

Community-Based Waste Management in Cisauk District, Tangerang Regency (Case Study of Melati Bersih Waste Bank, Griya Serpong Asri Housing)

Ziyad Hizbullah¹

Public Administration Study Program, Faculty of Social and Political Sciences, Universitasu Sultan Ageng Tirtayasa

Hizbullziyad88@gmail.com

Hasuri Waseh²

Public Administration Study Program, Faculty of Social and Political Sciences, Universitasu Sultan Ageng Tirtayasa

lawangabang19@gmail.com

ABSTRACT

Community Base Solid Waste Management one element that enables a community can develop themselves and achieve progress. This study aims to describe the process of community empowerment in the waste management system through the principle of 3R waste banks that are in Clean Jasmine Waste Bank. Type of research is descriptive qualitative. Data collected by observation, interviews (interview), and documentation. Testing and analysis of data is done by triangulation of data and classifying data is systematically then outlines the existing data in the field that describes the form of community empowerment in the Waste bank. The results showed that community base solid waste management in Clean Jasmine Waste Bank was not yet optimal. Community Response, People are not consistent in depositing their waste every month, People have not been able to implement a system for sorting waste from their homes, People prefer to sell their waste to collectors.

Keywords: *Community Base Solid Waste Mangement, Waste Bank, 3R*

INTRODUCTION

One of the primary issues facing Indonesian society in urban areas is waste management. Human daily activities are inseparable from waste generation; as the population grows, the accumulation of waste increases accordingly. Consequently, waste is an inherent part of human existence, as every individual fundamentally leaves behind and produces waste.

According to data from Binusa.ac.id (accessed 10/03/2024), Indonesia is the world's second-largest producer of plastic waste after China. Therefore, it is unsurprising that waste has become a national crisis across Indonesian cities. Based on 2020 data from the Ministry of Environment and Forestry, Indonesia's annual waste accumulation reached approximately 67.8 million tons – a figure that continues to rise alongside population growth. Assuming each person generates 0.7 kg of waste per day, Indonesia's dense population results in an immense volume of refuse.

The accumulation of both organic and inorganic waste is not only a social issue but also an environmental one. A lack of public awareness regarding proper disposal leads to blockages in existing drainage systems. This problem is exacerbated by the limited availability of land for containing the community's consumption remains. Furthermore, waste left to pile up without proper management becomes a breeding ground for various diseases.

One effort to reduce household waste is the implementation of the Waste Bank program. The Waste Bank is a strategy to build community awareness, encouraging people to "befriend" waste and gain direct economic benefits from it. Waste management policy is the responsibility of the Tangerang Regency Environmental Office, regulated under Tangerang Regent Regulation No. 3 of 2020. This regulation concerns the delegation of partial authority from the Regent to Sub-district Heads (*Camat*) to manage local government affairs regarding waste. Specifically, Article 6D, Paragraph 2, outlines the formation of waste banks at the sub-district level:

1. Management of household waste based on 3R (Reduce, Reuse, Recycle) at the sub-district level.
2. The establishment of waste banks at the sub-district level.
3. Community empowerment in integrated waste management at the sub-district level.

The Waste Bank program applies the 3R principles: **Reduce** (minimizing waste by limiting the use of unnecessary items), **Reuse** (repurposing used items into something new), and **Recycle** (processing old materials into new products with aesthetic or functional value). Through these Waste Banks, the government strives to address waste issues while enabling the community to utilize surrounding waste as a beneficial resource with economic value.

Table 1.1 Total Waste in Tangerang Regency

No	District	Total Waste (ton/day)
1.	Cisauk	113,2
2.	Balaraja	72,8
3.	Gunung Kaler	43,7
4.	Jayanti	42,4
5.	Cisoka	26,3
6.	Curug	-

Source: Environmental Office, 2023.

The data in Table 1.1 indicates that among the six sub-districts (*Kecamatan*) listed in Tangerang Regency, the highest volume of waste is generated by Tangerang Sub-district, producing 113.2 tons per day. This is followed by Cikupa Sub-district with 72.8 tons, and Kelapa Dua Sub-district with 43.7 tons. As for Curug Sub-district, the Environmental Office (DLH) does not yet possess the relevant data.

The implementation of the Waste Bank Program in Tangerang Regency commenced in 2015. This was initiated through socialization efforts across every sub-district and urban village (*Kelurahan*) within the regency.

