

Strategy to Strengthen Sustainable Waste Management Policy in Lhokseumawe City Tourist Destinations

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Abstract

Lhokseumawe City, as one of the tourist destinations in Aceh Province, faces serious challenges in waste management that are increasing along with the growth in the number of tourists and population. Although there has been a policy through Qanun Number 9 of 2015 that prioritizes the 3R principle (reduce, reuse, recycle), its implementation still encounters significant obstacles. This study aims to analyze the implementation of waste management policies in Lhokseumawe, identify the main obstacles, and formulate more effective strategies for sustainable waste management. The method used in this study is a qualitative approach with case studies, which involves in-depth interviews, participatory observations, and document analysis. The results of the study show that the main obstacles faced are weak law enforcement, limited waste management facilities, and lack of active community participation. In addition, the lack of adequate budget and infrastructure also exacerbates this situation. Therefore, to achieve more effective waste management, it is necessary to increase the budget of the hygiene sector, improve infrastructure, as well as cross-sector collaboration and community empowerment. This research provides strategic recommendations for the Lhokseumawe City government to improve waste management policies to support tourism sustainability and the quality of the city's environment.

Keywords: *Strategy, Waste Management, Sustainable Tourism, Public Policy.*

Introduction

Lhokseumawe City, as one of the autonomous cities in Aceh Province, has a strategic geographical position and plays an important role in the regional economy. The city's population is expected to reach 197,339 people by 2024 (BPS, 2024), which shows significant growth in recent years. One of the main drivers of Lhokseumawe's economic development is the tourism sector which utilizes natural wealth and local traditions as a major attraction. Famous tourist destinations such as Ujong Blang Beach, Seumadu Island, and Jeulikat Reservoir have become major tourist destinations, attracting many visitors, both local and international (Abbas et al., 2025; Velayati et al., 2023).

However, behind the rapid development of the tourism sector, there is a big challenge that must be faced, namely waste management which is getting worse along with the increase in the number of tourists and population growth. Based on data from the Lhokseumawe City Environmental Agency (DLH), the average daily volume of waste reaches 95 to 100 tons, with a significant increase during the month of Ramadan and other peak periods of economic activity, such as in the Arun industrial estate (DLH Lhokseumawe City, 2024). This shows that there is a serious problem in the city's waste management system that must be addressed immediately.

To overcome the waste problem, the Lhokseumawe City Government has issued Qanun Number 9 of 2015 concerning Waste Management, which focuses on the 3R (reduce, reuse, recycle) principle (Shalawati et al., 2024). Although this regulation aims to regulate waste management more effectively, its implementation still faces various obstacles. One of the main problems found in several

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studies is the lack of a fleet of garbage carriers, lack of socialization to the community, and low welfare of field officers (Yunizar et al., 2024). In addition, there is no clear operational SOP and the inability of the waste management system to reach suburban areas and narrow alleys.

In accordance with the Lhokseumawe Urban Sanitation Strategy Document (SSK) 2020–2025, only 40.3% of urban areas are served with a good waste management system, while only 6.9% of rural areas have similar services (SSK Lhokseumawe, 2020). In fact, 19.7% of rural areas and 33% of urban areas do not have legitimate waste management services, while according to national regulations, the coverage of waste management services in cities such as Lhokseumawe must reach at least 60% (Minister of Environment and Forestry Regulation Number P.14/Menlhk/Setjen/Kum.1/4/2021).

One of the main causes of this waste management problem is the limited supporting infrastructure such as temporary landfills (TPS) and landfills (TPA). Lhokseumawe City has only 17 active polling stations and 19 garbage trucks, although the ideal need is double (Abbas et al., 2025). On the other hand, most of the waste in tourist destinations, such as at Ujong Blang Beach and Seumadu Island, is littered or even burned, especially in areas that do not have an official waste management system. This not only damages the beauty of tourist destinations but also pollutes the environment and reduces tourist attractions (Shalawati et al., 2024).

