



IMPLEMENTATION OF GOVERNMENT COMMUNICATION OF THE ENVIRONMENTAL SERVICE IN WASTE MANAGEMENT POLICY IN DUMAI TIMUR DISTRICT

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Article Info

Article history:

Received :

Revised :

Accepted :

Available online

<http://jurnal.uinsu.ac.id/index.php/analytica>

E-ISSN: 2541-5263

P-ISSN: 1411-4380

How to cite:



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ABSTRACT

Waste management is one of the crucial issues in sustainable development in Indonesia. Sustainable development in Indonesia, especially at the sub-districts that have limited resources and infrastructure. This study examines the implementation of government communication by the Environment Office in the waste management policy in Dumai Timur Sub-district, Dumai City. Dumai Timur, Dumai City. Through a qualitative approach with case study analysis, this research highlights how government communication strategies play a role in the effectiveness of waste management policy implementation. The results show that effective communication between the government, community, and other stakeholders determines the success of waste management. However, there are various challenges such as limited facilities, low community participation, and coordination barriers between institutions. Strategic recommendations were developed to strengthen government communication, improve resource capacity, and encourage active community participation in waste management. This study makes an important contribution to the development of more responsive and participatory environmental policies at the local level.

Keywords: Implementation, Government Communication, Waste Management, Kota_Dumai.

1. INTRODUCTION

Waste management is a very crucial issue and a major challenge in many regions in Indonesia, including Dumai Timur Sub-district, Dumai City. Rapid population growth and the ongoing urbanization process significantly increase the volume of waste generated every day (Rahmawati et al., 2023) (Hastuti et al., 2021). This condition puts great pressure on the existing waste management system, which if not handled properly can cause various environmental and public

health problems. Waste that accumulates without effective management has the potential to pollute soil, water and air, and become a source of disease that threatens the quality of life of residents (Sari & Umama, 2019)(Sulistiyani, 2022).

Recognizing the urgency of this problem, the local government responded by formulating a systematic and sustainable waste management policy, one of which is through (Dumai City Regional Regulation Number 3 of 2021 concerning Waste Management, 2021). This policy is designed to provide a clear framework for waste management, from reduction, collection, transportation, to final processing and disposal, with the aim of creating a clean and healthy environment (Hardiyanti, 2021). However, the success of the policy relies heavily on effective government communication, which includes information delivery, inter-agency coordination, and community participation (Dalimunthe & Ginting, 2023)

Waste management is one of the crucial aspects in sustainable environmental governance, especially at the local government level. The Environmental Agency as a government agency responsible for has a strategic role in designing, communicating, and implementing waste management policies. Government communication in this context does not only function as a means of delivering information, but also as an important mechanism for building awareness, public participation, and coordination between stakeholders. An effective government communication framework in the Environmental Agency must be able to bridge formal policies with practices in the field, so that waste management policies can run optimally and have a positive impact on the quality of the environment and public health environment and public health.

In the context of waste management, effective communication involves disseminating clear and timely information on waste management policies, programs, and procedures to the public and related actors. This includes socialization, education, and interactive dialogues that can increase collective understanding and awareness. Previous studies have shown that communication constraints are often a major factor in the failure of waste management policy implementation, such as the lack of comprehensive socialization, limited human resources, and lack of active community participation in waste management at the local level (Lenovo, 2025).

However, the implementation of this policy at the sub-district level, especially in Dumai Timur, still faces various obstacles that hinder its effectiveness. Factors such as unsustainable communication between the government and the community (Wika & Tambaip, 2022), limited human resources who are competent in the field of environmental management, as well as limited budgets and infrastructure facilities are the main obstacles (Fira et al., 2022). Less intensive communication causes a lack of socialization and public understanding of the importance of good waste management, so that active community participation in waste management programs is still low. In addition, the lack of assertiveness in enforcing sanctions against policy violators also weakens the effectiveness of

implementation, due to the lack of a deterrent effect that can encourage compliance. The limited capacity of human resources, especially in the technical aspects of waste management, as well as the lack of procurement and maintenance of supporting infrastructure, also worsen the condition of policy implementation in the field (Harianto et al., 2023; Ohorella et al., 2024).

