

# Implementation of Waste Management Policies by the Main Waste Bank in Realizing the Effectiveness of the Waste Program in the City of Bandung

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## Abstract

The Bandung City Government's goal in presenting a trash bank is to teach inhabitants from the home level on how to dispose waste in an orderly manner, so that the City of Bandung will be passive in the waste bank program. Because the Waste Bank provides people with additional cash incentives. People have also grown accustomed to categorizing the many forms of rubbish generated by their respective families. It is feasible that each person generates 0.5 kg of individual garbage per day, which can be computed by the Bandung population. Bandung launched a similar initiative in 2018. Through the efforts of KANG (Reduce) PIS (Separate) MAN, the city of Bandung initiated a movement, a collaboration between the government, citizens, the private sector, and others in developing a new civilization of more advanced waste management (Use). The long-term goals of this research are to develop a waste management policy implementation strategy based on the effectiveness of the Waste Bank Program in Bandung City. Create a waste management policy concept by incorporating a waste bank into the design of future policies as part of the waste management policy.

**Keywords:** Implementation, Policy, Waste Management, Waste Bank.

JEL Classification Code: D04, F68, G21, G32, G38, G18

## 1 INTRODUCTION

Garbage is the closest problem faced daily. The amount of garbage piles is getting bigger day by day with the increase in population. Of the ten most populous countries in the world, Indonesia is ranked fourth after the United States in terms of waste production (Larasati, Astuti, & Maharani, 2020). With the continued increase in the rate of population growth, the amount of waste heaps will increase. Garbage that is increasing day by day will take up a lot of space and interfere with human activities if it is not handled properly (Dewanti, Purnomo, & Salsabila, 2020).

Urban areas that become a crucial problem is about waste management. The rapid rate of urban economic growth is one of the driving forces for the emergence of waste. The reason is that urban areas have extraordinary attractiveness for residents in all respects, especially in

finding sources of income (Hardiatmi, 2011). A poor management system will certainly have an impact on the environment, ranging from health problems, and even has the potential to bring about natural disasters. It is possible to attain a state of health in the residential environment where humans are engaged if the trash is correctly managed, so that it does not pollute it (Mahyudin, 2017). Specifically, as stated in Article 5 of the Waste Management Law, the Government and local governments are responsible for ensuring that waste management is implemented in a responsible and environmentally sound manner. Similar to Indonesia's 1945 Constitutional Article 28H paragraph (1), which guarantees everyone the right to a healthy and safe living environment. The Constitution mandates that the government provide waste management services to the public. Even though the government is the legal and accountable entity in the sphere of waste management, it is possible for the government to collaborate with corporate entities in order to better manage garbage (Candrakirana, 2015).

In the management of more and more diverse waste, of course, an alternative solution is needed. The alternatives in question can be various things, such as partnering with business entities, upgrading the operation of the landfill system with more sophisticated technology, or involving the community in managing their waste (Hayat & Zayadi, 2018). Community involvement in managing waste can be a good first step to creating a healthy and clean environment. Besides being able to grow self-awareness of the importance of protecting the environment by managing waste, it can also encourage independent communities (Halimah, Krisnani, & Fedryansyah, 2015).

In the journal Kurnia and Khikmah (2015) regarding the evaluation of community-based waste management that the community can play a role in more environmentally friendly waste management by managing waste from home. People's mindsets still view waste as useless leftovers, not as a resource that needs to be utilized. The Waste Bank Program is a national program of the Ministry of Environment in the context of realizing environmentally friendly regencies/cities towards sustainable development. The technical service unit (UPT) of the Waste Bank has a waste management function that can still be utilized and has economic value (Khatimah, 2021). Therefore, the government is expected to play a greater role in encouraging public awareness by strengthening community involvement in waste management, especially in the Bandung city environment.

Bandung City Regional Regulation Number 9 of 2018 concerning Waste Management mandates the need for a fundamental paradigm of collection and disposal into waste management, reducing and utilizing. A new paradigm shift that considers waste as a resource that has economic value and can be utilized, for example, for energy, compost, fertilizer, and industrial raw materials. Waste management can be done with a comprehensive approach. Starting from upstream, that is, since the initial potential waste is generated. Continued downstream, where the product has been used, so that it becomes waste, which is then returned to the environmental media safely (Komalasari, Suryantari, & Martini, 2018).