This phenomenon is not only limited to Lhokseumawe, but also occurs in other tourist attractions such as Sabang. A report published in the Aceh Sanitation Journal (2023) shows that 61% of waste management in Sabang tourist destinations does not meet the set standards, and almost all waste is not sorted from the beginning (Aceh Sanitation Journal, 2023). This issue is even more important considering that 73% of global tourists now consider sustainability and environmental cleanliness when choosing their tourist destinations (Isharyati et al., 2019). Therefore, poor waste management can reduce Lhokseumawe's competitiveness as a tourist destination.

The challenge of waste management is also a concern in public policy. Based on the policy implementation model of Van Meter and Van Horn (1975), there are many factors that affect the success of the policy, such as communication between actors, availability of resources, clarity of policy objectives, and characteristics of implementing institutions. In Lhokseumawe, weaknesses in these four components can be seen from the imperfection of the implementation of Qanun Number 9 of 2015. Socially, poor waste management affects people's behavior and tourist satisfaction. The public and visitors are increasingly aware of the importance of environmental cleanliness and sustainability, which is increasingly a determining factor in choosing tourist destinations (Velayati et al., 2023).

Despite collaborative efforts, such as environmental awareness campaigns and household-based waste sorting programs, the results achieved are still far from expectations. These efforts are often unsustainable without the support of strong systems and regulations. In this case, an integrative and interdisciplinary approach is needed that involves various sectors, ranging from spatial planning, education, to tourism. The planned behavior theory approach states that attitudes, subjective norms, and perceived behavioral controls greatly influence people's behavior in managing waste (Julita et al., 2025).

Therefore, strengthening waste management policies by involving the community, strengthening local institutions, and integrating appropriate technologies, such as GIS-based information systems and small-scale composters, is an important step to ensure more efficient and sustainable waste management. Thus, this study aims to analyze the implementation of waste management policies in Lhokseumawe, identify the main obstacles, and formulate a more effective strategy to improve the waste management system and maintain environmental quality that supports the competitiveness of the tourism sector.

Literature Review

Policy evaluation is an important step in the public policy cycle that aims to assess the extent to which the policies implemented achieve the goals that have been set. This evaluation process also includes an assessment of the implementation and impact of the policy on the community. William N. Dunn in his book *Public Policy Evaluation: Introspection* (2003) explained that policy evaluation is a systematic and objective process to study the content, implementation, and impact of policies. This evaluation focuses not only on the final results of the policy, but also on the process of its implementation from the formulation stage to implementation. Thus, policy evaluation aims to provide useful recommendations for future policy improvements (Julita et al., 2025).

Policy evaluation can be done in a variety of ways, such as formative evaluation that assesses the policy implementation process, and summative evaluation that assesses the results and impact of the policy. In the framework of formative evaluation, the analysis provides more input for improving policy implementation during the process. Meanwhile, summative evaluation is carried out after the program is running to assess the effectiveness and efficiency of policies (Jensen, 2020).

One of the frequently used policy evaluation models is the CIPP (Context, Input, Process, Product) model, developed by Daniel Stufflebeam. This model measures policies from four dimensions: context (needs or problems to be solved), inputs (resources used), processes (policy implementation), and products (policy outcomes and impacts). This CIPP model-based evaluation is very relevant to be applied to waste management policies, as it covers all the dimensions necessary to assess the effectiveness of the policy as a whole (Jensen, 2020). In Indonesia, policy evaluation is regulated in Presidential Regulation No. 25 of 2004 concerning the National Development Planning System and Presidential Regulation No. 29 of 2014 concerning the Performance Accountability System of Government Agencies (SAKIP). However, in practice, policy evaluation is often faced with challenges such as the limited amount of data available, the lack of evaluator human resources, and political issues that can affect the objectivity of evaluation. Therefore, strengthening institutional capacity and encouraging the participation of non-governmental parties is very important to support credible and accountable policy evaluations (Bappenas, 2010).