The need to deeply understand the extent to which this waste management policy is implemented in the field is the main background of this research (Okhtafianny & Ariani, 2023). Identifying the inhibiting factors that affect policy implementation is very important so that appropriate and effective solutions can be formulated (Rahmananda & Widjonarko, 2021). The increase in waste volume that is not matched by adequate management not only has a negative impact on the environment, but also has the potential to threaten public health at large. Therefore, this research focuses on aspects of waste management policy implementation in Dumai Timur Sub-district, with an emphasis on communication, human resources, budget, and supporting facilities and infrastructure, as an effort to provide a comprehensive picture of the real conditions in the field and open up opportunities for continuous improvement.

2. RESEARCH METHOD

This research uses a qualitative approach with the aim of obtaining an in-depth understanding of the government communication process, the dynamics of policy implementation, and the challenges faced in the local social and cultural context. The main data collection methods include analyzing official policy documents

Data were collected through direct observation in the field to observe government communication activities, waste management, infrastructure, and interaction between government officials and the community; in-depth interviews with key informants such as officials of the Environmental Agency.

Data analysis was carried out descriptively qualitatively by describing and interpreting data to describe the real conditions of the implementation of government communication and policies in the Environmental Agency and its inhibiting factors, including aspects of communication, human resources, budget, and infrastructure. Data validity is maintained through source triangulation techniques by comparing the results of observations, interviews, and documentation, while data reliability is maintained through careful recording and systematic analysis. This approach enables a comprehensive understanding of the social and cultural context that influences policy implementation, so that the research results can provide relevant and targeted recommendations to improve the effectiveness of waste management in the region.

3. RESULT AND ANALYSIS

Implementation of Government Communication of the Environmental Service Government Policy in Waste Management in Dumai Timur District, Dumai City

The implementation of government communication of the Environmental Agency in the waste management policy in Dumai Timur Sub-district shows that effective communication plays an important role in the successful implementation of the policy. The case study revealed that the main obstacles faced include limited infrastructure, minimal human resources, and low public awareness and participation in waste management. This confirms that government communication is not just about delivering information, but must also be able to build understanding, motivation, and active involvement of the community and other stakeholders to support existing policies (Lenovo, 2025) The aspects that influence the implementation of government policies in waste management in the East Dumai sub-district of Dumai City are as follows:

Communication Aspects

Communication is one of the most important dimensions for success in achieving the goals of a work unit in implementing government policies at this point in this context communication is concerned with the process of delivering information which contains important messages from policy makers to stakeholders. Therefore, it requires clarity of policy information and consistency of information conveyed to related parties in this condition, the role of communication departs from the assumption that policy implementers will implement what is received and understood in a policy. There are three factors measuring the success of communication, the first of which is 1) transition (socialization), 2) clarity, and 3) consistency.

Transition

Transition (socialization), so that public policies are conveyed not only to policy implementers (implementors) but also to policy target groups and other interested parties both directly and indirectly. There are some common barriers that usually occur in communication transmission, namely there is a conflict between policy implementers and orders issued by policy makers. Such contradictions will lead to distortions and direct barriers in policy communication. Second, information is transmitted through layers of bureaucratic hierarchy. Communication distortions can occur due to the length of the information chain which can result in information bias. Third, information capture problems are also caused by the perception and inability of implementers to understand the requirements of a policy.

Transition / socialization is an activity carried out by parties who are given the authority as stipulated in a policy, these actors are generally government officials who legally have the authority and are bound by the policies that have been made, whether they are parties directly involved in the policy formulation process (in the policy formulation stage), or parties deliberately appointed by the government to carry out socialization activities, or also parties who will be directly involved in implementing the policy, so that these parties must ensure that other parties and target groups know the content or substance of a policy that has been made.

The socialization of waste reduction that was originally carried out by the local government has stopped since 2020. This has led to a lack of understanding and awareness of the community and business actors on the importance of good and proper waste management. Unsustainable communication also has an impact on the lack of coordination between related agencies, so that policy implementation becomes inconsistent and less integrated.

Clarity

The existence of information dissemination carried out regarding the content or substance of the policy that has been made, which is a description of the content or substance of a policy that has been made. The clarity of information in the socialization process will determine the level of knowledge and understanding of the parties who will be involved in the implementation of a policy that has been made, so that the content or substance of the policy must be absolutely clear, detailed and can be understood easily. The policy of Dumai City Regional Regulation Number 11 of 2020 concerning waste management is quite clear in discussing waste reduction and waste handling. Related to waste reduction according to article 8 is carried out by limiting waste generation, recycling waste, and reusing waste While for waste handling, according to article 10, it is carried out by sorting, collecting, transporting, processing and final processing of waste.

