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The Context of the Collaborative Governance Systems in Organic Waste Management is a Public Service in the Urban Area of Lebak Regency

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ABSTRAK

Pengelolaan sampah organik di kawasan perkotaan Kabupaten Lebak menjadi polemik yang belum terselesaikan mencapai 62,28% sampah tidak terkelola di 2017-2022, didominasi oleh jenis sampah sisa makanan sebesar 30%. Tata kelola kolaboratif menjadi pendekatan strategis untuk meningkatkan efektivitas pelayanan publik dalam bidang ini. Melalui keterlibatan aktif lintas sektor publik, swasta, dan sipil dalam setiap tahapan pengelolaan sampah. Penelitian ini bertujuan untuk menganalisis model tata kelola kolaboratif yang diterapkan, mengidentifikasi faktor, serta memberikan rekomendasi strategis menggunakan metodelogi kualitatif deskriptif untuk menggambarkan secara utuh dan mendalam mengenai pengelolaan sampah organik. Temuan menunjukkan bahwa kurangnya pengoptimalan kolaborasi sektor publik dan sipil seperti kesadaran dan partisipasi masyarakat dalam pemilahan dan pengumpulan sampah organik dari anorganik di rumah tangga. Begitupula kolaborasi bersama sektor swasta yang belum dioptimalkan menjadi kerjasama jangka panjang. Kurangnya peran sektor publik seperti komitmen, kapasitas, serta mekanisme koordinasi yang efektif, perlu adanya penguatan melalui kegiatan penyuluhan dan sosialisasi secara terus menerus, atau berkolaborasi dengan Dinas Pendidikan untuk melakukan edukasi tentang pengelolaan sampah organik di sekolah. Selain itu pembentukan forum pengelolaan sampah organik oleh Dinas Lingkungan Hidup serta berperan menjadi network broker sebagai penghubung lintas sektor yang bergerak di bidang pengelolaan sampah organik.

ABSTRACT

Organic waste management in urban areas of Lebak Regency has become an unresolved polemic reaching 62.28% of unmanaged waste in 2017-2022, dominated by food waste at 30%. Collaborative governance is a strategic approach to improving the effectiveness of public services in this field. Through active involvement across public, private, and civil sectors at every stage of waste management. This study aims to analyze the collaborative governance model applied, identify factors, and provide strategic recommendations using descriptive qualitative methodology to describe organic waste management in a complete and in-depth manner. The findings indicate a lack of optimization of public and civil sector collaboration such as public awareness and participation in sorting and collecting organic waste from inorganic in households. Likewise, collaboration with the private sector has not been optimized into long-term cooperation. The lack of public sector roles such as commitment, capacity, and effective coordination mechanisms, needs to be strengthened through continuous outreach and socialization activities, or collaborating with the Education Office to provide education on organic waste management in schools. In addition, the formation of an organic waste management forum by the Environmental Service and act as a network broker as a liaison across sectors engaged in organic waste management.

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INTRODUCTION

The unity of space consists of all objects, resources, energy, conditions, and living things. Likewise, humans and their behavior are included in it. Therefore, the unity of this space needs to be maintained, such as improving the health of the space. Because it can have an impact on nature, the continuity of life, and the welfare of humans and other living things. So maintaining this is a shared responsibility, especially for humans as living things that often damage the surrounding space. Community participation has an important role in maintaining space and the environment. One of the environmental problems is about cleanliness. A condition that is free from all dirt and others that can harm all aspects concerning community activities and behavior. The problem of cleanliness that often occurs in the environment in society is related to waste management. Basically, waste is a concept initiated by humans to define things that are no longer wanted or no longer used by the owner (Meyrena & Amelia, 2020).

In Indonesia, waste management is an unresolved problem. Many areas in Indonesia experience it, especially areas with dense populations such as urban areas. One area experiencing waste issues is the urban area of Lebak Regency. The movement of people to urban areas to improve their economy, causes population growth and results in changes in domestic consumption and has an impact on increasing the volume of waste. The population of the urban area of Lebak Regency is 413.47 thousand people with a percentage of 28.84% and a growth rate of 17.86% of the total population of Lebak Regency (BPS, 2024).

Although the Lebak Regency Government has made efforts by creating a legal framework for policies such as Lebak Regency Regional Regulation No. 4/2018 Waste Management and Lebak Regent Regulation No. 30/2018 Regional Policies and Strategies for Household Waste Management and Household Waste Types in Lebak Regency. In reality, the policies implemented have not been able to determine the values that should be achieved to improve the quality and quality of waste management in Lebak Regency. Based on data obtained from the National Waste Management Information System (SIPSN) as a publication media for the Ministry of Environment and Forestry (KemenLHK), the achievement of waste management performance in Lebak Regency in 2024 is as follows:

Table 1.
Waste Management Performance Achievements in Lebak Regency in 2024

Indicator	Performance Achievements	
	Percent	Tons/Year
-Waste reduction	3.15%	6,920.43
-Waste management	21.57%	47,450.00
Total Waste Managed	**24.72%**	**54,370.43**
-Unmanaged waste	75.28%	165,560.76
Waste Generation	**100%**	**219,931.19**

Source :(SIPSN, 2024a)

In 2024, Lebak Regency's annual waste generation was 219,931.19 tons with daily waste generation of 602.55 tons (SIPSN, 2024c). In **Table 1**, managed waste was only 24.72%, while 75.28% of waste was unmanaged. It should be noted that waste generation is divided into two types of waste, namely organic waste and inorganic waste. 'Organic Waste' is waste generated from agricultural, fisheries, and other activities such as fruit peels, vegetable waste, and others, while 'Inorganic Waste' is waste generated from industrial processes such as plastic bottles, plastic bags, cans, and others that take a long time to be decomposed by nature (Setiowati & Furqonita, 2007). In Lebak Regency, organic waste is the type of waste that dominates, reaching

more than 50% of the waste generated; such as food waste of 30%, wood/twigs 12%, paper/cardboard 10% (SIPSN, 2024b).

Usually, household waste will be collected and transported by private services or directly by individuals to the Waste Collection Site (TPS) location, then transported by garbage trucks facilitated by the Lebak Regency Government to the Final Processing Site (TPA) location such as TPA Cihara or TPA Dengung. However, waste management in urban areas presents many challenges such as the lack of facilities and infrastructure for the waste generated and limited TPA land. (Fitri & Ferza, 2020). Not to mention the environmental impacts caused by conventional waste management methods such as incineration and landfilling that contribute to air, water, and soil pollution and can emit greenhouse gases and dangerous toxins. Added to this is the lack of public awareness of environmental cleanliness so that people still carry out old habits in responding to waste (Yunita & Wulansari, 2023).

Composting offers a sustainable alternative by diverting conventional waste management and converting it into nutrient-rich soil. This process reduces methane emissions, improves soil health, and can help mitigate urban heat from greenhouse gases. In places where waste management infrastructure is often limited, composting can significantly reduce waste volumes, lower disposal costs, and contribute to the circular economy by closing the loop between organic waste production and agricultural needs (Ashraf et al., 2025). By promoting composting at both the individual and private scale, it can address waste management challenges while advancing environmental sustainability and supporting urban resilience.

Therefore, a governance system is needed that regulates this in a comprehensive and integrated manner as a general term in public administration literature. It has been mentioned that community participation has an important role in maintaining space and the environment. Thus, governance refers to the act of regulating, as a dimension of norms and rules that are jointly established and designed to regulate the behavior of individuals and groups (Ostrom, 1990), and as a means of directing processes that impact decisions and actions in the public, private, and civil sectors. (O'Leary et al., 2006).