An evaluative approach can be used in waste management studies to assess whether the policy is successful in reducing the amount of waste, increasing public awareness about how to sort and process waste, and improving environmental quality. This evaluation is very important, especially in tourist areas such as Lhokseumawe City, as an increase in the number of visitors that is not proportional to the existing waste management capacity can exacerbate waste management problems (Lyu et al., 2019).

The factors used to assess the success or failure of a policy according to policy evaluation theory include effectiveness, efficiency, relevance, and sustainability. Effectiveness refers to the extent to which policy objectives are achieved, while efficiency relates to the ratio between policy inputs and outputs. Relevance evaluates how well a policy fits the problem it wants to solve, while sustainability measures whether a policy can be implemented in the long term and provide sustainable benefits (Ruggeri et al., 2018).

According to Dunn (2003), policy evaluation should be based on clear and measurable standards. In practice, evaluation standards can be tailored to local contexts and specific policy objectives. For example, in waste management in tourist areas, some indicators that can be used for evaluation are an increase in the number of polling stations, more people involved in sorting waste, and a decrease in tourist complaints about cleanliness. Policy evaluation is an important component of the public policy cycle that aims to assess the extent to which the policies that have been implemented can achieve the goals that have been set. This process also involves an assessment of the implementation of the policy and its impact on society. William N. Dunn in his book *Public Policy Evaluation: Introspection* (2003) explained that policy evaluation is a systematic and objective process that aims to study the content, implementation, and impact of a policy. This evaluation focuses not only on the final results of the policy, but also on the entire policy process, from formulation to implementation. It aims to provide useful recommendations for future policy improvements. Policy evaluation can be carried out with various approaches (Dunn, 2003).

One of them is a formative evaluation that focuses more on the policy implementation process during the policy, with the aim of providing input for improving implementation. On the contrary, summative evaluation is carried out after the policy or program is running to assess its effectiveness and efficiency of implementation (Fontaine, 2020). Both approaches have an important role to play in ensuring the sustainability and quality of the policies implemented. One of the most commonly used policy evaluation models is the CIPP (*Context, Input, Process, Product*) model, developed by Daniel Stufflebeam. This model measures policies from four important dimensions: context, inputs, processes, and products. In this context, context refers to the need or problem to be solved with the policy, input is the resource used in the implementation of the policy, the process is related to how the policy is implemented, and the product refers to the results and impact of the policy.

The CIPP model-based evaluation is particularly relevant to be applied to waste management policies, as it allows for a thorough assessment of policies taking into account all aspects necessary to achieve policy objectives (Jacob, 2024; Tjoetra, 2023). In Indonesia, policy evaluation is regulated in

Presidential Regulation No. 25 of 2004 concerning the National Development Planning System and Presidential Regulation No. 29 of 2014 concerning the Performance Accountability System of Government Agencies (SAKIP). However, in practice, policy evaluation often faces several obstacles, such as the limited amount of data available, the lack of evaluator human resources, and political influences that can hinder the objectivity of evaluation. Therefore, it is important to strengthen institutional capacity and encourage participation from non-governmental parties to ensure more transparent, credible, and accountable policy evaluation (Bappenas, 2010).

An evaluative approach can be applied to assess waste management policies, especially in tourist areas such as Lhokseumawe City. An increase in the number of visitors that is not balanced with adequate waste management capacity often leads to a decline in environmental quality. Therefore, it is important to evaluate waste management policies to see if they are effective in reducing the amount of waste, increasing public awareness about how to sort and manage waste, and improving the overall quality of the environment. The factors used to assess the success or failure of a policy according to policy evaluation theory are effectiveness, efficiency, relevance, and sustainability. Effectiveness refers to the extent to which policy objectives are achieved, while efficiency is related to the ratio between inputs and outputs in the policy. Relevance measures the extent to which the policy is appropriate to the problem to be solved, and sustainability assesses whether the policy can be implemented in the long term and provide sustainable benefits (OECD, 2010). According to Dunn (2003), policy evaluation should be based on clear and measurable standards. Such evaluation standards can be tailored to the local context and specific objectives of the policies being evaluated. For example, in waste management in tourist areas, indicators that can be used to evaluate policies include the number of available polling stations, the number of people involved in sorting waste, and the reduction of tourist complaints related to environmental cleanliness. All of this can be used as a parameter to measure the extent to which waste management policies have been successful.