According to Iqbal (2008: 23) the clarity of the content of a policy implemented by policy makers must be required to contain consistent clarity. A policy whose content is clear will facilitate a policy and will avoid various forms of misuse of the policy implementation. This is because if a policy already has clear content, it will reduce the misunderstanding in understanding the contents of the policy. And vice versa, if the contents of a policy are still unclear, there is a high probability of misunderstanding.

Consistency

Consistency is needed so that the policies taken are not confusing so as to confuse policy implementers, target groups and interested parties. The existence of consistency refers to the target group or in other terms it is called the target group, which is the object that will be subject to a policy. The target group determines whether the policy that has been made will be successful or not, this is

because the purpose of a policy that is made is to respond to or overcome the problems that exist in the target group.

The consistency of the implementer is still not apparent considering that this local regulation has discussed in detail related to licensing (article 26) and also prohibitions (article 40). The administrative sanctions are contained in article 42, where every person or business actor who violates will be subject to verbal reprimand, written reprimand, social sanctions and administrative fines of Rp.500,000,-.

According to Sulila (2015: 49) consistency is related to the various parties involved in the policy implementation stage. With the socialization that provides knowledge and understanding to the parties involved, these various parties will have attitudes and actions in the form of awareness and a sense of responsibility for the successful implementation of policies that have been made in accordance with their respective roles.

Barriers in communication related to the transmission of socialization, which was stopped from 2020 due to the co-19 pandemic, also caused disruption in waste management services. The socialization that was previously carried out was an effort to reduce waste and increase public awareness of the importance of disposing of waste properly. Furthermore, the consistency of this local regulation has not been able to be realized considering the application of sanctions which until now has not been strictly implemented.

Source Aspect

According to Winarno (2016: 180) resources in implementation are things that must be carried out carefully, clearly and consistently, this is expected so that the implementers of the implementation run effectively. Therefore, it is necessary to support sources such as human resources (HR), budget resources (SDA), and supporting facilities and infrastructure. Human resources as policy implementers, where these human resources have sufficient numbers and meet the qualifications to implement policies. What is meant by human resources having sufficient numbers and meeting qualifications is that the implementers are sufficient in number and have the necessary abilities and skills in implementing the policies set. The number of human resources in DLH Dumai City is still minimal, plus the educational background of field supervisors is still not optimal. For ASN in DLH Dumai City itself, it is also hoped that in the future it can be supported by employees who have an environmental engineering education background, so that it is hoped that their knowledge, capabilities and competencies can improve the performance of waste management in Dumai City, especially in East Dumai District. In the implementation of environmental management, it is very necessary to have an apparatus who has knowledge considering the rapid development of the environmental world so that the figure of the Acting Apparatus is needed at the

Dumai City Environmental Service and understands the processes of the Industrial World based on Environmental Technology (Dalimunthe, 2022).

Budget limitations are a significant obstacle. The limited budget makes it difficult to procure waste recycling machines, given the relatively expensive price per unit. As a result, the procurement of these tools has not been able to reach all villages in Dumai Timur Sub-district. Limited funds also have an impact on the maintenance and procurement of other waste management facilities and infrastructure, such as a large fleet of waste carriers that are in a damaged condition and limited TPS capacity in several villages. This condition causes waste management to be less than optimal and uneven throughout the sub-district area (kholil et al., 2024).

According to Sulila (2015: 52) the budget is a management planning tool to achieve organizational goals. Public sector budgets are made to plan what actions the government will take, how much it will cost, and how much the results obtained and government spending will be. The budget as a government fiscal policy tool is used to stabilize the economy and encourage economic growth. Through the public budget, the direction of the government's fiscal policy can be known so that economic predictions and estimates can be made. The budget can be used to encourage, facilitate and coordinate the economic activities of the community so as to accelerate economic growth.