However, power relations become political dynamics between the public, private, and civil sectors that are interconnected to establish cooperation in resolving issues. Coordination and monitoring are needed to enable the survival of partnerships or collaborative institutions (Bryson et al., 2006). In addition, network connectivity needs to be considered to make policies successful. That the process and structure of decision-making and management of public policies that involve people constructively between public institutions, levels of government, and/or public, private, and civil spheres in order to implement public goals that cannot be achieved in other ways (Emerson et al., 2012). For this reason, community participation in public services can be a solution that is realized in the form of cooperation, fulfillment of community rights and obligations, and an active role in policy formulation.

The author focuses on the management of organic waste carried out by the public sector involving the private and civil sectors in the urban area of Lebak Regency. The composting method in waste management will be the main topic of this article. Also, as a New Management Public, community participation is expected to be a solution to dealing with bureaucratic problems. Therefore, a system is needed that can be a solution to the problem, and a collaborative governance approach is chosen in this case. That collaboration can be an example for other regions so that efforts to accelerate waste reduction can be achieved (Ain et al., 2021; Fatmawati et al., 2022; Rahmasary et al., 2021). In addition, to support the clarity of a meaning or situation related to an incident, the author is limited to the term context (input/external) rather than process or impact (output/internal). Because from this initial stage it can provide

the information needed to determine the value that should be achieved in the management of organic waste in the urban area of Lebak Regency. Aims to analyze the collaborative governance model applied, identify supporting and inhibiting factors, and provide strategic recommendations to strengthen synergy between stakeholders. So, the question that arises in the research article is **how is the context of the collaborative governance system in the management of organic waste as a public service in the urban area of Lebak Regency** ?

Literature Review

Collaborative Governance

In the introduction it has been mentioned that the collaborative governance system is used as an effort to solve the problem of organic waste management in the urban area of Lebak Regency, but the problem for the public sector is how inclusive they are in promoting, sponsoring, and designing collaborative processes (Ansell & Gash, 2008; Emerson & Nabatchi, 2015; E. H. Klijn & Koppenjan, 2015). It can start from collaborating and involving the private and civil sectors, because this can increase opportunities for community participation and thus have a 'democratizing effect' (Hendriks, 2008; Sørensen & Torfing, 2018; Young, 2002). It is interesting for pragmatic reasons, when the public sector meets with stakeholders in the private and civil sectors in the field of waste management, its potential to produce richer considerations and learning in the network (Lee & Jung, 2018), assessing the condition of resources from their perspective that is unknown to the Lebak Regency Government. From the meeting it is possible to determine the value, ensure coverage of issues and opportunities (Baird et al., 2019; Koontz & Johnson, 2004; Leventon et al., 2017)that may be used as a legal framework for organic waste management policies in the urban area of Lebak Regency. Where the values produced will increase discursive representation (Dryzek & Niemeyer, 2008)and foster a sense of legitimacy and procedural justice (Nissen, 2014)because with the participation of the private and civil sectors involved in waste management minimizes failure in addressing issues. However, failure may occur, when stakeholders related to organic waste management in urban areas of Lebak Regency fail to be involved or prevent their defection, can undermine the effectiveness and legitimacy of the collaborative process, ignore valuable knowledge and resources, and increase the likelihood that dissatisfied stakeholders will refuse to cooperate in downstream implementation (Innes & Booher, 2018; Provan & Milward, 2001). Therefore, the relationship between stakeholders needs to be maintained as a political dynamic.

To solve the problem of organic waste management in urban areas of Lebak Regency by implementing collaborative governance requires complex interactions between a number of interdependent actors (Klijn & Koppenjan, 2000). These interactions are not simple or spontaneous, requiring network connectivity to achieve a certain level of success. Perspective democracy and inclusion even worthy admired, before conclude that openness, agreement, taking decisions, and coordination in a collaborative model Possible difficult achieved (Peters, 2015). Collaboration is therefore not an automatic effect of the interdependent network connectivity within a community, which may be need idea about skills For produce mark public (Peters, 2015). The complexity of implementing a collaborative governance system in organic waste management in urban areas of Lebak Regency is pursuing sustainable outcomes, which must be identified, agreed upon, and evaluated based on consensus from public, private, and civil sector stakeholders.

Need For understanding collaborative processes (Ansell & Gash, 2008)and how the process is influence and be influenced by the results (Crosby & Bryson, 2010; Klijn et al., 2010) also very important for literature implementation, which explains how and why design factor 'formal' organization (protocols, rules, structures, and roles) for allow collaboration can or No can produce desired outcomes . This includes the relevance of informal factors (e.g. facilitative leadership, trust, commitment, shared understanding, and values) to explain 'how' to implement collaborative governance in practice to produce sustainable outcomes. The first thing to do is to obtain information related to the condition of resources and the legal framework of policies related to organic waste management in the urban area of Lebak Regency why previously there was a failure in addressing this issue. And the power relations between stakeholders from the public, private, and civil sectors are political dynamics in network connectivity that can increase trust or conflict. Ultimately, the organic waste management process aims to produce aspects of health and sustainable socio-economic and cultural diversity, such as organic waste management with composting methods significantly reducing waste volume, lowering disposal costs, and contributing to a circular economy by closing the cycle between organic waste production and agricultural needs.

Organic Waste Management

One may not have full control over the non-organic waste that is recycled or disposed of on a daily basis. However, if one discusses organic waste and learns about its management process, one can also take charge of recycling organic waste at one's own level (Kharola et al., 2022). Therefore, waste management emphasizes on collaboration between public, private and civil sectors. This can contribute to the waste supply chain from post-consumer waste, waste collection and segregation, recycling, landfills and can facilitate the handling of mixed waste that has been collected. Logically, it is cost-effective and environmentally beneficial to handle separate organic and non-organic waste rather than mixed waste that is processed and then cannot recover both. Therefore, the ideal strategy is to organize and manage the waste generated in an environmentally friendly, economically feasible and socially acceptable manner (Edwards et al., 2017).

One of the most significant benefits of recycling organic waste is minimizing pollution in air, water, and soil by reducing odor problems and gas emissions. Stabilization of organic waste such as composting methods offers value by increasing nutrient content and availability for use as fertilizer in agriculture. Soil biofertilizers made through recycling processes improve soil quality, which increases soil fertility and plant growth (Kharola et al., 2022). Organic waste recycling also raises popular concepts such as cleaner production, zero-waste policies, sustainability, and circular economy (Kumar et al., 2022; Sharma et al., 2020). Perhaps this can be a reference for the Lebak Regency Government in managing organic waste using composting methods in urban areas.