Policy evaluation theory also emphasizes the importance of a participatory approach in the evaluation process. A participatory approach means involving all stakeholders, such as local governments, non-governmental organizations, business actors, and the community in the evaluation process. This approach not only makes the results of the evaluation more acceptable to all parties, but also encourages more responsive, inclusive, and evidence-based policies. By involving various parties, the resulting policies will be more in line with local needs and conditions. In addition, a good policy evaluation should include both quantitative and qualitative elements. Quantitative data, such as the amount of waste collected or the number of available transport fleets, are critical to provide a clear picture of policy achievement (Hudib & Cousins, 2021).

However, qualitative data, such as public opinions on the quality of waste management services or obstacles faced in policy implementation, are also very important to understand the social and cultural factors that affect the success of policies. Therefore, the evaluation approach using mixed methods is very relevant to evaluate policies as a whole (Creswell et al., 2007). Overall, policy evaluation has a strategic role in the policy cycle, not only as a tool to assess policy success, but also as a basis for policy changes, policy improvements, or ineffective policy terminations. Using the theory of policy evaluation as a framework for analysis, the evaluation of waste management policies in Lhokseumawe can provide a comprehensive picture of the effectiveness of the policy, as well as provide a basis for better policy improvement and development in the future.

Research Methods

This research is located in Lhokseumawe City, Aceh Province, which has great tourism potential, but faces challenges in waste management. Some of the tourist destinations that are the focus of this research include Ujong Blang Beach, Meuraksa Beach, Rancong & Pusong Beach, and the City Roving Reservoir. The selection of this location is based on the level of tourist visits, environmental characteristics, and waste management problems faced by each place. For example, Ujong Blang Beach is a popular destination that is crowded, while Meuraksa Beach faces the problem of domestic waste polluting the area. Rancong and Pusong beaches have beach ecosystems that are vulnerable to plastic waste, and the Roving Kota Reservoir, which has recently become a recreational site, also requires sustainable waste management.

The research approach used is a qualitative approach with case studies (Creswell, 2012; Moleong, 2021), aims to gain an in-depth understanding of the experiences, perceptions, and views of various related parties in sustainable waste management in Lhokseumawe tourist destinations. The data collection techniques used include in-depth interviews, participatory observations, and document

analysis. In-depth interviews were conducted with key respondents such as government officials, community leaders, NGO members, and local communities to explore their perspectives on waste management. Participatory observation is carried out to gain a direct understanding of the participatory process taking place in the field, while document analysis aims to evaluate the policies and strategies implemented in waste management.

By using interactive data analysis techniques that include data collection, data reduction, data verification, and drawing conclusions, this study is expected to provide strategic recommendations for strengthening sustainable waste management policies in Lhokseumawe City.

Results and Discussion

Obstacles to the Implementation of Waste Management in the Lhokseumawe City Tourist Area

Waste management policies in the tourist area of Lhokseumawe City face many challenges, especially in terms of regulations, which are the basis of the cleanliness program. The results of the study show that regulatory barriers do not only lie in the existence of rules; It is more about poor implementation, lack of technical tools, and inconsistencies in law enforcement. Actually, Qanun Number 9 of 2015 concerning Waste Management has provided a fairly complete legal basis. The 3R principle of reduce, use, and dispose of is set out in the rules, and prohibits the indiscriminate disposal of waste. In addition, companies and the public are asked to actively participate. However, Ridwan Puteh, Head of Hygiene and Sanitation Division of DLH, admitted that "this rule often stops at the formal level." We have laws, but the law enforcement system and its technical consequences have not worked properly.