Facilities and infrastructure are all facilities and infrastructure available for the implementation of a policy and are used to support directly and related to the tasks set. This is in accordance with the opinion of Sulila (2015: 53) that the development of facilities and infrastructure has a very important role in supporting economic, social, cultural activities, as well as national unity and integrity, especially as a basic capital in facilitating interaction and communication between community groups and binding and connecting between regions. The development of facilities and infrastructure, which is an integral part of national development, is expected to be a driving force for national economic growth and support national competitiveness globally.

Based on the facilities and infrastructure at the Environmental Service, there is still a lack of supporting facilities in improving quality in environmental management. In this case, for example which is based on data / sample analysis, currently the Environmental Service only has a simple laboratory that has not been accredited for water and air quality testing. Testing is carried out only for reporting and cannot be published because it is not yet accredited and for further water quality testing samples are sent to the Pekanbaru laboratory and air quality testing samples are sent to the Medan laboratory.

This is in accordance with the opinion of Prayitno (2010: 188) which states that the support of facilities and infrastructure for policies is very important. Mainly manifested in the role of welfare concerning transportation networks, communications, and facilities that enable a policy implementer to carry out its

duties in accordance with the orders set to provide services that are an integral part of community life. Therefore, facilities and infrastructure are very influential on policy implementation. Based on the various explanations above, it can be seen that the obstacles in the source indicators consist of the lack of human resources both in number and also the educational background and training that is still minimal. Furthermore, in terms of a limited budget, it also causes the procurement and maintenance of facilities and infrastructure to be hampered. This indirectly affects the performance of waste management, especially in East Dumai District.

Social, Economic and Political Condition

Based on the report on population document services in Dumai City according to final education as of December 31, 2021, it is known that there are still many people in East Dumai Subdistrict who have low education. There are 6,048 people who did not graduate from elementary school, 7,591 people who graduated from elementary school, 7,561 people who graduated from junior high school and 17,768 people who graduated from high school.

The level of education has a significant influence on people's awareness and behavior in disposing of waste. Waste management behaviors include: keeping the house and yard clean, reducing household waste, carrying out community service activities in the neighborhood, separating organic and inorganic waste, waste disposal habits, reusing waste into economically valuable goods, and applying inorganic waste recycling. From observations over the past 5 years, economic conditions in Dumai City have fluctuated. In terms of the number of poor people, it experienced a downward trend from 2017 to 2020. However, in 2021, the number of poor people increased quite significantly, namely 10.57 thousand people or 3.42% increase from the previous year.

In the case of the poor in big cities, the injustice of the social structure (external factors of poverty) can be seen from the unfulfillment of their needs to survive in good health, the difficulty of getting access to public services (healthy sanitation, clean water, waste management), healthy houses, green spaces, education services and so on. Injustice is also seen in the lack of access to ownership of the land they live on. As a result, it is difficult for them to gain access to good and stable jobs. These injustices cause the poor to remain poor and damage the environment of the community itself and threaten the process of sustainable development. Examples of unavoidable environmental damage include air pollution due to the habit of burning garbage, land shrinkage due to the high number of residents and migrants, shrinkage of green open spaces, decline in land topography, pollution of river water and groundwater (Hartono, 2018: 147).

Likewise with political conditions, political changes that result in a change of government can change the orientation or approach to implementation, or can even cause changes to all policies that have been made. Politics, which has sub-factors in it, namely information management, the smooth transmission process

from sender to recipient, the suitability of information conveyed by the management in implementation, the number of implementing apparatus in accordance with their fields, community participation and also the economic resources of the organizational environment that are still low.

This shows the role of political conditions in Dumai City, including the interests between actors, resulting in a protracted management process for several Dumai mayors. The interaction between these actors resulted in the concept of green politics not being fully understood in waste policy making. Where green politics is understood as a human relationship with the environment, it can be sustainable. When the understanding of green politics has been understood by each actor, the waste management process in East Dumai Subdistrict will not be protracted. In the interaction between actors, the concept of green politics should be interpreted as a pattern to form a new order, which is not only based on handling the impact of waste. But it must also be understood as an interaction of each actor that forms a sustainable pattern between humans and nature. Many fleet vehicles are damaged, the procurement of TPS container bins has not yet been realized, and visionary efforts in the future will continue to be hampered given the very limited budget available.