Composting is a proven technology for processing organic waste and can significantly reduce the volume of waste produced. Conversion of organic waste by the saprafog system, which provides decomposing organic waste to worms and microorganisms and converts it into nutrient-rich humus by the Black Soldier Fly (BSF) has been introduced as an organic waste converter, and is the focus of a relatively new organic waste processing method (De Smet et al., 2018; Zurbrügg et al., 2018). BSF greedily consumes organic waste such as food waste (Nguyen et al., 2015), agro-industrial by-products (Meneguz et al., 2018), and cow dung (Rehman et al., 2017), making the nutrients in BSF that can be converted into essential proteins and fats used in animal feed (Liu et al., 2017; Xiao et al.,

2018), and meeting the shortage of conventional animal feed whose prices have increased over the years (Stocker et al., 2013). In addition, the manure produced from the BSF bioconversion process can be used as fertilizer (Ma et al., 2018; Xiao et al., 2018), another benefit as a comprehensive solution to lower environmental impacts such as greenhouse gas emissions and a smaller ecological footprint for producing protein feed and other nutritional supplements. The low capital investment of this method makes its application feasible for low- and middle-income areas (van Huis et al., 2013)such as Lebak Regency. Therefore, the management of organic waste in the urban area of Lebak Regency using the composting method through BSF bioconversion can be carried out by implementing a collaborative governance system initiated by the public sector to facilitate the private and civil sectors as a form of public service.

New Public Management

There is growing interest in the role that hybrid organizations, that is, organizations that combine contrasting and conflicting elements in addressing the social, environmental and economic aspects of sustainable development through innovation and synergy, can play. (Davies & Chambers, 2018; Haigh & Hoffman, 2012). The combination of various governance regimes and institutional logics operates in the public, private, and civil spheres as a social enterprise that integrates 'economic and social value creation (Battilana & Lee, 2014; Mair & Martí, 2006). Therefore, in the research article related to organic waste management in urban areas of Lebak Regency, it is carried out through the Black Soldier Fly (BSF) composting method approach in an effort to reduce the volume of organic waste, reduce disposal costs, and contribute to the circular economy by closing the cycle between organic waste production and agricultural needs.

However, social enterprises are not the only ones demonstrating hybridity. (Battilana & Lee, 2014; Jay, 2013), many public sectors (governments) have implemented New Public Management (NPM) to build hybrid organizations for decades on the basis of contracts, outsourcing, and privatization, promoting the commercialization of public services. In the case of organic waste management in the urban area of Lebak Regency, it failed due to the type of conventional hierarchical public administration resulting in inefficiency and lack of entrepreneurial spirit in the provision of public services. Lebak Regency DLH as a government institution organization and the public management strategies they implement are to blame for this weakness. (Head & Alford, 2015; O'Flynn, 2007). The delivery of public services through government agencies is regulated through a rigid hierarchy, with specialists enforcing rules in their respective areas of competence. As a result, the organization's adaptability and capacity for teamwork have been hampered by the formation of functional area boundaries. (Head & Alford, 2015), this needs to be changed like the multifaceted structure of a private sector company that manages various business units, which it controls by building and tracking performance results.

Given the general decline in the provision of public services related to organic waste management in the urban areas of Lebak Regency, a new approach is designed with the aim of realigning responsibilities between the public, private and civil sectors. In doing so, the Lebak Regency Government must analyze all available options for service provision. An integrated approach to providing urban services is increasingly being proposed as a possible solution to the problem of waste management (Ahmed & Ali, 2004; Ali et al., 1999; Baud & Post, 2018). Furthermore, the provision of public services using the NPM method emphasizes community participation in the process. Community participation is essential in the implementation of community-based waste management (Tarigan et al.,

2020). Community participation in waste management is realized through active involvement in the process of waste disposal, transportation and management, with a sense of awareness and responsibility to create a clean and healthy environment (Sulistiyorini et al., 2015).

Organic waste management in urban areas of Lebak Regency is not only the responsibility of the public sector, but a shared responsibility by involving the private and civil sectors as a form of community participation in public management. The collaborative governance system is used as an effort to solve these problems. It is a challenge because there are always interests between the public, private, and civil sectors, where the key to solving it is in the public sector to provide public services that integrate the creation of economic and social value. Therefore, collaborative governance in organic waste management in urban areas of Lebak Regency applies the composting method through BSF bioconversion which collaborates and involves the private and civil sectors as the realm of public service. Focusing on this, to go further, it is necessary to determine a framework through the system context in the collaborative governance approach.

RESEARCH METHODS

The method in the research article uses a qualitative method that aims to describe and explore the problems that occur. And a descriptive approach is carried out to create a systematic, accurate and factual overview of a fact in a phenomenon. The qualitative descriptive method is used to describe in full and in depth the management of organic waste and the processing of organic waste into compost in the urban area of Lebak Regency, as well as the role of the public sector involving the private and civil sectors in reducing the volume of waste. The source of the research article was obtained from the Lebak Regency Environmental Service in the form of documents as primary sources, and other data sources such as those from previous related studies were used as secondary sources.

Data analysis in the research article uses triangulation analysis. The data obtained related to organic waste management in the urban area of Lebak Regency are presented and described, to be compared with theories from literature studies in public administration literature such as public services and collaborative governance, and to conduct discussions and draw general conclusions. The location in this study is the urban area of Lebak Regency. The area designated as an urban area in this research article is adopted based Pasal 11 ayat (2) Perda Lebak No. 2/2014on the Lebak Regency Spatial Plan for 2014-2034 which is classified as the Regional Activity Center (PKW), Promotional Regional Activity Center (PKWp), Local Activity Center (PKL), and Promotional Local Activity Center (PKLp), namely as follows:

1. PKW is located in Rangkasbitung District;
2. PKWp is located at:
   a. Bayah District; and
   b. Maja District;
3. PKL is located in Malingping District;
4. PKLp is located at:
   a. Cipanas District; and
   b. Penggarangan District.

To be presented in detail, this research article uses the *Collaborative Governance Regime* (CGR) model proposed by Kirk Emerson, Tina Nabatchi, and Stephen B. Balogh in the research article "*An Integrative Framework for Collaborative Governance* " published in 2012. The CGR model is

divided into three stages in the application of CGR, namely input which is limited to the context of the external system presented as a framework; the process as a way in which the framework that has been obtained from the context of the external system is transformed into a value; and the output or internal system is how the value is evaluated whether it has a negative or positive impact to be applied (Emerson et al., 2012). Furthermore, this research article it is limited to the context of the external system. Because, collaborative governance begins and develops in a multi-layered context of political, legal, socio-economic, environmental, and other influences (Borrini-Feyerabend, 1996). The system context is presented in this framework not as a series of initial conditions, but as a three-dimensional space around it, because external conditions can impact the dynamics and performance of collaboration, not only at the beginning, but also at any time during the CGR, thus opening up new possibilities or creating unexpected challenges. In the discussion of the Collaborative Governance System Context as one of the dimensions of CGR, there are several elements such as resource conditions; legal policy framework, previous failures in addressing issues; political dynamics/power relations; network connectivity; level of conflict/trust; and socio-economic and cultural health and diversity (Emerson et al., 2012).