Ridwan added that one of the main problems is the absence of derivative laws, such as mayoral regulations, that can explain how laws are implemented. As a result, DLH faces challenges in tracking violations that occur in the field. A social activist Asra Rizal, SH, who emphasized the weaknesses of law enforcement, made this statement clearer. He stated that "it has been years since the qanun was in effect, but I have never heard of any community or traders being sanctioned for littering on the beach." Rules are no longer useful for controlling behavior if they are simply written.

Recent studies have found that this criticism is in line with law enforcement. The study found that law enforcement is the main factor that causes difficulties in implementing local regulations on waste management in Indonesia. A study by Widianingsih and Rachmawati (2025) shows that waste management rules are already available in many regions. However, due to political, cultural, and limited resources, the authorities are reluctant or unable to enforce it. This situation also applies in Lhokseumawe.

In addition, regulations related to waste management in Lhokseumawe face challenges in terms of synchronization with national regulations. Local governments have the responsibility to manage waste based on the principles of reduction and handling, according to Law Number 18 of 2008 concerning Waste Management and Government Regulation Number 81 of 2012 concerning the Management of Household Waste and Other Types of Household Waste. However, local regulations have not fully utilized this method in real life. The Qanun places more emphasis on the prohibition and transportation of waste, but little is done to reduce it through education and incentives. Sofyan, a social activist, asserts that "the regulations here place too much emphasis on the prohibition aspect, but do not leave room for innovation." There is no reward mechanism for active communities and incentives for communities that want to manage waste independently.

Institutional factors are also affected by regulatory issues. Based on an interview with Nurbayan, M.Sos., Chairman of Commission D of the DPRK Lhokseumawe, the DPRK recognizes the importance of waste management, but it is often not considered when talking about budgets or regulations. "We are hit by regional fiscal limitations," he said. Cleanliness is sometimes considered number two because many sectors require funding. This statement shows that regulatory barriers are not only technical but also political. Regulatory and budgetary assistance will remain limited if the government does not consider hygiene issues strategically.

In contrast, the obstacles posed by regulation also include cross-sector coordination. According to Noviyani Rahmi from the Marine, Fisheries, Agriculture, and Food Service (DKP3), the problem of garbage on the beach affects fishermen's productivity and beach aesthetics. However, he admitted that there is no law that integrates marine ecosystem management with land waste management. As a result, a lot of plastic waste still enters the sea and damages fishermen's nets even though DLH tries to transport it.

Waste Management Policy Review

The waste management policy in Lhokseumawe City is based on the Qanun of Lhokseumawe City Number 9 of 2015 which prioritizes the 3R principle (reduce, reuse, recycle). This Qanun was created to provide a legal basis for more structured and environmentally friendly waste management. Given that Lhokseumawe City has quite potential tourist areas, waste management is an important aspect to maintain the cleanliness and comfort of tourist areas. Cleanliness is the main attraction for tourists, and dirty environmental conditions can reduce visitor interest and damage the tourism image of the area.

However, even though the policy already exists and is regulated in qanun, its implementation on the ground still faces many challenges. One of the big challenges is the limitation of resources, both in terms of human resources (HR) and infrastructure. For example, in waste management, an adequate fleet of waste carriers and sufficient management facilities are needed to handle the waste generated every day. Every day, Lhokseumawe City generates about 70 tons of waste, but only about 40 to 50 percent can be transported and managed properly. This condition is caused by the limited number of existing garbage transport fleets. Along with the increase in the number of visitors on weekends and holiday seasons, the volume of waste also increases dramatically. Without adequate infrastructure support, waste management becomes increasingly difficult.

Not only fleet and infrastructure problems, but public awareness about cleanliness is also the main problem in the implementation of waste management policies. Although the local government has held various cleanliness socialization programs, the habit of littering is still widely found in the community. People tend not to realize the importance of maintaining cleanliness in public places, including tourist areas. This bad habit, coupled with the lack of adequate waste management facilities, causes garbage to often accumulate and become an unpleasant sight. This proves that despite the existence of waste management policies, without the active participation of the community, it is difficult to run effectively.

