

Evaluation of Local Government Policy Towards Improving Coastal Waste Management

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Abstract: This research focuses on the complex issue of coastal waste management, especially in Tanjungpinang City, Indonesia, which has excellent potential to generate coastal waste. This research aims to evaluate the extent to which government policies in managing coastal waste in Pelantar II of Tanjungpinang City have been implemented. The research method used is qualitative, with data collection through literature studies. The results showed that implementing government policies in managing coastal waste in Pelantar II Tanjungpinang City still faced several obstacles. One of the main obstacles is the need for more community participation in managing coastal waste. This is caused by several factors, including the lack of facilities, especially landfills, in the neighborhood. In addition, the implementation of existing regulations could be more robust. These findings underscore the importance of the government and community's roles in addressing the coastal waste problem. The government must improve infrastructure and facilities that support more effective waste management, including developing suitable landfills. It is also essential to strengthen the implementation of existing regulations and raise public awareness of the importance of maintaining coastal cleanliness. The results of this study provide a deeper understanding of the challenges faced in managing coastal waste in Pelantar II Tanjungpinang City and highlight the need for joint efforts between the government and the community to achieve better coastal waste management.

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INTRODUCTION

Waste management is one of the important aspects in maintaining environmental balance and public health (Bradley et al., 2002). We cannot avoid generating waste as humans, as each of our daily activities, from the food we consume to the items we use, generates waste (Stefan et al., 2013). However, when waste management is done incorrectly, it can have a serious impact on the environment and the health of the surrounding community (Bowen, 2002).

In this context, the role of law is crucial in regulating waste management. In some countries, as you mentioned in Law No. 18/2008 on Waste Management, regulations have been established that govern how waste should be managed in a systematic, comprehensive and sustainable manner (Marshall & Farahbakhsh, 2013). This is a very positive step, as it underscores the importance of our collective responsibility in dealing with waste issues.

Effective and systematic waste management is not just about maintaining cleanliness, but also plays an important role in protecting the environment (Moh & Abd Manaf, 2017). When waste is not managed properly, it can pollute soil, water and air.

This can damage natural ecosystems, threaten biodiversity, and damage natural resources that are precious to our lives.

In addition, poor waste management can also have a negative impact on public health. Improperly treated sewage can become a breeding ground for diseases and harmful bacteria, which can spread to surrounding communities (Abubakar et al., 2022). Water polluted by sewage can cause diseases such as diarrhea and skin infections. Therefore, good sewage management is an integral part of maintaining public health and well-being.

Communities should also not forget the economic benefits of effective waste management (Song et al., 2015). In proper waste management, there is potential to recycle reusable materials, generate energy, or even create jobs in the waste management industry. This can make a positive contribution to the local and national economy.

In Indonesia, an archipelago with thousands of ports, waste management is becoming increasingly important. These ports are hubs of marine transportation activities that support the national economy and trade (Yudhistira & Sofiyandi, 2018). According to the latest data in 2021, there are 3,227 ports in Indonesia, which are key infrastructure for economic growth (Amehati et al., 2022). Around these ports, people live and work, which generates domestic waste, also known as coastal waste.

Waste disposal in coastal areas is a complex problem that has not been well resolved. This can be seen from the amount of waste that is still being dumped uncontrollably in coastal areas (Mihai & Taherzadeh, 2017). One of the main causes of this problem is the lack of public understanding of domestic waste management and the lack of adequate locations and facilities for Temporary Disposal Sites to dispose of the waste (Yukalang et al., 2017).

The lack of public understanding of the importance of proper domestic waste management is one of the main obstacles (Moh & Abd Manaf, 2014). The lack of education on the negative impacts of indiscriminate waste disposal and the importance of responsible waste management needs to be a focus in addressing this issue (Cobbinah et al., 2017). The government, NGOs and the private sector need to work together in raising public awareness of this issue through awareness and education campaigns (Sarofah & Herliana, 2023).

In addition, investment in the construction of adequate landfill facilities around the harbour is required. These facilities should be designed to safely and efficiently contain domestic waste. This will help reduce uncontrolled dumping in coastal areas and protect vulnerable marine ecosystems.