According to Suryani (2014) Waste management is all activities carried out to handle waste from the time it is generated to its final disposal. Broadly speaking, waste management activities include: control of waste generation, waste collection, transportation, processing and final disposal. In Indonesia, the waste management method was formed by the Waste Bank Program, the Garbage Bank has several benefits for humans and the environment, such as making the environment cleaner, making people aware of the importance of cleanliness, and turning waste into economic goods (Saputro, Kismartini, & Syafrudin, 2016). Another benefit of the Waste Bank for the community is that it can increase people's income because when they exchange their waste they will get a reward in the form of money collected in the account they have (Selomo et al., 2016).

The city of Bandung as an urban area is an area that has a magnet as an attraction for various residents' activities, ranging from livelihoods and extraordinary tourism. Various policies are made by local governments to regulate various activities to provide comfort for local and foreign tourists who come, including the policy on waste management. According to the results of Muliawaty's research (2019) that: "Termination will give birth to a new policy which Kingdon calls the unpredictable window or by Baumgartner and Jones as changing the institutional and political environment or changing the context of policy making. With the window open, it will build termination priorities in the decision-making process." New policies will always be born, especially regarding institutional changes by building termination priorities in decision making.

Based on the results of Dewi's research (2022), explained that the majority of the community welcomed the waste bank program even though when the waste bank was opened only a few became customers, the intensive socialization to the public about awareness of waste. Garbage banks are still not widely known by many people due to the lack of awareness and responsibility of the community towards the surrounding environment. Therefore, it is necessary to have tips to build public awareness through coaching or empowerment, where the community not only knows, but also understands the waste problem that is being experienced.

The purpose of the Bandung City Government to present a waste bank is to educate residents to treat waste in an orderly manner from the household level so that the City of Bandung will be passive with the waste bank program. Because with the Waste Bank, people get additional income incentives. People have also become accustomed to sorting the types of waste from their respective households. It is conceivable that each person produces 0.5 kg of individual waste per day, so it can be calculated by the population of the city of Bandung.

The similar effort was launched by the city of Bandung in 2018. Through the efforts of KANG, the city of Bandung initiated a movement, a collaboration between the government, citizens, and the commercial sector to develop a new civilization with more advanced waste management (Reduce) PIS (Separate) MAN (Use). There are 467 waste banks at the RW, sub-district, and Regional Apparatus Organizations (OPD) levels spread throughout the city of Bandung.

Based on these problems, the researchers are interested in conducting research as a continuation of the research road map of the head of the researcher in the field of Public Policy and the phenomenon of waste because as long as humans are active, the result is waste. So this research is entitled Implementation of Waste Management Policy by Waste Banks in realizing the Effectiveness of the Waste Program in Bandung City.

## **2 METHOD**

The researcher employed descriptive analysis as a research method, utilizing a qualitative approach. According to Sugiyono (2001), descriptive analysis is meant as a way for summarizing an ongoing condition at the time the research is conducted. Meanwhile, Moleong (2009) defines qualitative research as "a research process that produces descriptive data in the form of written or spoken words from people and observable behavior." The qualitative strategy was chosen with the understanding that this research is intended to collect real data and to thoroughly explore the research problem in order to acquire the expected results. The use of qualitative research is thought to be particularly relevant in the study of public administration, particularly research that attempts to evaluate and comprehend a society.

### **3 RESULT AND DISCUSSION**

Since its inception, the residents of Bandung have been enthusiastic about the establishment of a waste bank in accordance with Regional Regulation Number 9 of 2018 regulating waste management in the city. As part of the effort to save our planet's resources, we work with the government, local residents, and the business sector (trash collectors). 3R-based waste management (reduce, reuse, recycle). As a breakthrough in the community's participation in sustainable trash management. It all begins with home waste sorting, depositing, weighing and recording till the waste results are reported or recorded in a savings book. Adding value and economic value to trash is envisaged to be achieved through the installation of the waste bank. The idea of a populist economy that is simple to implement will become a reality thanks to the establishment of a trash bank. Money can be made from trash as well, thanks to garbage banks, of course. Researches in this study are primarily concerned with putting into practice the "waste bank" policy, which includes information on the policy's history, its implementation, and the supporting and inhibiting variables that contribute to the community's positive experiences.

The local administration is currently unable to fully implement waste reduction measures such as waste restriction, waste recycling, and waste reuse in the city of Bandung. Some are managed by DKP, while others are managed by businesses and scavengers. This is due to the fact that the limitation of the amount of waste generated must come from the source of the garbage, and the government merely acts as a facilitator or provides facilities to the community in terms of waste limitation. DKP has created TPST (Integrated Waste Processing Sites) to reduce the quantity of waste generated, with approximately 15 TPSTs currently operational in the city of Bandung. The 3R approach is another strategy to limit waste generation (Reduce, Reuse and Recycle). The 3R approach is used to decrease waste as well as recycle and reuse existing garbage. For each sub-district, the agency provides technical equipment assistance in the form of trash cans, garbage tricycles, and weighing equipment. In terms of waste recycling, the government can only do so for organic waste by generating compost, but there is no follow-up for inorganic waste. This should also be included in the government's agenda for inorganic waste recycling.