Table 1.2 Waste Banks in Cisauk District

No	Waste Bank	Address
1	MIGUNANI ASRI MADANI	Perum Griya Serpong Asri Ds. Suradita
2	MELATI BERSIH	Perum Griya Serpong Asri
3	BUMI BERSERI	blok C RT 02 RW 06 Cibogo
4	DAHLIA MEKAR	Grita Serpong Asri RW 06
5	METRO SERPONG INDAH (MSI- JK)	Metro Serpong Indah Blok J-K RW 06 Ds. Cibogo
6	BERMIS	Perum Bermis Blok B RW. 04 Kel. Cisauk
7	PAPANDAYAN INDAH	Jl. Papandayan Raya Cisauk, RT. 5 RW. 4 Ds Suradita
8	BANK SAMPAH MELATI 456	Bermis Blok A3/A8 RT. 05 RW. 04 Ds. Cibogo Cisauk
9	GREEN HARMONY	Serpong Garden Cluster Green Harmony Blok B 20 No 02 RT/RW. 004/006 Desa Cibogo
10	ALASKA BERMIS A1	A1 RT 006 RW 04, KOMPL BERMIS, BLOK A1 Kel. Cisauk

11	ASSABIQUNAL AWWALUN	Griya Serpong Asri RW 08 Desa Suradita
12	OCEAN PASIFIK	Griya Suradita Indah Korpri Blok blok O RT 16 RW 09 Desa Suradita
13	PELANGI 02	Kampung Anamui RT. 002 RW. 003 Desa Suradita
14	BANK SAMPAH METRO 46	Perumahan Metro Serpong I Blok E3 No. 6 RT 004 RW 06 Desa Cibogo
15	PEMUCIS	Griya Suradita Indah B8 No.1 Desa Suradita
16	SIMPLY CITY	Cluster Simplicity The Icon BSD Kel. Sampora
17	BANK SAMPAH GMC- D	Griya Mulia Cisauk Cluster D, Jalan Padat Karya
18	BANK SAMPAH AVANI	Kluster Nittaya Avani A2/8 BSD
19	BANK SAMPAH COSMO	Cluster Cosmo, The Icon, BSD Kel. Sampora
20	LIBERO WASTE 28	Jl. Raya Cisauk LAPAN
21	ALBERA	Cluster Albera Foresta BSD
22	GREEN VIEW SERPONG GARDEN	Serpong Garden 1. Green View Kel. Cibogo
23	VERDANT VILLE	Cluster Verdant Ville The Icon BSD
24	BINTANG JAYA LIMBAH	RT 05/01 Suradita
25	GREEN WICH PARK	Greenwich Park Cluster Luxmore GA8/1 BSD
26	BANK SAMPAH Mandiri	Griya Serpong Asri RW. 07 Ds. Suradita

Source: Environmental Office, 2023.

There are 26 waste banks established in Cisauk District. However, it is undeniable that the implementation of waste banks in Tangerang Regency faces several challenges. Based on preliminary observations and data obtained from the local waste banks, the issues include:

First, the implementation of the waste bank in the Griya Serpong Asri Housing complex is not yet optimal. This is evident from data comparing the number of waste banks to the volume of waste generated. Despite having numerous waste banks across various neighborhood units (RT) and clusters, Griya Serpong Asri remains one of the highest waste-producing residential areas. Ideally, the presence of many waste banks should significantly reduce the total volume of waste produced.

Second, the community is inconsistent in depositing their waste monthly. In residential areas like Cisauk, where waste collection fees are standard, many residents feel that instead of dealing with the "hassle" of sorting, it is easier to throw everything into the bin and let the scavengers or collectors handle it.

Third, residents have not yet implemented waste sorting at the source (their homes). This is largely due to a lack of education. If they were properly educated on the "money-oriented" benefits of becoming a waste bank member, they would likely overcome excuses regarding laziness or lack of time, as they would recognize the financial incentives.

Fourth, many residents prefer selling their waste directly to collectors (*pengepul*) because the prices are often higher and the waste can be picked up daily. However, by holding routine community meetings—such as social gatherings (*arisan*)—or announcing weighing schedules via the mosque's loudspeaker, residents could be "triggered" and more enthusiastic about participating in the waste bank activities.

Based on the problems outlined above, the author is interested in conducting research titled "Community-Based Waste Management in Cisauk District, Tangerang Regency: A Case Study of the Melati Bersih Waste Bank at the Griya Serpong Asri Housing Complex."