RESULTS AND DISCUSSIONS

Resource Conditions

It has been previously mentioned that population density can have an impact on waste generation. The movement of people to urban areas is carried out to improve their economy. However, this causes population growth in the area and results in changes in domestic consumption which has an impact on increasing the volume of waste. According to the Lebak Regency Environmental Service (DLH), the amount of waste volume in urban areas from 2017-2022 from documents published in 2024 is as follows:

Table 2.
Volume of Waste and Waste Handled in Urban Areas of Lebak Regency

Indicator	Year	Subdistrict						Amount
		Bayah	Cipanas	Mayan	Malingping	Maja	Rangkasbitung	
Waste Volume (Tons/Year)	2017	28.70	32.27	36.05	42.86	23.78	85.07	**248.73**
	2019	6,103.68	6,821.12	7,609.96	9,295.67	5,262.72	17,766.01	**52,859.16**
	2021	6,633.51	7,451.69	8,716.93	10,378.26	5,626.55	8,486.98	**58,508.91**
	2022	6,573.65	7,371.98	8,644.37	10.34	8,486.98	19,867.39	**50,954.71**
Amount		**19,339.54**	**21,677.06**	**25,007.31**	**19,727.13**	**19,400.03**	**57,420.44**	**162,571.51**
Waste Handled (Tons/Year)	2017	5.83	0	0.9	14.43	4.95	39.19	**65.30**
	2019	2,034.37	1,705.28	1,902.49	2,383.92	1,315.68	6,218.10	**15,559.84**
	2021	2,664.79	1,496.79	2,628.58	2,445.57	912.94	9,928.58	**20,077.25**
	2022	1,916.00	639.00	2,427.00	2.28	1,442.00	19,199.00	**25,625.28**

Indicator	Year	Subdistrict						Amount
		Bayah	Cipanas	Mayan	Malingping	Maja	Rangkasbitung	
Amount		**6,620.99**	**3,841.07**	**6,958.97**	**4,846.20**	**3,675.57**	**35,384.87**	**61,327.67**

Source :(Kabupaten Lebak, 2024a, 2024b)

In **Table 2**, if we calculate the percentage, the comparison of waste volume and waste handled in the urban area of Lebak Regency from 2017-2022 as a whole is 37.72%. However, the percentage of waste handled has actually increased over time with an average growth in waste handled of 55.99%. In 2017 the percentage of waste handled was 26.25%, in 2019 it was 29.44%, in 2021 it was 34.31%, and in 2022 it was 50.29%. Meanwhile, the area in the urban area of Lebak Regency with the highest percentage of overall waste handling from 2017-2022 is Rangkasbitung District at 61.62% and the lowest is Cipanas District at 17.72%.

Furthermore, Lebak Regency only has two Final Disposal Sites (TPA), namely TPA Cihara and TPA Dengung. TPA Cihara uses a Sanitary Landfill waste processing system, namely by compacting waste and then covering it with soil as a cover layer that can reduce the negative impact on the environment. In 2022, 8,030 tons of waste entered TPA Cihara with 7,847.5 tons of waste entering the landfill ; while in 2023 14,600 tons of waste entered the landfill with 14,235 tons of waste entering (SIPSN, 2023b) the landfill . Meanwhile, TPA Dengung uses a Controlled Landfill waste processing system, namely by leveling and compacting waste for a certain time which is then covered with soil as a cover layer which aims to minimize the impact that can arise and harm the environment. In context, only TPA Dengung is located in an urban area, more precisely in Sindangmulya Village, Maja District; with waste entering in 2022 as much as 32,850 tons/year with waste entering landfills as much as 32,393.75 tons, while in 2023 waste entering as much as 28,835 tons with waste entering landfills as much as 28,378.75 tons (SIPSN, 2023b).

In addition to the two TPAs, there is waste processing that is run individually such as Waste Processing Places with the 3R concept (reduce, reuse, and recycle) or TPS3R, Main Waste Bank (BSI), and Unit Waste Bank (BSU). Unfortunately, the location of this waste processing is focused on the Rangkasbitung District area, not evenly distributed to other areas that are classified as urban areas. The details will be presented as follows:

Table 3.
Number of Savers, Employees, and Monthly Turnover from Waste Banks in Urban Areas of Lebak Regency

No.	Facility Name	Location	Status	Number of Savers	Number of employees	Turnover (Rp)
1	TPS3R Barangbang	Rangkasbitung	Individual	98	5	1,152,000
2	BSI Pasir Ona	Rangkasbitung	Local government	57	6	1,375,000
3	BSU Cimesir	Rangkasbitung	Individual	35	4	1,115,000
4	BSU Kuntum Mekar	Rangkasbitung	Individual	45	5	1,125,000
5	BSU Dukuh	Rangkasbitung	Individual	50	4	1,355,000
6	Pearl BSU	Rangkasbitung	Individual	20	6	925,000
7	BSU Dengung Jaya	Mayan	Individual	-	-	-

No.	Facility Name	Location	Status	Number of Savers	Number of employees	Turnover (Rp)
8	BSU Cimangeunteung	Rangkasbitung	Individual	25	5	1,355,000
9	BSU Rejeki	Rangkasbitung	Individual	38	5	1,155,000

Source :(DIKPLHD Kab. Lebak, 2022)

For **Table 3**, there is no definite data in the Final Report of the Environmental Management Performance Information Document for Lebak Regency in 2022 regarding waste entering or managed by TPS3R, BSI, and BSU; only providing information on the BSI and BSU list criteria, number of savers, number of employees, and monthly turnover as presented in **Table 3** which was selected by the researcher according to the location criteria included as an urban area of Lebak Regency. Furthermore, waste processing in Lebak Regency is also supported by the informal sector. According to data taken from SIPSN, there are ten registered informal sectors that can accommodate and manage waste up to hundreds of tons/year (SIPSN, 2023a). However, the ten informal sectors are not located in the urban area of Lebak Regency.

From the data presented above, with the division of labor between the public and private sectors and the continuous increase in waste products generated from domestic consumption of the urban community in Lebak Regency, resources will experience exponential growth throughout the product life cycle (Bader et al., 2020). In **Table 2**, in 2022 the volume of organic waste produced by the community in the urban area of Lebak Regency was 50,954.71 tons per year. Of the volume of organic waste produced, only 25,625.28 tons per year or 50.29% can be handled. One of the causes is related to the condition of the resources owned by the public and private sectors. In the public sector, the Lebak Regency Regional Government only has two landfills that cover the entire area, namely the Cihara Landfill and the Dengung Landfill. And in the private sector there are only eight business entities in the field of waste management as presented in **Table 3** ; however, the eight business entities registered with the Lebak Regency DLH only process inorganic waste, not organic waste, so that the urban area of Lebak Regency does not have a business entity engaged in organic waste management. Meanwhile, the remaining organic waste that is not handled will continue to increase over time in the waste production life cycle.

This growth inevitably leads to several problems. First, the dispersed system hinders corporate collaboration and innovation and the security of the manufacturing value chain is difficult to guarantee; second, the lack of an integration model for product innovation and resource scheduling (Steele et al., 2001). As is currently the case in the management of organic waste in the urban area of Lebak Regency. First, the dispersed system is likened to the absence of organic waste management such as facilities and infrastructure for organic waste processing in the urban area of Lebak Regency. Inhibiting collaboration between the public, private and civil sectors, because the Lebak Regency Government as the public sector and public service provider must start from the beginning in creating a framework that ultimately hinders innovation related to organic waste management. As a result, it has an impact on the security of the urban area value chain that is clean from waste. Second, in the condition of resources, there is no integration model found in the management of organic waste in the urban area of Lebak Regency. For example, the Lebak Regency Government carries out organic waste management activities by processing bioconversion into compost, so everyone needs to be involved from the individual household level to separate waste that is classified as organic waste and inorganic waste that will be collected and transported by the waste processing business entity with a cycle twice a week to be used as product innovation. However, what is commonly found is that waste

collection starting from individual households is directly taken to the waste collection location (TPS) without separation, then transported from the waste collection location to the TPA to be processed using the method of being buried in the ground. However, the Lebak Regency DLH revealed that it is planning to develop the Dengung TPA to become an Integrated Waste Collection Site (TPST) that can process waste into Refuse-Derived Fuel (RDF) and maggot feed or BSF with an operating capacity of 60-90 tons per day.