In addition, although the local government has provided a legal basis through the qanun and several regulations related to waste management, its implementation has not been able to meet expectations. Therefore, waste management policies in Lhokseumawe must be more than just a legal basis, but also require careful planning, good coordination, and adequate budget support. Strategic steps are needed to ensure that this policy can be implemented properly, both in terms of providing facilities and infrastructure and in increasing public awareness.

Obstacles and Challenges in Implementation

The implementation of waste management policies in Lhokseumawe City is faced with a number of quite serious obstacles, both in terms of resources, infrastructure, and social communities. One of the main obstacles faced is the limitation of human resources (HR) working in the cleaning sector. According to Ridwan Puteh, Head of Cleanliness and Sanitation Division of DLH Lhokseumawe City, currently DLH only has around 19 garbage trucks that must serve all city areas, including tourist areas. With a volume of garbage that reaches 70 tons per day, it is clear that the number of these transport fleets is insufficient. On certain days, especially when the number of visitors increases, such as on weekends or holiday seasons, the volume of garbage can more than double, which further burdens the cleaners.

Not only fleet problems, waste management facilities are also a big obstacle. The existing Temporary Shelters (TPS) are not enough to accommodate the waste produced, so waste often accumulates around tourist areas. In addition, many facilities such as garbage cans are lost or damaged due to the actions of irresponsible individuals. Cleaners often complain about this condition, as they have to work harder to collect garbage scattered in many places. In several tourist attractions, such as Ujong Blang Beach and Jagu Beach, the accumulated garbage gives the impression of dirty and shabby, which of course is very detrimental to the tourism image of Lhokseumawe City.

In addition to obstacles in terms of infrastructure and resources, public awareness is also a big problem. Even though there are regulations and socialization programs about cleanliness, many people still do not care and tend to throw garbage carelessly. Social activists, such as Sofyan, criticized that the government only conducts cleanliness socialization at certain moments, such as the commemoration of Environment Day, without any continuous follow-up (Khan et al., 2019). The community does not feel the direct impact of these cleaning programs, so the habit of littering continues.

In addition, law enforcement is also an inhibiting factor. Although there are already regulations that prohibit indiscriminate waste disposal, the sanctions applied are not strict enough. As a result, people feel free to throw garbage carelessly, because there are no obvious consequences. This shows that

the implementation of waste management policies has not been effective and is still far from expectations.

Community Empowerment in Waste Management

Community empowerment is one of the important strategies in sustainable waste management in Lhokseumawe City. One of the interesting initiatives is the Meutuwah Waste Bank, which is managed by Saifullah. This waste bank invites the public to collect inorganic waste, especially plastic, and exchange it for economic incentives in the form of money or basic necessities. This program has succeeded in attracting community participation and reducing waste dumped in landfills. With economic incentives, people are more motivated to play an active role in waste management, which not only reduces the burden of waste management by the government, but also helps increase public awareness of environmental cleanliness.

However, although this program shows positive results, the sustainability of the Meutuwah Waste Bank is still limited. The program relies heavily on the participation of non-governmental organizations and has not received adequate support from the government. Saifullah revealed that this program requires clearer regulations and larger funds so that it can be developed and expanded to all areas of Lhokseumawe City. With support from the government, both in the form of policies and budgets, this Waste Bank can be one of the long-term solutions in sustainable waste management in tourist areas.

In addition, community empowerment can also be carried out through education programs and ongoing cleanliness campaigns. This program can be implemented in schools, communities, and through social media. The goal is to instill awareness in the younger generation and the general public that cleanliness is a shared responsibility. The government can work with various parties, including universities, community organizations, and the private sector to organize systematic and sustainable hygiene education activities.

Successful community empowerment programs require the active involvement of all elements of society. Without community participation, waste management policies will not achieve their goals. Therefore, the government needs to strengthen and expand community empowerment programs so that waste management can run more effectively and sustainably.

