Collaborative Governance in Waste Management in Bandung City

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Abstract

Collaborative governance is governance in which stakeholders, notably the government, private parties, and the community, work together to develop answers to difficult-to-solve issues. Waste management is one of these issues. The purpose of this research is to examine collaborative governance-based waste management and the roles of each stakeholder in collaborative governance-based waste management in the city of Bandung. This research employs a qualitative approach to data collecting, including interviews, observations, and recording of numerous specified informants, as well as analytical approaches such as data reduction, data presentation, and conclusion. The results demonstrate that collaborative governance in waste management has been successfully implemented, from assessment through initiation, discussion, and execution. Collaboration in waste management in Bandung is still semi-formal, relying only on the commitment of partners. The KangPisman program recognizes this, a Bandung municipal government movement in waste management via efforts to minimize, segregate, and use garbage and make the kangpisman program refraction and become a lifestyle for residents in the city of Bandung.

***Keywords**: Collaborative Governance, Stakeholders, Waste Management, KangPisMan Program.*

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A. INTRODUCTION

Collaborative governance was born along with the paradigm shift from Government to Governance. In the concept of governance, the government does not need to solve public problems. However, it can involve the participation of other parties or non-governmental organizations to increase public service satisfaction through policies (Maryam, 2017). In addition, because there are now more demands and increasingly complex problems, the government needs to involve the community in government policies. In other words, collaborative governance exists to enhance collaboration among stakeholders in government administration, including the public, private, and community sectors, as well as an effort and government reaction in dealing with public concerns (Bila & Saputra, 2019). The public sector (government) will be more effective and efficient if it collaborates with the business sector and the community as stakeholders.

Cooperation may also refer to collaboration amongst stakeholders in collaborative governance who include the government, corporate sector, and community. Collaboration is a kind of collaboration, interaction, and compromise of numerous associated parts, both persons, institutions, or parties that get the consequences and advantages directly and indirectly (Irawan, 2017). According to this definition, collaboration refers to working together or cooperating with others. Where

individual players, groups, or organizations collaborate on a project. So collaborative governance is a form of cooperation, and mutual compromise, directly or indirectly involving government, non-governmental, and community institutions. The collaborating actors will get the consequences and benefits of collaboration and impact governance (Hardi, 2020).

Garbage is a significant problem that must be faced by the region, both in big cities and in small cities. Cleanliness of the area from waste and waste management services by the government is one of the main improvements that must be faced by local governments (Madani, 2011). The increasing population and community and government activities in development are environmental problems, especially those related to increasing waste production (Sulistiyorini et al., 2015).

Garbage is a reasonably complicated problem faced by the government and society. Waste management must be carried out and collaborated by all parties, be it the community, government, community organizations, or private groups. Waste management must be carried out responsibly so as not to cause environmental problems that impact the community and the government (Widiyanto et al., 2017). Some of the efforts made, one of which is to make innovations, and think about how to solve waste management problems, so that these problems can be handled quickly, more effectively, and efficiently (Artiningsih, 2008).

Waste management is specifically controlled under Law No. 18 of 2018, which states that waste management is required to enhance public health and environmental quality. This statement demonstrates that garbage degrades environmental quality and potentially poses a health risk (Harmana et al., 2021). According to Greenpeace, Indonesia produces 65 million tons of garbage each year, of which 10.4 million tons, or 16 percent, is plastic waste. The entire garbage is 10.4 million tons; only 1 million tons, or about 9%, is recycled, and around 1.2 million tons, or approximately 12%, is burnt. 8.2 million tons of garbage, or 79% of all plastic waste, end up in landfills and public areas like beaches (Ngalu, 2019).

In addition to Law No. 18 of 2008, which governs trash management, Government Regulation No. 81 of 2012, which governs home garbage and comparable waste, mandates that local governments carry out waste management operations. There are several critical main contents mandated by this government regulation, namely: (1) providing a stronger foundation for local governments in the implementation of environmentally sound waste management from various aspects, including formal legal, management, technical operations, financing, institutional, and human resources; (2) providing clarity regarding the division of tasks and roles of all parties involved in waste management; and (3) providing clarity regarding the division of tasks and roles of all parties involved in waste management (Akib, 2016).