Based on observations, it is known that every year the DLH Dumai City budget has increased but the budget provided has not been able to accommodate all waste management programs, such as the cost of maintaining facilities and infrastructure for adding a fleet of waste trucks, TPS and waste banks. Every government work unit is involved in the budgeting process. The public budget is a coordination tool between parts of the government. A well-prepared public budget will be able to detect inconsistencies between work units in achieving organizational goals. In addition, public budgets also serve as a communication tool between work units within the executive. The budget must be communicated to all parts of the organization to be implemented.

Aspect of Disposition

According to Winarno (2016: 183) the tendency / disposition / attitude of implementers is another important factor in the public policy implementation process. If policy implementation is expected to run effectively, the role of the implementor must have a positive attitude desire and disposition to implement the policy. Implementor attitude / disposition is the character and characteristics of the implementor. If the implementor has a good disposition, then he will carry out the policy well as desired by the policy maker. As in this case includes; 1) commitment, 2) honesty, and 3) democratic nature.

The commitment of implementers does not appear optimal in supporting policy implementation. Waste management in Dumai Timur sub-district. One of the plans being developed is the exchange of waste from the community with plant seeds which is expected to teach public awareness in sorting their own waste. However,

the application of sanctions still cannot be realized as the implementer's commitment to implementing the local regulation.

The realization of retribution that reaches the target is one of the real manifestations of honesty from officers and implementers in the field considering that waste retribution often leaks and has a low percentage of not reaching the target. DLH Dumai City is able to implement the regulation supported by honesty and commitment in carrying out waste management tasks.

This is also in accordance with the opinion expressed by Dunn (2015: 82) that honesty is very important in the policy process. A problem-oriented policy analysis stated by Dunn says that a policy is formulated from the existence of a policy problem as outlined in the formulation of a policy problem. Then a policy is formulated, so that in a problem-oriented policy analysis cycle, the policy that has been determined is then implemented followed by monitoring to see the results of the policy. The review data is used as material for evaluating policy performance. Democratic nature is realized in the efforts of DLH Dumai City to be able to manage its waste independently. Although overwhelmed, DLH still wants to continue to manage its own waste without the help of third parties, by implementing and hastening the concept of the 3R method by leaving the open dumping method, it is hoped that slowly but surely DLH Dumai City will be able to manage waste independently, effectively and efficiently.

Based on the various explanations above, it can be seen that the obstacles from disposition are the lack of optimal commitment of implementers to apply administrative sanctions for the community, business actors who litter in illegal TPSs and also public awareness in managing their waste properly needs to be improved.

Bureaucratic Structure

According to Winarno (2016: 188) bureaucratic structure is the arrangement of work components in an organization that shows the division of labor and the clarity of the division of functions or different activities that are integrated, coordinated, and show job specifications, the form of orders and final reports. The bureaucratic structure in charge of implementing the policy has a significant influence on policy implementation. This includes; 1) The existence of standard operating procedures (SOP), and 2) fragmentation.

The success of the supervision process is determined by the availability and clarity of minimum service standards as outlined in the Standard Operating Procedure (SOP).

SOPs are particularly likely to be an obstacle to the implementation of new policies that require new ways of working or new types of personnel to implement policies. Thus, the more a policy requires a change in the usual ways of working within an organization, the greater the probability of SOPs hindering implementation.

Community participation is needed in implementing a policy. This is because the community is an important component in a policy to determine the success or failure of an activity. What is meant by community participation here is the participation or concern of the community in implementing waste management in Dumai City. The Environmental Service has provided TPS (Temporary Disposal Sites) but there are still people who throw garbage on the side of the road. This proves that the community does not understand and they have not yet animated this cleanliness of garbage where to dispose of it and the community still lacks concern for the environment. Participation from the community towards waste management is still very lacking, participation that is carried out is only limited to paying dues to garbage levies every month for those whose garbage is transported by janitors and some people dispose of their garbage at home and burn it themselves. There are no people who utilize their waste into useful goods, as for that, only some people use it for their own needs.

The obstacles in the bureaucratic structure are that community participation in managing their own waste is still not good, especially in terms of garbage disposal. Although there are SOPs relating to the time and hours of garbage collection, there are still officers who are not disciplined in carrying them out so that many people also do not know about how the SOPs of waste management services in East Dumai District.