Finally, the long-tail resource becomes very large causing a cold-start problem in most recommendation engines (Kosmopoulos & Styliaras, 2018). Long-tail means that the remaining organic waste that is not handled will continue to increase in the life cycle of waste production, while cold-start means that organic waste management cannot make reliable recommendations due to the absence of organic waste processing facilities such as bioconversion or biogas methods. However, the author found in the field that in the urban area of Lebak Regency there are business entities in the field of organic waste processing that are not registered with the Leba Regency DLH, such as in the Bayah District area there is organic waste processing into compost fertilizer which is run by Village-Owned Enterprises (BUMDes), namely BUMDes Darmasari, Bumdes Pamubulan Maju Bersama, and Bumdes Memikat Bayah Barat which started with training and making compost fertilizer carried out by PT Cemindo Gemilang Tbk in collaboration with the Lebak Regency DLH in 2023. Then there are also Micro, Small and Medium Enterprises (UMKM) Gerbang Persada Lebak located in Pamubulan Village, Bayah District and UMKM Kriya Agro Nusantara located in Rangkasbitung District which develop organic waste processing from household waste by utilizing maggots or BSF.

To overcome the above challenges, an appropriate meta-model is needed to integrate and share heterogeneous organic waste resources into homogeneous ones. The provisions produced to improve smooth collaboration between the public, private, and civil sectors aiming to improve the efficiency of production and operations of organic waste processing in urban areas of Lebak Regency. Therefore, the author provides the following steps. First, the scattered organic waste resources are integrated and correlated to form a classification of organic waste types and inorganic waste types based on the resource scheme played by the public, private, and public sectors. The role of the civil sector is that each individual household participates in waste management by independently classifying the types of organic waste and inorganic waste types. After the types of waste are separated according to classification, it is continued by the private sector in the field of waste transportation which plays a role in transporting both types of waste to the TPS, here the private sector in the field of organic waste processing will easily transport the types of waste needed to be processed. While for the public sector, it will transport the remaining types of waste to the TPA or TPST location. Second, due to the scarcity of resource conditions in organic waste management, the role of the public sector is needed to conduct schema-based reasoning to identify potential implicit relationships and solve them heuristically. The implicit relationships in question are socialization activities, provision of facilities and infrastructure, and to the civil sector and identifying the private sector in the field of organic waste processing in detail. While solving heuristically is an implicit problem-solving relationship in the form of continuous education and coaching of the community to play an active role in sorting household waste according to classification, facilitating facilities and infrastructure in the community environment such as trash bins based on the classification of waste types in every corner of the urban area of Lebak Regency, not only at certain points, and collaborating or forming community-based business entities in organic waste processing.

Policy Legal Framework

A legal policy framework is a set of legal rules or principles used to support or guide decision-making in public policy. It includes regulations, laws, or court decisions that provide the legal basis for the implementation of a particular policy. Policy law aims to ensure that public policies are formulated and implemented in accordance with the principles of justice, legal certainty, and the public interest. In addition, policy law is also a tool to control or supervise the government so that its policies do not violate the rights of the community.

The policy framework related to collaborative governance in organic waste management has actually been stipulated through the 1945 Constitution of the Republic of Indonesia. Although it does not explicitly mention 'organic waste,' several relevant articles such as the one that Pasal 28H ayat (1) states "everyone has the right to live in physical and spiritual prosperity, to have a place to live, and to have a good and healthy environment and the right to receive health services." This article is the basis for the right to a clean and healthy environment, which includes freedom from waste pollution that must be fulfilled by the state to the community, as Pasal 28I ayat (4) related to Human Rights, which states "protection, advancement, enforcement, and fulfillment of human rights are the responsibility of the state, especially the government." Showing that the state is responsible for guaranteeing the right to a healthy environment, including through a good waste management system such as regulating and managing waste produced in an environmentally friendly, economically feasible, and socially acceptable manner as stated in asal 33 ayat (4) the one that states "the national economy is organized based on economic democracy with the principles of togetherness, efficiency with justice, sustainability, and environmental insight..." becomes the basis that resource management, including waste, must be carried out sustainably and environmentally aware, and is a shared responsibility.

In order for the policy framework to become an explicit basis, the Indonesian Government issued a policy related to waste management in the form of Law of the Republic of Indonesia Number 18 of 2008. And it has been stated that waste management is the responsibility of the government, so the regional government is also included in it, as explained in the law, such as Pasal 6stating that "the district/city government is responsible for waste management in its area" continued to Pasal 7 have an obligation to "ensure the implementation of good and environmentally friendly waste management, increase the participation of the community and the business world, and develop and implement environmentally friendly technology." Furthermore, to implement good waste management, Pasal 12-17 it regulates "waste reduction and handling, including reducing waste from producers, the community, and the government with handling such as selection, collection, transportation, processing, and final processing." To realize this, it is stated Pasal 22-24 that the Government and Regional Government "regulate the participation of the community and the business world in waste management," as well as a commitment to enforce this rule as stated in Pasal 27-29 by providing "administrative and criminal sanctions for violations of waste management."

Responding to the above challenges, the Lebak Regency Government issued a policy on Lebak Regency Regional Regulation No. 4/2018 Waste Management which aims to regulate the role of the community, government, and business actors and explain the stages of management such as reduction, sorting, collection, transportation, processing, to final processing of waste. There are also other policies issued, such as Lebak Regent Regulation No. 30/2018 on the Regional Policy and Strategy for Household Waste Management and Household Waste in Lebak Regency, which is used as the implementation of Regional Policy and Strategy (Jakstrada) as PermenLHK No. P.10/MENLHK/SETJEN/PLB.0/4/2018 and Presidential Decree No. 97/2017, and compiling technical and funding strategies (RIPS) as PermenPU No. 03/PRT/M/2013. Then the Lebak

Regency Government has also issued Lebak Regency Regional Regulation Number 5 of 2016 concerning Environmental Protection and Management as a general environmental legal umbrella, including waste and garbage management.

From the explanation above, that constitutionally the legal framework of policies related to waste management in Indonesia is to create a good environment. Its implementation is made a derivative of the policy of laws and regulations at the Government and Regional Government levels that must be obeyed by all communities in the territory of Indonesia, especially in the context of research, namely the community in the urban area of Lebak Regency. The Lebak Regency Regional Government is responsible for providing public services such as facilities and encouraging community and private participation in waste management. It has been mentioned several times that to reduce and handle organic waste, it is carried out through the stages of selection, collection, transportation, processing, and final processing which are a shared responsibility. The civil sector has a crucial role in selecting or sorting waste which is then collected based on the classification of waste types, at this stage it is a challenge because public awareness is needed to do so. The remaining stages will be the role of the public and private sectors based on economic democracy with the principles of togetherness, fair efficiency, sustainability, and environmental awareness.

Prior Failure to Address

Failure in public administration often occurs for several reasons, such as poor planning, weak coordination or lack of public participation. Failure to address the issue of organic waste management in urban areas of Lebak Regency faces several serious challenges, leading to failure to address this problem effectively. The author sees several factors that cause failure to address the issue, including lack of infrastructure and facilities, minimal education and public awareness, weak policy support, limited funds and human resources, dependence on traditional patterns, and lack of collaboration with the private sector and communities.