The Role of Other Sectors in Waste Management

Waste in Lhokseumawe City is not only a problem for the tourism sector, but also affects other sectors, especially fisheries. In an interview with Noviyanti Rahmi, Head of Capture Fisheries at the Lhokseumawe City Marine, Fisheries, Agriculture, and Food Service, it was explained that plastic waste that pollutes the sea seriously disrupts fish habitats and damages fishermen's catches. Plastic stranded on the beach often gets stuck in fishermen's nets, which causes the quality of catches to decline and adds to fishermen's operational costs. This impact is clearly very detrimental to the economy of coastal communities that depend on fisheries.

The problem of waste in the sea also shows that waste management must involve various sectors. Waste management policies that focus only on the tourism sector will fail if they do not take into account other affected sectors, such as fisheries and agriculture. Good waste management requires strong coordination between sectors to create comprehensive and integrated policies.

Local governments need to pay more attention to coordination between the tourism, fisheries, and environmental sectors. By strengthening cooperation between these sectors, waste management policies in Lhokseumawe City can run more effectively and provide wider benefits to the community. It will also improve environmental quality and support the sustainability of sectors affected by waste problems, such as the fisheries sector.

Budget and Infrastructure Improvement

Increasing the budget and improving infrastructure are two very important aspects in the success of waste management policies in Lhokseumawe City. As revealed in an interview with Nurbayan, Chairman of Commission D of the DPRK Lhokseumawe, the hygiene sector often gets a very small budget allocation compared to the actual needs. Most of the budget is allocated more to physical development, such as road, bridge, and building infrastructure, which is more visible and has a direct impact on society. As a result, the hygiene sector is often considered a less important issue and gets a lower priority in the regional budget.

However, this situation needs to be changed considering that cleanliness has a very important role, especially in maintaining the image of Lhokseumawe City as a tourist destination. The success of the tourism sector is highly dependent on environmental cleanliness, and if cleanliness is not a priority, then tourism potential will be hampered. Therefore, to achieve effective and sustainable waste management policies, local governments need to pay greater attention to the hygiene sector budget. One way to increase the budget is to allocate a portion of the larger regional budget to waste management and cleanliness, as well as to incentivize the private sector and the community to actively participate in maintaining a clean environment.

An increase in the budget also needs to be followed by improvements in the existing waste management infrastructure. Many waste management facilities that already exist in Lhokseumawe City, such as garbage cans and Temporary Shelters (TPS), are often not functioning properly or are damaged. This is due to a lack of funds for the maintenance and repair of the facility. Local governments need to allocate larger budgets for the maintenance and improvement of existing waste management infrastructure, as well as to provide new, more adequate facilities. With better infrastructure improvements, waste management will be more effective, and waste that accumulates in tourist areas can be minimized.

In addition, the increased budget must also include the procurement of a larger and more modern garbage transport fleet. Currently, DLH Lhokseumawe City only has 19 garbage trucks, which is clearly not enough to transport the large amount of waste generated every day. Increasing the number of garbage transport fleets will speed up the transportation process and minimize waste that accumulates in tourist areas.

Overall, an increase in the budget and waste management infrastructure will have a significant impact on the success of this policy. Without adequate budget support and adequate facilities, waste management will remain limited and cannot achieve the expected goals.

Cross-Sector Coordination and Private Sector Involvement

Strong coordination between sectors is needed to ensure that waste management policies can be implemented effectively in Lhokseumawe City. Good waste management does not only involve the Environment Agency (DLH), but also other related sectors, such as the Tourism Office, the Marine and Fisheries Service, and the private sector. Each of these sectors has an important role in waste management and environmental sustainability, so there needs to be a strong synergy between them.

For example, the fisheries sector has a great interest in waste management, given the impact of plastic waste on fish habitats and fishermen's catches. The Marine and Fisheries Service must work with DLH to reduce plastic waste in the sea and coastline that disrupts marine ecosystems. Coordination between these sectors is essential to create comprehensive policies that can address waste problems holistically.

In addition, the private sector also has a very important role in supporting waste management policies. Many companies can contribute to waste management through Corporate Social Responsibility (CSR) programs. For example, large companies can provide cleaning facilities at tourist attractions or support the operation of waste banks in cities. However, the involvement of the private sector in Lhokseumawe City is still very limited. Local governments need to encourage the private sector to be more actively involved in waste management by providing incentives or incentives in the form of tax reductions or facility assistance.