Waste reuse activities, such as packaging waste reuse for the same function, have not been adequately implemented. According to observations, the TPS still has a lot of packaging waste. This demonstrates that the community has not completely supported the successful implementation of waste management policies in the city of Bandung. The following stage is waste handling, which involves sorting, collecting, transporting, and final waste processing. These actions are carried out by the local government, but the community can also help. According to observations, there are still people who do not collect rubbish at TPS and instead litter outside their homes or in rivers. Meanwhile, the TPA is in charge of the final waste processing, and it also receives aid from the private sector.

Bandung's current waste management system employs the landfill control method, which involves stacking up garbage with a layer of dirt every seven days. Waste management in the city of Bandung undoubtedly has challenges in terms of execution. The mindset of individuals who have not been able to fully carry out a clean and healthy lifestyle has been a hurdle in implementing waste management, in addition to a lack of facilities and infrastructure in waste management. Waste management will be successful if the local government and the community work together to implement it. Meanwhile, in the city of Semarang, the community as a target group is not completely aware of its role in the successful implementation of waste management in the city of Bandung.



The policy standards in the KangPisMan program are based on Law Number 18 of 2008 concerning Waste Management as implemented through Regional Regulation Number 09 of 2018 concerning Waste Management, which explains that in order to realize the city of Bandung is free of waste and can manage waste properly, it is necessary to clarify the responsibilities and authority of the regional government, as well as the role of the community and related agencies, so that it can run efficiently.

Regional Regulation Number 09 of 2018 concerning Waste Management is the policy standard for the KangPisMan program as a General Guidelines for implementing the KangPisMan program waste management policy in Bandung City. Meanwhile, the targets in the KangPisMan program are regional administrators and the people of Bandung City. The goal is to create a Bandung City area that is clean of waste in order to support environmental sustainability, improve public health and environmental quality and make waste as a resource. While the scope is household waste; waste such as household waste; specific garbage.

The success of the implementation of waste management policies through waste banks in the city of Bandung can be analyzed through 3 (three) dimensions that influence the success of implementation, namely the level of compliance with applicable regulations, the smooth functioning of routines, performance and the desired impact (Ripley & Franklin, 1986).

### **1. *Compliance with applicable regulations***

the success of an implementation is measured by the level of compliance of the implementor with the specific mandate contained in the legislation. The level of compliance of waste bank implementers to the provisions of the Minister of Environment Regulation No. 13 of 2012 concerning Guidelines for the Implementation of Reduce, Reuse, and Recycle through Waste Banks includes, firstly, the need for physical waste bank infrastructure is important because waste banks that do not have a physical waste bank generally utilize residents' houses/yards for shelter and waste sorting. The results showed that all waste banks that became the object of the study met the requirements for building waste bank buildings. It's just that the findings in the field show that there are still waste banks that use private homes as a place for waste bank activities, so there is a potential for environmental disturbance around the house which is a waste bank area.

Second, the existence of waste bank implementers/managers is one of the requirements in the Waste Bank Management Standards. According to Appendix I of the Minister of Environment Regulation No. 13 of 2012, there are requirements for the Waste Bank Management System Standard for waste bank operators, namely: waste bank directors with a minimum education of SMA/equivalent, waste bank implementers have attended waste bank training, the number of daily managers is at least 5 (five) people, waste bank implementers carry out monitoring and evaluation (monev) for at least 1 (month).

Third, important institutions in an effort to make the waste bank more developed. In addition, the existence of institutions also makes it easier for waste banks to obtain legal entity status. The results show that compliance with the requirements for the form and legality of the waste bank is still not optimal. However, regarding legality in the form of a Decree (SK) for the regional head (kades/lurah) regarding the formation and management of waste banks, almost all waste banks can fulfill them.

Fourth, one of the requirements in the waste bank management system is that the waste bank manager gets a salary/incentive that is paid regularly every month. Because the sustainability of the waste bank depends on how far the waste bank is able to finance its

operational activities, one of which is providing salaries/incentives to its employees.