This explains why, in waste management, the concepts of collaborative governance must be used since waste management is an issue that affects and is responsible for all stakeholders. Local government waste management policies include elements of collaborative governance techniques. Bandung City's local government policy is one of them. Regional Regulation Number 9 of 2018 City of

Bandung on Trash Management requires a major paradigm shift from collection and disposal to waste management, reduction, and usage. A new paradigm shift views garbage as a resource with economic value that may be used to produce energy, compost, fertilizer, and industrial raw materials, among other things. A complete strategy to waste management is possible. Starting upstream, that is, from the generation of the original potential waste. Continued downstream, that is, when the product has been utilized, it becomes garbage, which is then securely returned to the environmental media (Suryani, 2014).

The city of Bandung as an urban area is an area that has a magnetic attraction for various residents' activities, ranging from livelihoods and extraordinary tourism. Local governments make various policies to regulate activities to provide comfort for local and foreign tourists, including the waste management policy. According to research results, Muliawaty et al. (2021) say 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.

The similar effort was launched by the city of Bandung in 2018. Through the efforts of KANG (Reduce) PIS (Separate) MAN, the city of Bandung initiated a movement, a partnership between the government, residents, and the business sector, to develop a new society with more sophisticated waste management (Use). In the city of Bandung, there are 467 trash banks at the RW, sub-district, and Regional Apparatus Organizations (OPD) levels. There are two primary BSs, the Green Waste Bank Lestari and Resik, which has around 3,300 clients.

On the basis of these issues, it was determined which collaborative governance aspects must be enhanced to enhance the implementation of collaborative governance in Bandung's waste management. Therefore, this research is about implementing collaborative governance in waste management in Bandung. This research is expected to contribute to and think about the concept of public policy development in environmental management and become input for the Bandung City Government in improving the waste bank and waste management program in Bandung.

B. METHOD

This research uses qualitative research. According to Creswell (2016), qualitative research methods explore and understand the intentions of a number of individuals or groups of people who come from social problems. Qualitative research is often used in research on people's lives, behavior, history, and others. Researchers use descriptive qualitative research methods with an inductive approach so that researchers can analyze and describe the phenomenon of the researcher's research entirely and coherently based on the facts obtained so that researchers can draw meaningful research conclusions. In this study, researchers collect data by conducting

interviews, observations, and documentation. While the data analysis techniques used are data reduction, data presentation, and conclusion drawing.

C. RESULT AND DISCUSSION

1. Study on Waste Management

Trash producers (communities, industrial regions, traditional markets/malls, etc.) are obligated by Law No. 18 of 2008 concerning Waste Management to manage waste at the upstream level. District/City local governments adopt "firm and disciplined," create or update local legislation, and develop a waste management master plan based on community principles. The predominant method of garbage management in Indonesia is centralized, with an open dumping system at the TPA (as specified by Law 18/2008 concerning Waste Management, this pattern must be abandoned by 2013). There are at least three known forms of municipal solid waste management: centralization, decentralization, and centralization-decentralization. However, in a good waste management pattern, it is neither a form of centralization nor decentralization (because the community has not been patterned in managing waste), so the ideal currently is a form or pattern of centralization-decentralization (see-Decentralization), the community with the guidance of the government forms a Waste Management Installation. Organic (IPSO) in each dominant waste source (early stage) then the government formed a Waste Recycling Industry such as the Municipal Waste Management Installation (IPSK) to support and assist the marketing of IPSO, which had been established by a joint business group (KUB) by the community. Referred to as a communal pattern or neat, independent concept in dealing with solid waste problems in Indonesia (Kahfi, 2017).

The garbage issue in numerous Indonesian cities may be satisfactorily handled if the community plays a more active role. In general, the waste management process on a community level consists of various steps (Dwiyanto, 2011), which include:

a. Assuring that garbage is handled, sorted, and treated as early as possible, beginning with the waste generating site (in this case, the majority is the household environment). This attempt may at least lower the amount of garbage that must be collected and delivered to the TPS, reducing the strain.
b. At the home level, efforts are made to convert organic waste into compost, and inorganic garbage is sorted and collected according to its nature so that it may be recycled. TPS empowerment should be strengthened by putting IPSO in each family to support the management. Observing the state of TPS in different Indonesian regencies/cities, it is clear that each inorganic waste has economic worth.
c. The next stage is the processing of waste that is not possible to be processed in every household environment that has a TPS. The existing TPS using this approach was later converted into an integrated waste processing plant, whose processed products are compost, recycled materials, and waste that cannot be processed anymore.

d. The third step involves conveying the ultimate trash, garbage that cannot be recycled or reused at the TPS, which accounts for around 10-20% of the waste to the TPA. The ultimate landfilling or burning procedure might be carried out utilizing an incinerator during this step.