LITERATURE REVIEW

Managerial Concepts in Waste Bank Management

According to Terry (2014: 54), management is a process or framework involving the guidance or direction of a group toward organizational goals or clear objectives. Management is a form of activity, often referred to as "managing," while the practitioner is called a "manager" or administrator. Furthermore, according to Malayu Hasibuan (2011: 21), management is the science and art of regulating the utilization of human resources and other sources effectively and efficiently to achieve specific goals.

Waste Bank

Law Number 18 of 2008 concerning Waste Management emphasizes the need to shift from conventional waste management patterns to a system focused on waste reduction and handling. Waste reduction can be achieved through limiting waste generation, recycling, and reusing materials, commonly known as the 3R principles (Reduce, Reuse, Recycle).

Suryani (2014: 74) presents the definition of a waste bank according to Aryenti as follows:

"A Waste Bank is a place for depositing waste that has been sorted by type. The operational mechanism of a Waste Bank is generally similar to other banks – there are customers, bookkeeping records, and management systems. While in a commercial bank, customers deposit money, in a Waste Bank, they deposit waste that possesses economic value."

According to Suryani (2014: 75), the primary goal of establishing a waste bank is to assist in waste processing in Indonesia. Furthermore, waste banks aim to raise community awareness regarding a healthy, orderly, and clean environment. They are also established to transform waste into more useful products for society, such as handicrafts and fertilizers that hold economic value.

METHODOLOGY

Research Methods and Location

The research method employed in the study titled "Community-Based Waste Management in Cisauk District, Tangerang Regency: A Case Study of the Melati Bersih Waste Bank, Griya Serpong Asri Housing" is a qualitative descriptive research method. This study was conducted at the Waste Bank located within the Griya Serpong Asri Housing complex in Cisauk District, Tangerang Regency.

Research Subjects and Objects

The subjects of this research are the informants serving as interviewees, while the object of this research is the management of the Melati Bersih Waste Bank in the Griya Serpong Asri Housing complex, Cisauk District, Tangerang Regency.

Data Collection

Primary data collection was conducted through observation, interviews, and documentation. Meanwhile, secondary data were gathered from internet sites and other relevant sources.

RESULT AND DISCUSSION

Community waste management in the waste bank program consists of three stages, including:

1. Planning

Based on the results of the research conducted, in implementing waste management through the Melati Bersih Waste Bank, the following planning approach is used:

- **Community participation:** Strong community involvement in the vicinity of the waste bank is essential, particularly through strong encouragement from community leaders and government officials—specifically the DLHK—who collaborate to realize the waste bank program as an effort to manage the waste bank effectively.
- **Public outreach:** Outreach activities are conducted to increase community participation. The Melati Bersih Waste Bank educates the community on proper waste management practices, supported by the DLHK and Mrs. Susiyanti, chairperson of the Waste Bank Association for Tangerang Regency. The success of these outreach efforts will impact the sustainability of the program and the continued existence of the waste bank. This outreach is intended to attract the community to participate in the activities of the Melati Bersih Waste Bank.
- **Factors posing challenges during the planning phase.**
During this planning phase, the Melati Bersih Waste Bank also faced several challenges in managing the waste bank. These challenges were primarily due to the community's busy schedules—most of whom are workers—making it difficult for them to attend the outreach sessions. This indicates the need for greater involvement of enthusiastic young people who support social initiatives such as community-based waste management.

2. Organizing

Organizing is done to assign tasks for each activity to individuals who are skilled and knowledgeable in their respective roles, ensuring that the activity achieves its predetermined objectives. The division of labor must be clear and based on each member's expertise. The purpose of this division is to prevent tasks from piling up for any one person or, conversely, to ensure that no one is left without work.

Another objective of task allocation is to foster cooperation between divisions or departments. This cooperation is directed toward a single activity to achieve the previously established goals.

3. Actuating

Actuating is a core activity in management that motivates and directs everyone within the organization to be goal-oriented and take action to achieve the established objectives. Resource mobilization can also be defined as the overall effort that, in its implementation, uses techniques and methods to encourage organizational members to be willing, concerned, and responsible for performing their work as well as possible so that the established goals can be achieved. The implementation process is generally

defined as the effort to ensure that all group members willingly perform work that achieves the goals based on established planning guidelines and organizational structures.