This collaboration between sectors not only strengthens the implementation of waste management policies, but also helps reduce the burden that must be borne by local governments. The government can use the private sector and the community to jointly manage waste more efficiently, so that waste management becomes more sustainable and effective.

Law Enforcement and Community Behavior Change

Strict law enforcement and changes in community behavior are two important factors in ensuring the success of waste management policies in Lhokseumawe City. Although there are already regulations that prohibit indiscriminate waste disposal, the implementation of sanctions against violators is still weak. People feel free to throw garbage in any place because there are no obvious consequences. Therefore, to increase the effectiveness of policies, local governments must strengthen law enforcement by providing strict sanctions for those who litter. This sanction can be in the form of

finances or social work cleaning up garbage in tourist areas. Without strict law enforcement, waste management policies will be difficult to implement effectively.

However, law enforcement alone is not enough to change people's behavior. Changes in people's behavior are needed to support sustainable waste management policies. One way to change people's behavior is through education and ongoing hygiene campaigns. The government must focus on environmental education that starts from an early age and is sustainable through various educational media and programs. The cleanliness campaign carried out must not only be ceremonial, as is often the case, but must actively involve the community in the process of behavior change. These programs can be run in schools, campuses, and communities to instill hygiene values that will be passed on to future generations.

With strict law enforcement and positive changes in community behavior, waste management in Lhokseumawe City can run more effectively. A community that is aware and responsible for cleanliness will better support the implementation of policies, which will ultimately create a cleaner and more tourist-friendly environment.

Community Collaboration and Participation

Community participation in waste management is the key to success in the sustainability of waste management policies in Lhokseumawe City. One of the programs that can be used as an example is the Meutuwah Waste Bank, which has succeeded in attracting the attention of the public to participate in waste management. Communities that collect plastic and inorganic waste can exchange it for money or basic necessities, which provides them with a direct incentive to continue participating. This shows that waste management is not only the responsibility of the government, but also the community who play an active role.

However, although the Meutuwah Waste Bank has successfully attracted community participation, this program is still limited to non-governmental initiatives and has not received enough support from the government. Saifullah, the manager of the Meutuwah Waste Bank, revealed that without greater support, both in terms of funds, policies, and supporting regulations, the sustainability of this program will be limited. For this reason, the government needs to strengthen and expand community empowerment programs, one of which is by introducing waste banks to the entire Lhokseumawe City area and providing greater incentives to increase community participation.

In addition, to increase public awareness and participation, the government also needs to involve the private sector in waste management. CSR programs from the private sector can be an additional resource to support more effective and sustainable waste management. The private sector can assist the government in providing hygiene facilities and providing support in hygiene campaigns at tourist attractions. With collaboration between the government, the community, and the private sector, waste management in Lhokseumawe City can run more effectively and sustainably, thereby creating a clean and comfortable environment for tourists and local communities.

Conclusion

The waste management policy in Lhokseumawe City faces various obstacles that hinder its effective implementation, even though there is a sufficient legal basis through Qanun Number 9 of 2015. The main obstacles faced are weak law enforcement, lack of adequate waste management facilities, and limited budget and infrastructure. In addition, the low public awareness of cleanliness has also worsened the implementation of this policy. Active community participation is one of the important keys to more effective waste management, as reflected in the Meutuwah Waste Bank program which has succeeded in attracting the attention of the community by providing economic incentives. However, the sustainability of the program is still limited due to the lack of support from the government and the private sector.

To overcome these challenges, it is necessary to increase the budget of the sanitary sector, improve waste management infrastructure, and enforce the law more firmly. In addition, cross-sector coordination, collaboration with the private sector, and ongoing cleanliness education and campaigns will strengthen the effectiveness of these waste management policies. With these strategic steps, waste management in Lhokseumawe City can run more effectively, sustainably, and support the creation of a clean, comfortable, and tourist-friendly environment

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