Coastal waste management is a significant challenge for Indonesia, but also an opportunity to improve environmental, public health and economic sustainability (Fatimah et al., 2020). With a comprehensive approach, including community education, proper construction of Temporary Disposal Sites facilities, and strict law enforcement against illegal waste disposal, Indonesia can address its coastal waste problem and maintain its environmental sustainability.

Tanjungpinang City, which has one of the main ports known as Pelantar II, also faces similar challenges. Pelantar II is an important hub for the loading and unloading process of goods to be distributed within the city. Although the local government has allocated a large budget for the development of this port, the issue of coastal waste in Pelantar II has still not been adequately addressed. Along the entrance of Pelantar II, there are buildings used as shops and residences, but the level of awareness and moral responsibility in keeping the environment clean from coastal waste among local residents is still an issue that needs serious attention.

In this context, this study aims to evaluate the extent to which the roles of government and community in managing coastal waste in Pelantar II Kota Tanjungpinang have been implemented. Through this research, it is hoped that a sustainable solution can be found to address this complex issue and encourage active community participation in keeping the coastal environment clean.

It is important to identify the government's role in coastal waste management in Pelantar II. This includes the allocation of funds for waste management infrastructure, strict enforcement of regulations against illegal dumping, and education and campaigns aimed at raising public awareness on the importance of maintaining a clean marine environment. In addition, the active role of the community is also crucial. This includes participation in beach cleaning programs, waste management at the household level, and supporting government initiatives in keeping Pelantar II free of waste.

By combining the role of the government and the active participation of the community, it is hoped that a sustainable solution can be found to address the coastal waste problem in Pelantar II. It is important to build collective awareness and responsibility in protecting this environment, given the importance of Pelantar II in the local and national economy, as well as an important ecosystem for marine life. With strong cooperation between all stakeholders, Pelantar II can be a successful example of sustainable coastal waste management.

RESEARCH METHOD

This research has a special focus on waste management associated with the area around Pelantar II in Tanjungpinang City. Waste management in this area is of particular importance given Pelantar II's vital role as a center for goods loading and unloading activities that play a role in supporting the local and national economy. Despite significant budget allocations from the local government for the development of Pelantar II, the main challenge that needs to be addressed is the inadequate management of coastal waste. The coastal waste accumulated in this area threatens the sensitive marine ecosystem, as well as the health and hygiene of the people living around it.

This research applied a descriptive qualitative approach to understand more deeply how waste management is carried out around Pelantar II. The data used in this research is secondary data obtained through direct observation and literature study (Sagena et al., 2023). Direct observation can provide insight into the actual conditions in the field, while the literature study provides a broader understanding of the problems and solutions that have been proposed in the context of coastal waste management.

The data collected in this study is sourced from real problems that exist in the field (Moser & Korstjens, 2018). This includes aspects such as the amount and type of waste accumulated, existing waste management practices, as well as the impacts of inadequate waste management on the environment and public health. The purpose of this data collection is to find sustainable solutions to the waste management problems around Pelantar II.

Through this research, it is hoped that a better understanding of the coastal sewage problem in Pelantar II can be generated. In addition, the findings and recommendations from this study are expected to provide guidance for the local government, local communities, and other relevant parties to implement effective solutions for better coastal waste management in Pelantar II, as well as encourage active community participation in keeping this coastal environment clean.

RESULTS AND DISCUSSION

The incessant activities of humans create residual waste from households, and the management of waste from households is an important aspect that must be addressed with efficiency (Knickmeyer, 2020). If household waste management is not efficient, it will result in the accumulation of waste that has the potential to pollute the environment. One of the serious challenges in waste management is the handling of coastal waste, which until now has not received adequate treatment.

Coastal waste is an issue of particular concern around Pelantar II in Tanjungpinang City. Pelantar II plays an important role in the loading and unloading of goods and is the backbone of the local and national economy. However, the accumulation of coastal debris around this area has become a very serious issue. These debris come from two main sources: firstly, from people dumping their leftover household materials into the waters, and secondly, from garbage that is carried by ocean currents and eventually accumulates in the waters around Pelantar II.