## **2. *Smooth activity and function***

The success of the implementation is indicated by the smooth implementation of the function routines and no problems are encountered. As for the smooth running of the routine functions in this study, first, the availability of funds for waste bank operations and funds for waste bank facilities and infrastructure (Sarpras). Until now, there is no assistance in the allocation of funds for routine operations of the waste bank in the form of money, either from the city government or other relevant agencies, including from the village/kelurahan where the waste bank is located.

Second, waste bank socialization can be defined as an effort to promote waste bank so that it becomes known, understood and internalized by the community, with the hope that the community will form a waste bank and be willing to become waste bank customers. The socialization of the waste bank is carried out between the government, the waste bank, and the community. Socialization can be carried out between the local government through DLH and the village/kelurahan to the community, from the government to the waste bank, or from the waste bank to the community.

Third, basic waste bank services to the public in order to implement the working mechanism in the waste bank service coverage area, namely waste collection, sorting, and waste saving services. Even though the waste bank service is quite good, without the support of the community's participation in the waste bank at least as a customer, the sustainability of the waste bank will also face obstacles. Assistance and support from the village/kelurahan government and other relevant agencies is urgently needed to increase the number of waste bank customers.

Fourth, the marketing of recycled waste products still faces many obstacles. Although not all waste banks in Bandung City recycle waste, the sale of recycled waste products is important because it can significantly increase the income of the waste bank compared to only depending on selling waste directly to collectors. Help and support from all stakeholders is absolutely necessary if the government is serious about developing a waste bank in Bandung City.

## **3. *Influence and expected performance***

With the existence of a waste bank, the performance of the waste bank implementor will be assessed against the established standards, namely an increase in the number of customers, an increase in the amount of waste managed, an increase in products managed by a waste bank, and an increase in income. While the desired impact is a decrease in the amount of waste generated in areas where there are waste banks.

Increased production of waste banks is closely related to the marketing of recycled waste products. Not all waste banks produce recycled products such as handicrafts from inorganic waste or fertilizers from organic waste. The performance of the waste bank in the city of Bandung based on the increase in the production of recycled waste is still not optimal. Not all waste banks in Bandung City further manage the waste that has been collected from the community. For waste banks that produce recycled products such as organic fertilizers or handicraft products from inorganic waste, product sales are still a serious obstacle. Lack of marketing is considered a trigger for the lack of interest in waste banks to produce recycled waste products. Whereas producing recycled products is part of an effort to provide added

value to waste and can increase the capacity of waste banks in terms of funding and financing waste bank operations.

The performance of the waste bank in the city of Bandung based on the increase in the amount of income has not been implemented properly. The increase in income, or more precisely, additional income only applies to waste bank customers because previously they had to spend money to dispose of the waste they produced, with the existence of a waste bank they actually got money from waste. The increase in opinion does not occur for the management/manager of the waste bank. Most of the waste bank administrators in Bandung City do not receive adequate salary/incentives. Although for the current management of the waste bank, profit from the waste bank is not the main goal, it is more of a concern aspect, but this condition is not ideal for the sustainability of the waste bank in the future. This is also not in accordance with the mandate of the Minister of Environment Regulation No. 13 of 2012, namely so that waste banks can be professional and able to provide decent salaries for their employees.

With the existence of a waste bank, it is expected to have an impact on reducing waste generation. Based on the results of interviews and available data shows, the existence of a waste bank in the city of Bandung has not had a significant impact on reducing waste in general in the city of Bandung. However, the existence of a waste bank can at least overcome the problem of waste generated by the community in areas where there are waste banks. Garbage that used to only go to the landfill, or even dumped on the riverbank, is reduced because it has been managed by the waste bank. The impact that has been felt in the community is that the community has received sufficient education to be involved in waste management such as sorting and collecting waste in their respective homes.

## **4 CONCLUSION**

The process of implementing waste management policies in the city of Semarang has not fully gone well. This can be seen from waste reduction activities which include activities to limit waste generation, recycle waste and reuse waste with the 3R method and the waste bank carried out by the government has not been fully implemented optimally due to lack of participation and lack of public concern for the amount of existing waste generation. every year is still increasing. The Bandung City Government has implemented the KangPisMan program running well and smoothly, but referring to the results of the study, it was found that there were several shortcomings that needed attention to be improved. Based on the research results, the waste bank program in the city of Bandung is still not optimal based on the level of compliance of the waste bank implementor with the waste management policy through the waste bank, the smooth routine of the waste bank function, as well as the performance of the waste bank and the impact caused by the waste bank in the city of Bandung. However, several things have been successfully carried out, including: waste banks are considered capable of educating the public not to burn or throw garbage in gardens or on the banks of rivers that have the potential to damage the environment.

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