Inhibiting Factors in the Implementation of Government Communication of the Environmental Service in Waste Management Policy in East Dumai District

Key inhibiting factors include:

1. Low public awareness of the importance of good waste management.
2. Lack of assertiveness in the application of administrative sanctions.
3. Limited competent human resources.
4. Limited budget and supporting infrastructure.
5. Limited communication skills between government and community

Low public awareness causes littering behavior to still occur frequently, worsening environmental conditions. Lack of firmness in rule enforcement makes violations difficult to control. Limited human resources and budget limit the local government's ability to provide adequate facilities and supervision.

Overall, although the waste management policy has been formulated well, its implementation is still far from effective. Various obstacles must be overcome immediately so that the goal of clean, healthy and sustainable waste management can be achieved. This research provides a concrete picture of field conditions that can be the basis for improving policies and implementation strategies in the future, especially in improving communication, enforcing sanctions, strengthening human resources, and fulfilling waste management facilities and infrastructure (Ministry of Environment and Forestry RI, 2021).

Although the bureaucratic structure has SOPs and involves various parties, task fragmentation and inter- agency coordination are still a challenge. Ineffective coordination leads to overlapping tasks, confusion of responsibilities, and inefficiency in policy implementation. The governance literature emphasizes the importance of coordination across sectors and levels of government for the successful implementation of public policies (O'Toole, 2000). Therefore, strengthening coordination and integration between institutions must be the focus of improvement so that the implementation of waste management policies runs synergistically and effectively.

4. CONCLUSION

The implementation of waste management policies in Dumai Timur Sub-district, Dumai City, still faces various significant obstacles so that the implementation is not optimal. The main inhibiting factors include unsustainable communication, lack of assertiveness in enforcing administrative sanctions against violators, limited competent human resources, and limited budget and infrastructure. Communication that has been disconnected since 2020 has led to a lack of socialization and public awareness, resulting in low active participation in waste management. The lack of assertiveness in the application of sanctions makes violations difficult to control and reduces the overall effectiveness of the policy. In addition, the limited capacity of human resources, especially the lack of personnel with environmental technical backgrounds, as well as the lack of budget for procurement and maintenance of infrastructure

Therefore, systematic and continuous improvement of the communication aspect is needed to build awareness and participation of the public at large. Firm and consistent enforcement of sanctions must be strengthened to provide a real deterrent effect for violators. Human resource capacity building through training and education is also key so that policy implementers can work professionally and effectively. In addition, there is a need for innovation in budget management and procurement of infrastructure, including exploring partnerships with the private sector and the community to support better waste management. By improving these three main aspects-communication, sanction enforcement, and resources-the implementation of waste management policies in Dumai Timur Sub-district can run more effectively and sustainably. This will not only improve environmental quality and public health, but also encourage the creation of more professional and participatory waste governance. These recommendations are expected to be an important reference for local governments and relevant stakeholders in formulating strategies for improving and developing future waste management policies, so that the goals of sustainable development at the sub-district level can be better achieved (Ministry of Environment and Forestry RI, 2021).