In dealing with coastal waste management issues, being systematic and organized is essential. Tanjungpinang City has regulated the waste management system in Regional Regulation No. 14/2009 on Waste Management. Under Article 10 of this regulation, the responsibility of waste management is considered a shared duty between the local government and the community. This means that handling coastal waste is not only the responsibility of the government, but also requires active participation and responsibility from the local community.

Unfortunately, the obstacle faced is the lack of landfill facilities around Pelantar II in Tanjungpinang City. This has been the main trigger of the accumulation of coastal waste and the behavior of people who still dispose of waste into the waters. Under these conditions, the waste management system in Pelantar II needs to be significantly improved. There needs to be adequate facilities for efficient waste collection, sorting and disposal.

In addition, public education and awareness also need to be further improved. The local government and related agencies should conduct counseling and education campaigns on the importance of maintaining a clean environment and good waste

management. This will help change people's behavior and reduce the discharge of waste into waters.

With a more efficient waste management system, improved facilities and increased community awareness, it is hoped that the serious problem of coastal waste accumulation in Pelantar II of Tanjungpinang City can be better addressed, protecting the environment and health of the local community, as well as maintaining the sustainability of important marine ecosystems.

Waste management conditions

The results of research focusing on waste management around Pelantar II in Tanjungpinang City illustrate a situation that is not yet optimal and is still faced with a number of significant obstacles. The concept of waste management as a shared responsibility between the local government and the community has been introduced, but in practice, its implementation still faces a number of obstacles that require further attention (Gusmão Caiado et al., 2018).

Effective waste management is an important element in maintaining environmental cleanliness and public health, especially around Pelantar II, which is the center of marine transportation activities in Tanjungpinang. Although the concept of waste management involving active community participation and government support has been introduced, research shows that there are still a number of issues that affect the effectiveness of the implementation of this concept.

One of the challenges faced is the lack of public awareness of the importance of good waste management. Despite the existence of regulations and rules governing waste management, there are still many residents who do not comply with these rules by throwing garbage into the sea. The research also noted an increase in the volume of waste polluting the waters, which creates a negative impact on the surrounding environment.

In addition, infrastructure constraints are also a serious problem. Although efforts have been made to collect and transport waste, the problem of growing volumes makes waste management difficult. The landfill in Ganet, which is the only landfill in the city, has almost reached its maximum capacity. Other constraints include difficult access for garbage trucks due to poor road conditions.

In order to address these issues, there is a need for closer collaboration between the local government and the community. Public awareness about the importance of good waste management needs to be increased through effective socialization. Local governments should also improve waste management infrastructure, including the provision of adequate waste bins and more efficient transportation facilities. With strong cooperation between all parties involved, it is hoped that waste management around Pelantar II in Tanjungpinang City can be improved, maintaining environmental cleanliness and supporting the sustainability of this area. Thus, the results of this study provide an overview of the challenges and steps that need to be taken to improve waste management in the Pelantar II area.

First of all, the community's role in waste management in the region is far from ideal. Some people still violate the prohibition by throwing garbage directly into the sea,

even though the ban has been strictly enforced. The types of waste disposed of include a wide array of items, ranging from everyday household waste to larger household furniture. The impact of this practice is environmental pollution around Pelantar II and disruption to the aesthetics of the place, especially during low tide.

Secondly, another constraint is the lack of adequate facilities for separation and disposal of waste by type. This has resulted in a significant accumulation of non-organic waste, which not only comes from the local community but also from waste carried by ocean waves from other areas.

Non-compliance with the ban on dumping garbage into the sea by some communities creates serious problems in waste management. Although regulations have been strictly enforced, there are still those who choose to ignore them. This creates pollution that damages the environment around Pelantar II and disrupts the beauty of the place. Especially during low tide, the odor and piles of garbage that appear can disturb the comfort and aesthetics of this pelantar.