The first failure is the lack of infrastructure and facilities. In terms of resource conditions, the problem of organic waste management is due to the lack of organic waste processing facilities such as large-scale composters, TPS3R, and adequate waste banks. The existing TPA is only focused on disposal rather than sustainable waste processing. Another example, the provision of waste transport vehicles owned is only 11 vehicles that can transport 4-5 tons of waste per load, and can carry out 2-3 transports per day (Mulyana, 2022), the number of vehicles is still insufficient to transport the waste generated throughout Lebak Regency. waste generation in Lebak Regency is 602.55 tons per day, urban areas are 139.60 tons per day, while the maximum capacity of waste transport vehicles is only 165 tons per day, perhaps if it only operates in urban areas it can be met.

The second failure is the lack of education and public awareness. It has been mentioned previously that many people do not understand the importance of separating organic waste from inorganic waste. It generally happens that waste collection is not separated, resulting in mixed waste, resulting in difficulty in processing waste where mixed waste can no longer be separated. In addition, dependence on traditional patterns is an anomaly caused by the majority of people still using the pattern of burning waste or throwing it into rivers, which worsens environmental pollution. The role of the public is needed to conduct socialization regarding the benefits of organic waste management, such as composting, which is considered still less massive and effective. The third failure is weak policy support. In the legal framework of the policy, it has been explained that the waste management policy has been established. However, in its application and implementation it is often weak. Supervision of the implementation of waste management is inconsistent, so that many programs stop midway. For example,

educating and practicing the community in managing organic waste into valuable products such as compost fertilizer in the form of socialization.

Fourth, there are limited funds and human resources. The budget for organic waste management programs is often not a priority. In 2022, the Regional Original Income (PAD) of Lebak Regency was IDR 385,151,056,766, the budget allocated for the waste management program was IDR 6,966,033,600 or only 1.8% of PAD, although the 2022 budget increased from 2021 which was IDR 4,045,461,000 (DIKPLHD Kab. Lebak, 2022). In addition, trained workers for organic waste management are still lacking in Lebak Regency. For example, the Tangerang City Environmental Agency applies the maggot cultivation bioconversion (BSF) method in urban areas (DLH Kota Tangerang, 2020). This needs to be emulated by the Lebak Regency Environmental Agency. Finally, there is a lack of collaboration with the private sector and communities. The potential for collaboration with the private sector or local communities in organic waste management innovation has not been maximized. It has been mentioned, as happened in Bayah District, PT Cemindo Gemilang Tbk collaborated with the Lebak Regency Environmental Agency to conduct training and community empowerment in managing organic waste into compost. Things like this need to be maximized by the Lebak Regency Environmental Agency, because community self-help initiatives often do not get enough support to develop, such as the Gerbang Persada Lebak UMKM and the Kriya Agro Nusantara UMKM which developed the maggot cultivation bioconversion method (BSF) to manage organic waste into compost and animal feed did not receive support from the Lebak Regency Government.

The impact of this failure, namely organic waste that is not managed properly causes odor, pollutes water and soil which can be a source of disease. In fact, if organic waste is managed properly, it can be used as an economic opportunity such as compost production and biogas energy if utilized. This is because the assessment of the impact of fulfilling facilities is faced with the assessment of policy desires, or in many cases the lack of clear policies or established strategies/visions for the future (Wolsink & Devilee, 2009). The key is the commitment of the public sector to address the problem of organic waste management. Failure to resolve the problem of organic waste management will reduce the credibility of the public sector, which risks the emergence of civil sector distrust of the public sector. Inhibiting in the future when the public sector carries out programs or activities related to sustainable waste management. although in reality, organic waste management requires action by the public sector. This risk threatens environmental quality and the type of environmental conflict that often arises when public goods that are planned to be in the domain of environmental and sustainability policies are not accepted by the community (Higgs, 2010). In addition, often on the basis of environmental problems, the community submits infrastructure facilities needed to improve environmental quality (Petts, 2004).

Political Dynamics/ Power Relations

In collaboration, political dynamics and power relations play an important role, as each actor often brings its own agenda and interests. Power relations can impact the collaboration process, for example, those with more power or resources tend to dominate discussions, so decisions can be more biased towards their interests, and weaker actors often struggle to advocate for their views, making the collaboration feel less inclusive. In addition, political actors can use collaboration to improve their image or achieve political goals, sometimes at the expense of real outcomes for society. This can lead to tensions and conflicts, differences of opinion or role-playing can trigger conflict, hindering effective collaboration. However, successful collaboration usually involves mechanisms to balance power, such as transparent rules, clear role-sharing, consensus-based decision-making, and oversight mechanisms that involve all parties equally.

In the context of organic waste management in urban areas of Lebak Regency, the author sees several factors that influence political dynamics and power relations in Lebak Regency. First, the centralization of power in the Lebak Regency Regional Government, in practice, waste management (including organic waste) in Lebak Regency is still very dependent on the decisions of the Lebak Regency Government - especially related agencies such as the Lebak Regency Environmental Agency. The implementation of top-down policies makes initiatives from the community and the private sector often dependent on political approval. As experienced by the Gerbang Persada Lebak UMKM and the Kriya Agro Nusantara UMKM, which are not registered with the Lebak Regency Environmental Agency, even though they took the initiative to reduce and handle organic waste in urban areas of Lebak Regency. The Lebak Regency Government through the Lebak Regency Environmental Agency should help the two UMKM to develop further.

The second factor is budget politics. Organic waste management requires special funds, but the budget allocation for this sector is often not prioritized compared to other more political programs, such as physical construction of roads, buildings, and others. In 2021, Lebak Regency's realized income was IDR 2,643.72 billion obtained from PAD plus Transfers to Regions and Village Funds (TKDD) and Other Income (Kemenkeu, 2023). Based on the Work Plan and Budget document of the Regional Work Unit (RKA SKPD) of Lebak Regency, the total amount was IDR 1,696.17 billion, of which the Lebak Regency DLH received a budget of IDR 15,012,202,671 or 0.89% (BKAD Lebak, 2021). The budget received by the Lebak Regency DLH will then be allocated to predetermined programs. For the waste management program, the Lebak Regency DLH allocated funds of IDR. 4 billion or 26.52% in 2021, but there was an increase in the budget in 2022 received by the Lebak Regency DLH to Rp. 21 billion resulting in an increase in the budget allocated to the waste management program to Rp. 6.9 billion or 32.09% (DIKPLHD Kab. Lebak, 2022). This budget change is due to the increase in Lebak Regency's income in 2022. However, the increase in the budget allocated to the waste management program becomes unreal when there is no significant change in sustainable waste management, such as the management of organic waste converted into compost or biogas.

The third factor is elite dynamics and patronage networks. At the local level, such as the urban areas of Lebak Regency, the success of environmental programs is greatly influenced by the existence of political patronage networks, where government programs are sometimes given to groups close to those in power. Perhaps this is what happened to the Gerbang Persada Lebak UMKM and the Kriya Agro Nusantara UMKM which were not supported by the local government. And what is worrying for the author is that the assistance given to the two UMKM in managing organic waste will be politicized (who gets the project, who gets access to tools, and so on). The fourth factor is the lack of autonomous public participation. The author has never heard of the private and civil sectors being able to influence regional policies. Although there are various environmental communities, their power is relatively weak. Community involvement in decision-making is more symbolic (tokenistic), not true participation that can determine the direction of policy.