References

- Batahari, T.D., Kimbal, A., and Kumayas, N. (2016). Government Management in Waste Management in Sangihe Islands Regency. *Journal of Public Administration (JAP)*, Vol. 1, No. 2.
- Carlito da Costa. (2018). An Environmentally Sound Waste Management System in an Effort to Create a Sustainable City (Study on Waste Management System in Semarang City). Thesis: Unissula Semarang.
- Dalimunthe, M. A., & Ginting, C. H. B. (2023). Framing Analysis of Reporting on the Corruption Case of Langkat Governor in Online Media Waspada. co. id. *Journal of Digital Media Communication*, 2(1), 1-7.
- Dalimunthe, M.A. (2022). Keterampilan Komunikasi Antarbudaya Mahasiswa Malaysia di Kota Medan. *Langgas: Jurnal Studi Pembangunan* 1 (2), 82-89
- Devi Mulyasari. (2019). Implementation of Waste Management Policy in Rancaekek District, Bandung Regency. *Journal of State Administration*, Vol. 13, No. 1.
- Diartika, E.I. (2020). Inspiration to Manage Waste. Bandung: Quepedia DLH Buleleng, 2025. https://dlh.bulelengkab.go.id/informasi/detail/artikel/48_tantangan-dan-waste-management-solutions-in-buleleng-district
- Fira, S. Al, Kastolani, W., & Ismail, A. (2022). The Influence of Slum Level on Community Participation in Settlement Waste Management in Gedebage District, Bandung City. *Jpig (Journal of Geography Education and Science)*, 7 (2), 150-157. <https://doi.org/10.21067/jpig.v7i2.6821>
- Hardiyanti, K. (2021). Evaluation of Waste Management Policy at Tpa Kalikondang Demak Regency. *Journal of Government and Policy (Jpk)*, 1 (3), Layouting. <https://doi.org/10.18196/jpk.v1i3.10506>
- Hariato, F., Ohorella, N. R., & Dalimunthe, M. A. (2023). Kompetensi Komunikasi Guest Service Agent Dalam Mendorong Kepuasan Tamu Mh Hotel Ipoh Malaysia. *Komunika*, 19(02), 30-35.
- Hartono, M. (2018). Household-based Waste Management. Malang: Literasi Nusantara.
- Hastuti, B. D., Anwar, F., & Titi, T. D. (2021). Implementation of Waste Management Policy in South Bengkulu Regency. *Jiapi Indonesian Journal of Administrative and Government Sciences*, 2 (2), 92-101. <https://doi.org/10.33830/jiapi.v2i2.70>
- Juanda Elia Rembet, Jantje J. Tinangon, Treesje Runtu. (2018). Analysis of the Effectiveness of Collection of Solid Waste Retribution and Its Contribution to Tomohon City Original Revenue. *Journal of Going Concern Accounting Research*, Vol. 13, No. 4.
- Kholil, S., Ismail, I., Dalimunthe, M. A., Suhendar, A., & Rambe, R. F. A. K. (2024). Strengthening Religious Moderation through PTKIN and SIT Collaboration to Build Social Harmony. *JUPI (Jurnal Ilmu Perpustakaan dan Informasi)*, 9(2), 228-236.
- Lenovo, 2025. <https://ejournal.unitaspalembang.com/index.php/governance/article/download/355/151/723>
- Nigiana, J.P., Larasati, E., and Widowati, N. (2019). Waste Management in

- Tembalang Sub-district. *Journal of Public Administration (JAP)*, Vol. 3, No. 13 April 2019.
- Ohorella, N. R., Fauziah, D., & Dalimunthe, M. A. (2024). Brand Awareness Communication Strategy in Setujuan Coffee Marketing on Instagram Social Media. *Komunika*, 20(02), 46-57.
- Okhtafianny, T., & Ariani, R. (2023). Analysis of Waste Management Policy Implementation in Payakumbuh City. *Journal of Business Economics Management and Accounting (Jebma)*, 3 (2), 537-550. <https://doi.org/10.47709/jebma.v3i2.2837>
- Petronela Dea Sari. (2020). Implementation of Regional Regulation Policy Number 4 of 2015 concerning Household Waste Management and Waste Similar to Household Waste. STPMD.
- Rahmawati, J., Kurnianingsih, F., & Okparizan, O. (2023). Supervision of Waste Management at the Ganet Final Processing Site (Tpa) by the Tanjungpinang City Environment Agency. *Jiana (Journal of State Administration Science)*, 21 (2), 101-110.
- Rahmananda, T., & Widjonarko, W. (2021). Factors Affecting Community Participation in Sempulur Asri Waste Bank Activities in RW 05 Gedawang Village. *PWK Engineering (Urban Regional Planning)*, 10 (3), 201-209. <https://doi.org/10.14710/tpwk.2021.31877>
- Sari, M. M., & Umama, H. A. (2019). Patsambu (Bamboo Trash Can) to Improve the Quality of Clean and Healthy Living in Talaga Village, Mancak District, Serang. *Kaibon Abhinaya Journal of Community Service*, 1 (2), 66. <https://doi.org/10.30656/ka.v1i2.1537>
- Sulistiyani, R. (2022). Plastic Bottle Waste Recycling Training as a Learning Media for Waste Management and Creativity. *Journal of Community Service - Pimas*, 1 (1), 10-21. <https://doi.org/10.35960/pimas.v1i1.736>
- Wika, M., & Tambaip, B. (2022). Implementation of the Financial Management Policy of Tiworo Village, Merauke. *Musamus Journal of Public Administration*, 5 (1), 190-209. <https://doi.org/10.35724/mjpa.v5i1.4603>