The second obstacle in waste management is the lack of facilities that support efficient waste separation and disposal. Garbage coming from various sources, both from the local community and those carried by the sea waves, eventually accumulates into non-organic waste that is difficult to manage. This also creates environmental pollution problems and poor aesthetics in Pelantar II.

These two obstacles must be addressed immediately so that waste management in Pelantar II can become more efficient and sustainable. Public awareness about the importance of protecting the environment and compliance with regulations must be improved. In addition, there needs to be an effort to improve waste management facilities and infrastructure, including separation and disposal of waste according to its type. Only by addressing these constraints can the environment around Pelantar II be kept clean and maintained, supporting the sustainability and beauty of this place.

On the local government side, efforts have been made, such as the dispatch of cleaners and the construction of temporary landfills. However, the volume of waste that continues to grow every day is difficult to manage effectively. Some of the obstacles faced by the local government include inadequate facilities and infrastructure, such as the narrow roads around Pelantar II, which hinder the access of waste transportation facilities.

The findings of this study suggest that to address the serious problem of waste accumulation in Pelantar II of Tanjungpinang City, closer collaboration between the local government and the local community is needed. Public awareness about the importance of protecting the environment and good waste management needs to be improved. In addition, the facilities and efficiency of waste management by the local government must also be improved. Only through strong cooperation between all parties involved can the problem of waste accumulation in Pelantar II be better addressed, keeping the environment clean and supporting the sustainability of this area.

Regulatory Studies in Waste Management

The results of the regulatory study in waste management in Pelantar II Kota Tanjungpinang revealed a number of problems that require serious attention. Although

regulations and laws governing waste management already exist at the national level, their implementation at the local level, especially in Pelantar II, still faces various obstacles that affect the success of waste management.

Firstly, although there is a clear legal framework, namely Tanjungpinang City Local Regulation No. 14/2009 that regulates waste management, it seems that the local community's understanding and awareness of the importance of following these rules is still low. Despite the prohibition against dumping waste directly into the sea, there are still people who choose to violate this rule. The impact is an increase in environmental pollution and aesthetic damage to Pelantar II.

Secondly, another problem that arises is the lack of adequate facilities and infrastructure to support effective waste management. There are constraints in the separation of waste by type, and the management of sizable non-organic waste. The lack of adequate landfills is also a factor that exacerbates this problem.

Furthermore, law enforcement and monitoring aspects need to be improved. Although there are regulations governing waste management, if there is no strict enforcement and strict monitoring, then the rules will be difficult for the community to comply with. Therefore, there needs to be measures to ensure compliance with these regulations.

One important aspect in this research is law enforcement. Tanjungpinang City Regional Regulation No. 14/2009, specifically in Article 10, stipulates that waste management is a shared responsibility between the local government and the community. This includes the maintenance of personal hygiene and gotong royong, waste segregation, and the provision of adequate waste bins. However, in practice, many people still violate this regulation by dumping waste directly into the sea. The volume of waste from households and businesses polluting the waters has increased significantly, reaching 1.5 tons per day. This is a serious problem affecting environmental sustainability.

Another obstacle faced is the lack of adequate facilities and infrastructure for waste management. Despite efforts to collect waste and create temporary disposal sites, the problem of increasing waste volumes is difficult to overcome. The Ganet landfill, the only landfill in the city, has almost reached its maximum capacity. Obstacles in waste transportation also occur due to poor road conditions and some residents' houses that are difficult to reach.

In this context, law enforcement becomes very important. Although there are already regulations governing waste management, weak enforcement and lack of supervision can make it difficult for people to comply with these regulations. Therefore, more serious efforts need to be made in ensuring compliance with these regulations.

To overcome the various problems faced in waste management in Pelantar II Kota Tanjungpinang, a series of improvements are needed which include the implementation of existing regulations, increasing public awareness of the importance of good waste management, and improving waste management facilities and infrastructure by the local government. Only through close cooperation between the local government and the local

community can the serious problem of waste accumulation in Pelantar II be addressed, and the sustainability of the surrounding environment be maintained.