George R. Terry, as cited in Sarwoto's book, defines direction as the act of encouraging all group members to strive to achieve objectives in accordance with managerial planning and organizational efforts.

In this study, the implementation of the waste bank program at the Melati Bersih Waste Bank focuses on the following aspects: a macro-level persuasive approach, including socialization, technical training, flexible operational scheduling of the waste bank, waste bank mechanisms, facilities and infrastructure, and waste bank clients.

- Outreach and technical training conducted by the Melati Bersih Waste Bank were led by Mrs. Susiyanti, who serves as the chairperson of the waste bank for the entire Tangerang Regency. The technical training included instruction on waste recycling, such as managing compost from waste, creating crafts from waste, and educating participants on the differences between organic and non-organic waste, among other topics.
- The operational scheduling of the Melati Bersih Waste Bank is highly flexible; typically, the women in the housing complex coordinate it via a WhatsApp group, with weighing sessions generally held at least once every two weeks.
- Based on interviews and documentation, the author analyzed the waste bank mechanisms at the Melati Bersih Waste Bank, including: deposit, weighing, sorting, selection, transportation, and recycling. Although selection is done after recording, some customers have already sorted their waste at home before making a deposit.
- In the implementation of the waste bank program at the Melati Bersih Waste Bank, there are facilities and infrastructure that support the operational activities of the waste bank, namely: the waste bank building, waste bank signs/banners, scales, waste transport motorcycles, office supplies, ledgers, customer savings books, carts, etc.

Conclusion

Based on the field findings and research results previously presented by the researcher, the researcher concludes that community empowerment in the Waste Bank Program at the Griya Serpong Asri Housing Complex has not yet been fully realized. The following facts support this conclusion:

Planning: At this stage, planning for the Melati Bersih Waste Bank is carried out through continuous outreach and education efforts among the surrounding

community. They plan to increase community participation in the waste bank program by demonstrating its economic value. The collected waste can be exchanged for money to purchase various necessities.

Organizing: The organization of the Melati Bersih Waste Bank is quite effective, with a clear structure. There are board members and staff responsible for specific tasks. The organization includes a division of labor based on each member's expertise. Although the board members have their own commitments, they continuously strive to adjust their schedules to ensure the waste bank program continues to run smoothly. They avoid conflicts with other activities undertaken by board members.

Actuating: In this phase, the guidance provided by the Melati Bersih Waste Bank involves outreach efforts and technical training conducted by the bank's chairperson and management. They also strive to encourage and guide the community to actively participate in the waste bank program by conveying the perspective that "trash equals money" or "waste equals rupiah" to them. However, challenges have also been identified, particularly from customers. Some customers who were once active are no longer participating, citing busyness as the reason. However, the majority of challenges stem from a lack of willingness (laziness) to sort waste. This presents a challenge for the management to consistently remind participants.

Control (Controlling): Oversight is conducted solely by the waste bank itself. Performance monitoring can be conducted, but visits and supervision by the DLHK are irregular. Despite this, the DLHK still provides some assistance and equipment to support waste bank management, such as digital hanging scales. Although DLHK visits and supervision are irregular, waste bank managers will report their activities upon request. In evaluating this phase, the key finding is the difficulty in acquiring new customers. One of the challenges faced is the difficulty in acquiring new customers. This is primarily due to residents' indifference toward waste issues. Some people are still reluctant to sort their waste. Some prefer to give it to scavengers, while others mix sorted waste with organic waste. The management must be patient in dealing with residents' attitudes, as it naturally takes time for them to better understand the sorting process.

Recommendations

- A more in-depth approach to the community is necessary. Outreach efforts should not be limited to occasional events. The researcher suggests conducting large-scale outreach using mass media, including both social media and print media.

- Community empowerment efforts should target younger individuals or students, as providing motivation and knowledge transfer is easier with this demographic compared to older adults.
- Regarding the marketing of products from the Waste Bank, the researcher suggests that the Waste Bank can and should utilize social media to market products from each Waste Bank.
- The researcher also suggests that the Waste Bank in the Griya Serpong Asri Housing Complex can and should utilize current technology for administrative matters.
- The government needs to implement improvements to address various issues at the Waste Banks through regular evaluations between the relevant agency and the Waste Banks.
- The researcher suggests that Waste Banks collaborate with other institutions; this relates to securing sponsorships to ensure the sustainability of community empowerment within the Waste Banks.

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