The fifth factor is the unbalanced government-private relationship. The partnership between the Lebak Regency Government and the private sector in organic waste management is still weak. It is rare to hear of a cooperation program between the public and private sectors such as that carried out by PT Cemindo Gemilang Tbk and the Lebak Regency DLH in conducting training and empowering the community in managing organic waste into animal feed and compost. Not a sentimental writer, but usually, this cooperation is in the form of a short-term project, not a long-term strategic relationship that shares risks and benefits. The last factor is external political pressure. Organic waste management programs are sometimes influenced by

pressure from the Government or Provincial Government. Such as current developments, where every program or activity carried out targets the Sustainable Development Goals (SDGs). Therefore, many have spoken out in the context of waste management, especially organic waste, to be processed sustainably without having to sacrifice the ecosystem, such as processing with the composting method with the bioconversion technique of organic waste into feed or fertilizer from maggot cultivation (BSF). However, its implementation in the regions, especially in urban areas of Lebak Regency, remains highly dependent on local political will.

The author sees that community involvement in making policy decisions is a natural thing and is expected to benefit the community or society at large (Wilson, 2012). Instead of seeking recovery from external shocks or disasters, the government should focus on the resilience of rural communities on proactive human agency in the context of constant change (Skerratt, 2013). On the contrary, the Lebak Regency Government does not involve the community (environmental community) in making policy decisions related to organic waste management. The relationship between the government and the private sector is not utilized properly, such as conducting long-term cooperation to conduct training or create organic waste processing facilities in urban areas of Lebak Regency. Lack of attention to social and power relations between actors (Cote & Nightingale, 2012)because issues such as equality, power, justice, and social capital have not been recognized as important components for resilience (Ramcilovic-Suominen & Kotilainen, 2020). Furthermore, the resilience approach has underestimated the complex role of networks of knowledge, values, cultural meanings and actions (Weichselgartner & Kelman, 2015). Based on this, the power relations in Lebak Regency in organic waste management show the dominance of government actors, weak community participation, dependence on patronage relations, and minimal healthy collaboration with the private sector.

Network Connectedness

Network connectivity in public administration focuses on cooperation between various organizations, both governmental and non-governmental, to achieve common goals. This approach emphasizes the importance of collaboration, coordination, and communication between various parties. In this context, the network acts as a platform for sharing resources, information, and expertise. This helps create more effective and efficient solutions to public problems. Although in this element the author lacks data to present accurately, the author's opinion can be justified which is generated from facts in the field during initial observations. The element of network connectivity begins with knowing the actors in the network involved in organic waste management in the urban area of Lebak Regency. In the public sector there is the Lebak Regency DLH, but it can also involve actors at the village level such as the Village Head. The private sector is of course companies engaged in organic waste management such as fertilizer producers or Compost UMKM (for example, Gerbang Persada Lebak UMKM and Kriya Agro Nusantara UMKM). And in the civil sector, namely environmental communities such as waste banks (can also be private sectors because they have become industries) and farmer groups (not yet empowered by the government, such as independently producing compost and animal feed through organic waste processing), as well as Non-Governmental Organizations (NGOs) working in the environmental sector.

Furthermore, the form of connectedness between actors, the author sees that there is a hierarchical relationship between the Lebak Regency DLH and village officials which is carried out in a Top-Down manner. while the relationship between the environmental community and NGOs will be cooperative if there is assistance such as training or community empowerment in organic waste management. While the relationship in the public and private sectors is transactional if there is a procurement project. And finally, the form of connectedness between

actors is still fragmented, because there is no integrated cross-sector coordination forum. The difficulty in finding data on this element is the flow of information and resources, for regulatory and program information usually moves in one direction from top to bottom, in the best practice of organic waste management in urban areas of Lebak Regency, it is rarely documented and spread between villages, such as what happened in Bayah District which was practiced by BUMDes mentioned in the resource condition element, finally assistance with tools, training, or funding also tends to be uneven, only reaching certain villages such as the establishment of a waste bank which is focused on Rangkasbitung District.

The absence of a permanent collaboration platform such as a cross-stakeholder forum is an obstacle to the network in managing organic waste in urban areas of Lebak Regency. And weak coordination between sectors such as DLH, Agriculture Service, Health Service in interrelated issues. For example, activities carried out by BUMDes in Bayah District or MSMEs that the author often mentions are not registered as sectors engaged in organic waste management in the Lebak Regency DLH. The author believes that perhaps the BUMDes and MSMEs are registered with the Lebak Regency Agriculture Service because they produce agricultural products. Indicates to the author that there is a weak network connectivity between sectors to coordinate. The role of the Lebak Regency DLH does not position itself as a network broker that can effectively connect the Government with grassroots communities. In fact, this can be a potential for strengthening the network by positioning the Lebak Regency DLH as a network broker to form an organic waste management forum in the Lebak Regency urban area that involves all actors, and appointing community facilitators as key connector guards by encouraging the use of digital platforms such as WhatsApp Group and online information systems to share program information.

Levels of Conflict/ Trust

Conflicts in collaborative governance often occur due to differences in interests, priorities, or ways of working between the actors involved. Some of the main sources of conflict include: differences in interests, each actor (government, private sector, community) has different goals, which are sometimes difficult to balance; inequality of resources, the stronger party economically or politically often dominates, so that the weaker actor feels disadvantaged; lack of clarity of roles, when responsibilities are not well defined, overlapping tasks or authority struggles can trigger conflict; poor communication, lack of information or miscommunication often lead to distrust and misunderstanding; differences in values or culture, different perspectives on solving problems often give rise to friction. These conflicts can be managed through mediation, negotiation, and facilitation involving third parties. Consensus-based decision-making mechanisms are also effective in reducing conflict.

At the level of trust among actors in organic waste management in urban areas of Lebak Regency, the public often does not believe that the government's waste management program will run consistently. It has been previously mentioned that the implementation of organic waste management starts from sorting and collection carried out in households, to raise public awareness, the government needs to provide continuous counseling and socialization to make the program a success in reducing and handling organic waste in urban areas of Lebak Regency. For local communities such as BSI, BSU, to MSMEs or BUMDes, they have less trust in the private sector, especially if their involvement is only a short-term project or profit-oriented. What should happen, such as the collaboration between PT Cemindo Gemilang Tbk and the Lebak Regency DLH in Bayah District in empowering village communities to process organic waste into compost until an industry is formed on a BUMDes scale. And the government itself tends to doubt the capacity of communities or NGOs to manage organic waste independently without

strict supervision. As happened to the Gerbang Persada Lebak MSME. As a result, the existing collaboration is more compliance-driven, not trust-based collaboration.

At the level of conflict in organic waste management in urban areas of Lebak Regency so far latent conflict, not open or formal, but still real. Such as the conflict of values between the Lebak Regency Regional Government which encourages modern technology in organic waste processing such as composting methods, and the community who prioritize traditional approaches by burning waste and throwing waste into rivers. The conflict of values worsens the unresolved state of organic waste management in urban areas of Lebak Regency. The factors causing low trust and the emergence of conflict are due to bad habits of the past that are allowed. The community considers the activities and programs carried out by the government only for the public interest (government). Especially for political elites using this to increase their electorate. Different priorities between the government, private sector, and community also have an impact on reducing participation in all sectors.