Based on the preceding process phases, the key to community-based (communal) waste management is found in the chain process at the household and kelurahan/village levels (i.e., at the TPS), which directly includes the community as a plus manager (owner of home industry). Waste cannot be completely or sustainably managed without this shared system. This technique of handling is intended to:

a. Cultivate a good way of disposing of waste from the household environment to the TPS by using a crackle/garbage box.
b. TPS is being organized to become a center for the greatest exploitation of organic and inorganic waste.
c. Turning organic and inorganic waste left over from management at the communal level into raw materials for power generation and biogas based on municipal waste.
d. This waste management scheme will reduce the trash distribution chain from TPS to TPA.
e. Creating new businesses at the community level will eventually become self-reliant in managing their waste.

Garbage management is a required activity with two goals: transforming waste into commodities with economic worth (waste utilization) and processing waste into material that is not detrimental to the environment. There are numerous garbage disposal options, including (Suryani, 2016):

a. Landfilling is the disposal of rubbish in landfills, including burying it; this is the most common practice in the world. Backfill is often done on vacant land, ex-mining pits, or bottomless pits. A well built and maintained onshore landfill will be hygienic and cost effective. Meanwhile, poorly constructed and managed landfills will contribute to a variety of environmental issues.
b. Recycling, the process of sorting waste that still has material value for reuse is called recycling. There are several ways of recycling. The first is to take the waste material to be processed again or energy from materials that can be burned to become electricity generators. This method is the most widespread recycling activity: collecting and reusing discarded waste, for example, used bottles collected for reuse. The collection can be done from waste separated from the beginning (trash box/particular garbage vehicle) or mixed waste. The commonly collected waste is drinking cans, steel cans, cardboard bottles, magazines, newspapers, and cardboard—other types of plastic. Recycling sophisticated items, such as computers or automobiles, is more difficult since the pieces must be separated and categorized according to the kind of material.
c. Biological Treatment, Organic waste products, such as plant leftovers and food or paper waste, may be composted or composted using a biological method. As a consequence, compost for fertilizer and methane gas for energy generation

are produced. The Green Bin Program in Canada is an example of waste management employing composting methods, where home organic waste, such as kitchen garbage and plant cuttings, is collected in special bags for composting.

d. Energy Recuperation The energy component of waste may be extracted directly by converting it to fuel or indirectly by processing it into other fuel kinds. Heat treatment recycling ranges from utilizing it as a cooking or heating fuel to heating boilers to create steam and energy from turbines.

2. Collaborative Governance Waste management in the city of Bandung

The implementation of waste management in the city of Bandung has since been met with excitement by the people of Bandung. Waste management include working with the government, the community, and the private sector (trash collectors) to undertake environmental protection as a first step toward boosting community engagement in sustainable and implementable waste management. The waste management system begins with household-scale waste sorting, depositing, collecting, and disposal. The local government cannot now carry out waste reduction activities such as garbage limitation, recycling, and reuse in Bandung. Some are handled by DKP, while others are managed by businesses and scavengers. This is because the government merely serves as a facilitator or gives facilities to the community to reduce trash. DKP has created TPST (Integrated Garbage Processing Sites) to minimize the quantity of waste produced, with around 15 TPSTs now operational in the city of Bandung. The 3R approach is another strategy to limit trash creation (Reduce, Reuse and Recycle). The 3R approach is used to decrease trash as well as recycle and reuse current garbage. In terms of the waste bank approach, the department offers technical equipment such as trash cans, garbage tricycles, and weighing equipment to each sub-district. In terms of garbage recycling, the government can only do so for organic waste by generating compost; there is no follow-up for inorganic waste. This should be included to the government's list of priorities for recycling inorganic trash.