First of all, there needs to be more serious efforts in improving the implementation of existing regulations. Although regulations on waste management have been made, enforcement and supervision must be improved so that the rules do not just become text on paper, but also become a practice that is carried out by all parties. This could include increased sanctions for violators and legal counseling campaigns to the public.

In addition, public awareness also needs to be improved. People need to understand that good waste management is not only the responsibility of the government, but also a shared responsibility. Education and socialization campaigns need to be carried out continuously to explain the importance of disposing of waste in its place, sorting waste, and maintaining environmental cleanliness. The community also needs to be invited to actively participate in existing waste management programs.

In addition, local governments need to improve waste management facilities and infrastructure. This includes upgrading existing landfills, as well as providing better waste sorting facilities. In addition, waste transportation should also be improved, including the improvement of roads that connect landfills with waste-generating areas.

In the overall context, this regulatory review provides important insights into how waste management can be improved to support a cleaner and more sustainable environment. With better implementation, higher public awareness, and improved facilities, it is hoped that the serious problem of waste accumulation in Pelantar II Kota Tanjungpinang can be addressed, and the beauty and sustainability of the surrounding environment can be well maintained.

CONCLUSION

From the results of the analysis that has been carried out, it can be concluded that although the government has been implementing policies related to waste management in Pelantar II Kota Tanjungpinang for a long time, the implementation is still far from optimal. The field evaluation revealed a number of constraints that affect the effectiveness of the policy, including constraints in terms of facilities and human resources involved in waste management.

One of the main obstacles identified is the lack of awareness and participation from the community around Pelantar II coastal area. Although regulations related to waste management already exist and are enforced, there are still many residents who violate them by throwing garbage directly into the sea. This includes a variety of types, from daily household waste to larger household furniture. The impact of this practice is environmental pollution around Pelantar II, and disruption to the aesthetics of the place, especially during low tide.

Another significant constraint is the lack of adequate facilities and infrastructure for waste management. Despite efforts to collect and temporarily dispose of waste, the problem of increasing waste volumes continues to be a challenge. The Ganet Landfill, as the only landfill in the city, has almost reached its maximum capacity. This affects the government's ability to handle the growing waste. Constraints in waste transportation

also arise due to poor road conditions and some residents' houses that are difficult to reach.

In conclusion, waste management in Pelantar II Kota Tanjungpinang requires serious improvements in the implementation of existing policies, increased public awareness, and improved waste management facilities and infrastructure by the local government. Only through close collaboration between the government and the local community can the serious problem of waste accumulation in Pelantar II be addressed, and the sustainability of the surrounding environment be maintained. With these joint efforts, it is hoped that Pelantar II can become a cleaner and more sustainable neighborhood.