There are several efforts to increase trust and reduce conflict, such as establishing regular dialogue forums between the government, community, private sector, and academics. Increasing transparency is more important in the distribution of aid, budget, and programs related to organic waste management in urban areas of Lebak Regency. Or, the Lebak Regency Environmental Agency takes real action like the Tangerang City Environmental Agency in managing organic waste using the bioconversion method with maggot cultivation techniques (BSF) to create local success stories. Using neutral third parties such as academics or NGOs working in the environmental sector, especially organic waste management, to mediate new programs. Where all of this is facilitated by the Lebak Regency Environmental Agency which acts as a network broker.

Socio-economic/ Cultural, Health, dan Diversity

Health and social, economic and cultural diversity are important aspects of collaborative governance, as they impact how parties work together effectively. In this context: social diversity, collaboration involving different social groups can enrich perspectives, but also raise challenges such as bias or discrimination. Inclusion and equity efforts are essential here; economic diversity, differences in access to resources can create power imbalances in decision-making. Providing support to economically disadvantaged groups helps create more balanced collaboration; cultural diversity, variations in values, norms and traditions can strengthen collaboration if respected, but can also potentially create conflict. Understanding and respecting other cultures is key to success. In effective collaborative governance, all parties must ensure that diversity is seen as a strength, not a barrier.

In the socio-economic aspect, during the 2019-2023 period, the economic structure of the Lebak community has shifted from the primary business field group to the tertiary business field group. In 2023, the tertiary business field group contributed 48.96% or increased from 2022 by 47.66%. Meanwhile, the primary business field group in 2023 contributed 31.86%, or decreased from 2022 by 33.42%. For the secondary business field group in 2023, it contributed 19.18%, or increased from 2022 by 18.92%. The primary business field group experienced a decline in 2023, such as the agriculture, livestock, forestry, and fisheries business fields, for example, contributed 27.47% in 2022, decreasing to 27.36% in 2023, or experienced a decrease in the growth rate of -0.15%. Despite the decline, this business sector created added value to the GRDP at current prices of Rp. 9,733.11 billion, making it the business sector that contributed the most to the GRDP of Lebak Regency (BPS Kab. Lebak, 2024).

In relation to organic waste management in urban areas of Lebak Regency, primary business groups such as agriculture, livestock, forestry, and fisheries can be utilized as circular economic opportunities. It has been explained previously that the bioconversion method can process organic waste to produce animal feed and compost. The products produced such as animal feed can be used for the needs of the livestock and fisheries business fields, and the compost produced can be used for the needs of the agriculture and forestry business fields. So what needs to be done by the government as a service provider is access to technology and training in organic waste management such as maggot cultivation (BSF) for business actors, or it can also establish a new business field engaged in organic waste processing that produces community-based animal feed and compost products. Every day, using 40 kilos of maggots, it can decompose 800 kg to 1 ton of waste that has gone through the shredding and fermentation process, and it only takes 2 days for the maggots to finish eating it until they later produce waste that can be composted for planting media (DLH Kota Tangerang, 2020), and maggots can be processed into highly nutritious animal feed because they contain substances needed by the growth and development of livestock, especially poultry (Distanpangan Prov. Bali, 2023). Therefore, the opportunity for maggot cultivation not only solves problems related to organic waste management in urban areas of Lebak Regency, but also has economic value that can improve the community's economy.

In terms of culture, it has been mentioned that the community still prioritizes traditional waste management, such as throwing garbage in gardens, rivers, or burning garbage as a hereditary practice. The government's assertiveness in changing these old habits by implementing strict policy implementation related to the role of urban communities in Lebak Regency in sorting and collecting organic waste from inorganic waste, creates a new culture to maintain the community's living environment for the better. This is also related to improving the public health aspect in poor handling of organic waste, contributing to an increase in disease vectors such as flies, rats, and mosquitoes. Lebak Regency health data shows that environmental-based diseases such as Acute Respiratory Infections (ARI), Diarrhea, and Dengue Fever (DBD) are still quite high. According to the Lebak Regency Health Office (Dinkes), in 2021 the morbidity rate of the Lebak Regency population was 638,314 sufferers, for sufferers of the diseases mentioned, ARI as many as 110,960 sufferers, Diarrhea as many as 25,667 sufferers, and DHF as many as 202 sufferers, then if added up as many as 136,829 sufferers or 21.44% of the morbidity rate of the population (Dinkes Kab. Lebak, 2022). Therefore, a new culture in handling organic waste is carried out to increase public health awareness regarding the negative impacts of organic waste that rots in their living environment. The organic waste management program needs to be linked to public health education, not just environmental issues.

The aspect of diversity is a challenge to implement counseling and socialization to the community to educate and practice sorting and collecting based on the classification of waste types in handling organic waste in urban areas of Lebak Regency. Perceptions about waste differ between communities, for example the Baduy indigenous community manages organic waste with natural principles, while small urban communities are more familiar with the concept of waste banks. Therefore, organic waste management programs must be adjusted to local characteristics - cannot use a uniform approach.

CONCLUSIONS

Based on the results and discussions, collaboration between the public and civil sectors is still minimal. The role of civil society in sorting and collecting organic waste from inorganic waste is not implemented, resulting in mixed waste and difficult to separate again. This indicates a lack of community participation in managing organic waste in urban areas of Lebak Regency.

According to the rules, it has been stated that the role of the community in waste management is to sort and collect waste. Likewise, collaboration between the public and private sectors has not been optimal. The collaboration between the Lebak Regency DLH and PT Cemindo Gemilang Tbk in Bayah District should also be implemented in other areas by involving the local private sector. Similarly, collaboration between the public sector and local communities, where the Lebak Regency DLH does not optimally utilize resources, as happened in BUMDes Darmasari, Bumdes Pamubulan Maju Bersama, and Bumdes Memikat Bayah Barat, as well as UMKM Gerbang Persada Lebak and UMKM Kriya Agro Nusantara, where these local communities are engaged in organic waste management, processing using the bioconversion method with maggot cultivation techniques (BSF) which can produce products in the form of animal feed and compost. In fact, the policy that regulates waste reduction efforts, the Lebak Regency Government through the DLH carries out the implementation of plans for the use of environmentally friendly production materials by business actors, facilitating the community and the business world in developing and utilizing recycled results, marketing recycled product results, and reusing waste. However, the Lebak Regency DLH as a public service provider did not implement it.

Furthermore, relations between public sectors are also still not optimal. The occurrence of budget politics is also a political dynamic. The DLH was only allocated a budget of 0.89% of the total revenue of the Lebak Regency Government in 2022, of which 32.09% was allocated for a waste management program whose use is unknown. Because it was not mentioned in the document provided by the Lebak Regency DLH to the author. Then, the public sector played by the Lebak Regency DLH has not been able to fulfill the rights of everyone such as getting a clean, beautiful, comfortable, and healthy environment, as well as getting good and environmentally friendly waste management guidance. In addition, the absence of organic waste processing infrastructure facilities in Lebak Regency will make it difficult to achieve sustainable organic waste management.

The solutions that the author can provide regarding collaborative governance in organic waste management are:

1. The Lebak Regency Government through the DLH conducts outreach or socialization activities regarding organic waste management to the community related to the continuous sorting and collection of organic and inorganic waste. Or the DLH can collaborate with the Education Office to provide waste management education to school students and make it learning material.
2. Optimizing collaboration with the private sector, local communities, and civil society by forming an organic waste management forum, where the Lebak Regency DLH acts as a network broker that connects all actors engaged in organic waste management. Because with the formation of the forum, each actor will quickly get service, have the opportunity to participate in the decision-making process, and obtain correct and accurate data and information.

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