 06 was chosen as a waste reduction pilot RW as part of the Joint Responsibility Waste Program, it increased once more (SAMTAMA). However, considering the amount of waste that grows year after year, the increasing trend of sorting that occurs again has no significant impact.

Several people in RW 06 stated that the lack of community participation in 3R waste management was due to a variety of factors, including uneven distribution of information for activities related to 3R waste management (meetings, training in making compost and handicrafts from inorganic waste, etc.) , dissemination of information that RW 06 was given the title of RW reduction pilot was not conveyed to the entire community, so many people didn't know that RW 06 had a goal to reduce waste generation and didn't even know that RW 06 implemented an independent waste management system and productive for people who are not members of the waste bank membership.

In addition, the waste bank, which is located in RT 14 with other RTs, is located far away and the waste bank does not seek to take garbage into every house, making some waste bank members lazy to sort, as well as the benefits obtained from the community, particularly those who are not members of the community. There are few waste bank members because there are no permanent stakeholders in the business world who can sell compost or inorganic waste handicrafts made by the community on a regular basis, and there are no used goods collectors who come to RW 06 on a regular basis to collect inorganic waste that has been collected by people who aren't waste bank members.

In this case, the government only focuses on technical/physical aspects (selection of appropriate technology), without paying attention to other aspects, such as management aspects (development of mechanisms and management with good management concepts, determination of

organization and procedures, development of skilled workers and productive, providing stakeholders for processed waste, financing), and social aspects (well-programmed community counseling).

Tabel 2. Total Waste In RW 06

	Year	Total Of Waste Before Sorting (kg)	Total of Segregated Waste (kg)	Percent Total of Segregated Waste (%)	Final Total (kg)
Before the waste bank was established	2011	128.163,8	-	-	128.163,8
	2012	134.514,8	-	-	134.514,8
After the garbage bank was established	2013	135.143,3	2.639	1,99	132.504,3
	2014	136.481,1	7.378	5,71	129.103,1
	2015	140.138,6	6.410	4,79	133.728,6
	2016	149.058,9	6.241	4,37	142.817,9
	2017	151.881,6	5.977	4,10	145.904,6
	2018	150.855,3	5.185	3,56	145.670,3
After the garbage bank was established & the election of RW 06 as the Pilot RW	2019	151.477,3	5.932	4,08	145.545,3
	2020	158.188,5	6.424	4,23	151.764,5

**CONCLUSIONS**

The waste management system in RW 06 includes waste management with waste bank savings, independent and productive as well as collect-transport-disposal. The community's form of participation in the planning stage is related to 3R waste management meetings, then in the implementation stage it is related to sorting organic and inorganic waste, waste reduction activities (3R), and in the community evaluation stage RW 06 is involved in supervising and providing criticism/suggestions on 3R waste management.

The collect-transport-dispose system is still used by the community in RW 06 as a management system. Although RW 06 has been trusted to be a model RW for waste reduction, there are still many things that need to be improved, especially in the management and social aspects.

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**REFERENCES**

Badan Pusat Statistik Indonesia. (2020). *Statistik Indonesia 2020* (Vol. 1101001). <https://www.bps.go.id/publication/2020/04/29/e9011b3155d45d70823c141f/statistik-indonesia-2020.html>

CNN Indonesia. (2018). *Riset: 24 Persen Sampah di Indonesia Masih Tak Terkelola*. [www.cnnindonesia.com](http://www.cnnindonesia.com). <https://www.cnnindonesia.com/gaya-hidup/20180425101643-282-293362/riset-24-persen-sampah-di-indonesia-masih-tak-terkelola>

Daryanto. (1995). *Masalah Pencemaran Lingkungan*. Tarsito.

Dinas Lingkungan Hidup. (2020). *Statistik Lingkungan Hidup Indonesia*. 378.

Haswindy, S., & Yuliana, F. (2018). Partisipasi Masyarakat Dalam Pengelolaan Sampah Pemukiman Pada Kecamatan Tungkil Ilir Kabupaten Tanjung Jabung Barat. *Jurnal Ilmu Lingkungan*, 15(2), 96. <https://doi.org/10.14710/jil.15.2.96-111>

Menengkey, A. (2012). *Persepsi dan Perilaku Masyarakat Realitas dan Strategi Pengelolaan Sampah*. Cahaya Pineleng.

Soekama. (2010). *Pengantar Ilmu Teknik*

*Lingkungan, Seri: Pengelolaan Sampah  
Perkotaan.*

- Sulistiyorini, N. R., Darwis, R. S., & Gutama, A. S. (2015). Partisipasi Masyarakat Dalam Pengelolaan Sampah Di Lingkungan Margaluyu Kelurahan Cicurug. *Share : Social Work Journal*, 5(1). <https://doi.org/10.24198/share.v5i1.13120>
- The World Bank. (2018). *What A Waste: An Updated Look Into the Future of Solid Waste Management*. <https://www.worldbank.org/en/news/immersive-story/2018/09/20/what-a-waste-an-updated-look-into-the-future-of-solid-waste-management>
- Tim Katadata. (2020). *Kesadaran Warga Memilah Sampah Masih Rendah*. Katadata.Co.Id. <https://katadata.co.id/timpublikasikatadata/berita/5e9a470c74665/kesadaran-warga-memilah-sampah-masih-rendah>
- Tirto.id. (2021). *TPST Bantargebang Hampir Penuh, DKI Bangun Pengelolaan Sampah Tebet*. <https://tirto.id/tpst-bantargebang-hampir-penuh-dki-bangun-pengelolaan-sampah-tebet-gitq>
- Undang-Undang Republik Indonesia Nomor 18. (2008). *Tentang Pengelolaan Sampah* (Issue May).