Waste reuse activities, such as packaging waste reuse for the same purpose, have not been adequately executed. According to observations, the TPS still has a lot of packaging waste. This demonstrates that the community has not fully supported the effective implementation of waste management rules in Bandung. The waste management step follows, which involves sorting, collecting, and transporting garbage to the ultimate processing stage. These actions are carried out by the local government, but the community may also help. According to observations, there are still individuals who do not collect rubbish at TPS and instead litter outside their houses or in waterways. Meanwhile, the agency is responsible for trash ultimate processing in the TPA, and it also gets support from the private sector.

The current waste management system in Bandung employs the landfill control approach, which involves stacking up rubbish with a layer of soil every seven days. Waste management in the city of Bandung has implementation challenges. In addition

to a lack of waste management facilities and infrastructure, the mentality of individuals who have not been able to completely adopt a clean and healthy lifestyle is an impediment to waste management implementation. Waste management will be effective if the local government and the community work together to execute it. Meanwhile, in the implementation of waste management in Bandung, the community, as the target group, is not completely aware of its role in the success of waste management in Bandung.

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

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

In waste management, collaborative governance principles are needed because waste management is a problem in the interest and responsibility of all stakeholders. The characteristics of collaborative governance have been implemented in local government waste management regulations where one of the Bandung City government policies with its jargon is: "innovation, collaboration, and centralization." The implementation of a goal, target, as well as a program or policy to anticipate problems in processing and managing waste with the collaborative governance model in the City of Bandung, is still being carried out continuously so that people can understand how to treat waste that keeps piling up all the time.

Kangpisman (Reduce, Separate, Utilize waste) is a movement of the Bandung City government in processing waste that is focused on handling waste at its source, namely households. This initiative is a combined effort by the government, individuals, the commercial sector, and others to create a new waste management civilization via efforts to reduce, sort, and use garbage. This effort also demonstrates the Bandung City government's dedication in promoting the city to be cleaner and waste-free (Sekarningrum et al., 2020).

The Kangpisman program is pushed into a lifestyle movement because it will be difficult to grow without habituation awareness. By becoming a lifestyle, it is hoped that awareness will become a habit of the community, especially for people who live in the city of Bandung. Various parties have implemented the Kangpisman movement to all RT and RW in Bandung. Related to the Kangpisman movement, the Bandung City Government has issued Regional Regulation (Perda) No. 17 of 2012 concerning

Reducing the Use of Plastic Bags. The steps that must be taken with the Kangpisman program are Kang (reduce), which is to reduce the use of everything made of plastic and other materials that are difficult to decompose by nature, such as plastic bags, bottles/glasses of mineral water and others. Efforts are being made to replace plastic bags with tote bags made of canvas that can be used repeatedly. Also, use straws made of bamboo or environmentally friendly glass. Get in the habit of bringing your lunch box, drinking holder, spoon, and fork—Pis (separate), separating organic waste from inorganic waste. Man (use), namely managing organic and inorganic waste so that it can be recycled.

The emergence of the Bandung City government's initiative through the Kangpisman movement shows the government's seriousness in dealing with waste by building infrastructure and management systems. However, waste management is not only a matter for the government; stakeholders and the community need to help the government so that the Kangpisman movement can run smoothly.

D. CONCLUSION

Based on the findings of the study, one may draw the conclusion that collaborative governance in waste management in the city of Bandung, which is located in the province of West Java, has been developed in an effective manner. All of the residents of the city of Bandung, who have a deep love and appreciation for their home, have ingrained in them the importance of developing an awareness of the significance of waste management as the initial stage of collaboration. In Regional Regulation Number 09 of 2018 concerning Waste Management, the form of involvement in waste management between the government, the private sector, and the community in the City of Bandung is specified. This regulation is concerned with Waste Management. The Kangpisman movement is being made into a way of life in the expectation that community awareness will increase and become ingrained in people's routines. In the City of Bandung, the implementation of a goal, target, as well as a program or policy to anticipate problems in processing and managing waste with the collaborative governance model is currently still being carried out continuously so that people can understand how to treat waste that keeps piling up all the time. This is done so that people can understand how to treat waste that keeps piling up all the time.

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