REFERENCE

- Abubakar, I. R., Maniruzzaman, K. M., Dano, U. L., AlShihri, F. S., AlShammari, M. S., Ahmed, S. M. S., Al-Gehlani, W. A. G., & Alrawaf, T. I. (2022). Environmental Sustainability Impacts of Solid Waste Management Practices in the Global South. *International Journal of Environmental Research and Public Health*, 19(19), 12717. <https://doi.org/10.3390/ijerph191912717>
- Amehati, A. A., Sitohang, J. F., Najoan, D. J., & Ghafar, A. (2022). AN ANALYSIS OF CUSTOMER SATISFACTION OF SHIPPING SERVICES AT SHIPPING AGENTS IN PT PELABUHAN INDONESIA (PERSERO) REGIONAL 2 TANJUNG PRIOK. *Advances in Transportation and Logistics Research*, 5, 637–648.
- Bowen, W. (2002). An analytical review of environmental justice research: What do we really know? *Environmental Management*, 29(1), 3–15. <https://doi.org/10.1007/s00267-001-0037-8>
- Bradley, B. R., Daigger, G. T., Rubin, R., & Tchobanoglous, G. (2002). Evaluation of onsite wastewater treatment technologies using sustainable development criteria. *Clean Technologies and Environmental Policy*, 4(2), 87–99. <https://doi.org/10.1007/s10098-001-0130-y>
- Cobbinah, P. B., Addaney, M., & Agyeman, K. O. (2017). Locating the role of urbanites in solid waste management in Ghana. *Environmental Development*, 24, 9–21. <https://doi.org/10.1016/j.envdev.2017.06.004>
- Fatimah, Y. A., Govindan, K., Murniningsih, R., & Setiawan, A. (2020). Industry 4.0 based sustainable circular economy approach for smart waste management system to achieve sustainable development goals: A case study of Indonesia. *Journal of Cleaner Production*, 269, 122263. <https://doi.org/10.1016/j.jclepro.2020.122263>
- Gusmão Caiado, R. G., Leal Filho, W., Quelhas, O. L. G., Luiz de Mattos Nascimento, D., & Ávila, L. V. (2018). A literature-based review on potentials and constraints in the implementation of the sustainable development goals. *Journal of Cleaner Production*, 198, 1276–1288. <https://doi.org/10.1016/j.jclepro.2018.07.102>
- Knickmeyer, D. (2020). Social factors influencing household waste separation: A literature review on good practices to improve the recycling performance of urban areas. *Journal of Cleaner Production*, 245, 118605. <https://doi.org/10.1016/j.jclepro.2019.118605>
- Marshall, R. E., & Farahbakhsh, K. (2013). Systems approaches to integrated solid waste management in developing countries. *Waste Management*, 33(4), 988–1003. <https://doi.org/10.1016/j.wasman.2012.12.023>
- Mihai, F.-C., & Taherzadeh, M. J. (2017). Introductory Chapter: Rural Waste Management

- Issues at Global Level. *Solid Waste Management in Rural Areas*, 1–10. <https://doi.org/10.5772/intechopen.70268>
- Moh, Y. C., & Abd Manaf, L. (2014). Overview of household solid waste recycling policy status and challenges in Malaysia. *Resources, Conservation and Recycling*, 82, 50–61. <https://doi.org/10.1016/j.resconrec.2013.11.004>
- Moh, Y. C., & Abd Manaf, L. (2017). Solid waste management transformation and future challenges of source separation and recycling practice in Malaysia. *Resources, Conservation and Recycling*, 116, 1–14. <https://doi.org/10.1016/j.resconrec.2016.09.012>
- Moser, A., & Korstjens, I. (2018). Series: Practical guidance to qualitative research. Part 3: Sampling, data collection and analysis. *European Journal of General Practice*, 24(1), 9–18. <https://doi.org/10.1080/13814788.2017.1375091>
- Sagena, U., Lawelai, H., Dema, H., Sundari, S., Hardianti, H., & Irawati, I. (2023). *Metode Penelitian Sub Rumpun Ilmu Politik (Teori & Referensi berbasis Studi Kasus)*. Sonpedia Publishing Indonesia.
- Sarofah, R., & Herliana, P. A. (2023). Analysis of Government Policy on Green Open Space in Bekasi City. *Jurnal Studi Ilmu Pemerintahan*, 4(1), 167–178.
- Song, Q., Li, J., & Zeng, X. (2015). Minimizing the increasing solid waste through zero waste strategy. *Journal of Cleaner Production*, 104, 199–210. <https://doi.org/10.1016/j.jclepro.2014.08.027>
- Stefan, V., van Herpen, E., Tudoran, A. A., & Lähteenmäki, L. (2013). Avoiding food waste by Romanian consumers: The importance of planning and shopping routines. *Food Quality and Preference*, 28(1), 375–381. <https://doi.org/10.1016/j.foodqual.2012.11.001>
- Yudhistira, M. H., & Sofiyandi, Y. (2018). Seaport status, port access, and regional economic development in Indonesia. *Maritime Economics and Logistics*, 20(4), 549–568. <https://doi.org/10.1057/s41278-017-0089-1>
- Yukalang, N., Clarke, B., & Ross, K. (2017). Barriers to effective municipal solid waste management in a rapidly urbanizing area in Thailand. *International Journal of Environmental Research and Public Health*, 14(9), 1013. <https://doi.org/10.3390/ijerph14091013>