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Effectiveness of Government Policies in Municipal Waste Management in Pekanbaru City, Riau Province, 2022

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A B S T R A C T

The persistent and poorly managed waste problem in Pekanbaru City raises public questions regarding the effectiveness of government policies in waste management and their implementation. The daily increase in population contributes directly to the rise in waste volume, with at least 1,100 tons of additional waste generated every day. Public participation also plays a significant role in the growth of waste volume. Citizens are expected to manage waste properly and understand the urgency of waste management. Furthermore, the community needs to recognize the importance of maintaining environmental cleanliness to safeguard public health. By providing the community with adequate understanding, it is expected that the amount of waste produced can be reduced. To assess the effectiveness of government policies in managing waste in Pekanbaru City, this study employs William N. Dunn's policy effectiveness theory, which identifies five indicators of effectiveness: efficiency, adequacy, equity, responsiveness, and accuracy. In evaluating policy effectiveness, the government must determine whether a policy is efficient in achieving its intended objectives. This article utilizes a qualitative approach with a descriptive method.

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1. Introduction

Waste and its management have consistently been an issue attracting public attention. Poorly managed waste has a detrimental impact on public life and the quality of the environmental health. The community, which experiences these effects directly, often questions whether government policies on waste management are implemented properly. The ongoing emergence of waste-related problems raises concerns about the effectiveness of government policies in addressing waste management. The increasing volume and variety of waste generated daily compel the Pekanbaru City Government to enact policies, such as Regional Regulation No. 8 of 2014, as a response to public concerns regarding waste management. The continuous population growth is also a factor contributing to the increasing volume of waste each day, as well as the demand for improved performance from relevant authorities in managing waste in Pekanbaru. The excessive accumulation of waste has categorized waste management in Pekanbaru as a complex sanitation issue (Isril, 2017).

Policy evaluation is necessary to determine the effectiveness of a policy, identifying both its strengths and weaknesses. It is essential to examine whether a policy is efficient and sufficient to address the waste problem in Pekanbaru, as policy efficiency reflects the quality of performance by all involved stakeholders in realizing the policy objectives. It is also important to assess whether the

waste management policy has been applied uniformly across all districts. Given the number of districts in Pekanbaru, the city government must ensure that no district is overlooked in the policy implementation. Furthermore, it is crucial to determine whether the waste management policy provides a practical solution to the problems experienced by the community. A responsive policy that can address emerging issues and offer appropriate solutions is a key indicator of policy effectiveness, as policies fundamentally arise from public demands (Rielasari, 2018).

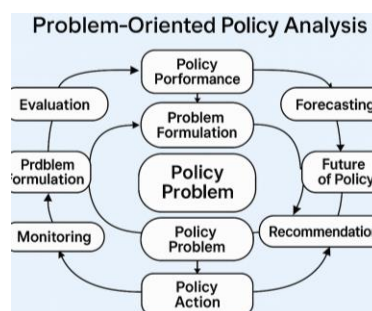
Community awareness in waste management is vital because the public plays a major role in determining the volume of waste generated daily. Citizens should be guided to reduce waste through various activities. The government can conduct socialization programs on household waste management to demonstrate its potential benefits. These programs may include promoting activities expected to provide solutions for community-generated waste, such as recycling initiatives or the establishment of waste banks. Effective socialization must be accompanied by monitoring to ensure that the programs and activities achieve the intended outcomes, including waste volume reduction and increased community creativity (Lubis, 2017).

Previous studies, such as those conducted by Kemala Hayati et al., indicate that the performance of waste management activities represents a concerted effort to reduce waste volume. Based on Law No. 18 of 2018 on waste management, a paradigm has emerged focusing on the source of waste as the primary target for reduction efforts. Research findings show that waste collection sites in Pekanbaru City remain inadequate to accommodate the volume of waste produced daily by residents. Additionally, waste collection in some areas is limited to main roads or thoroughfares, leaving waste located off these routes poorly managed. Furthermore, due to collection activities occurring on busy roads, complaints from road users regarding inconvenience have been reported (Kemala Hayati, Nugraheni Restu Kusumaningrum, Khairul Amri, 2022).

2. Implementation Method

In this scientific article, the author employs a qualitative approach with a descriptive method, aiming to provide an overview of the effectiveness of a policy. The study includes an analysis of previous research. A qualitative approach is a research process that focuses on observing social phenomena and issues within the community. Researchers attempt to provide a comprehensive and detailed portrayal of a given phenomenon (Sugiyono, 2021).

William N. Dunn argues that public policy constitutes a series of choices and tasks formulated by government institutions, each with distinct responsibilities but interconnected across sectors such as defense, education, health, economy, religion, and others. Dunn proposes that five factors can be used to identify the effectiveness of a policy: policy efficiency, policy adequacy, policy equity, policy accuracy, and policy responsiveness. Efficiency is closely related to effectiveness, emphasizing the level of effort required to achieve desired outcomes. Adequacy pertains to the extent to which a policy generates public satisfaction in response to its implementation. Policy equity refers to the ability of a policy to be implemented uniformly across all regions where it applies. Policy responsiveness reflects whether a policy sufficiently addresses the problems faced by the community (Dunn, 2003).



Picture 1. Problem-Oriented Policy Analysis

The following framework illustrates problem-oriented policy analysis as proposed by William N. Dunn, where the concepts within a policy are interconnected and mutually reinforcing.

3. Results and Discussion

The Republic of Indonesia Law Number 18 of 2008 on Waste Management defines waste as residues from human daily activities and/or natural processes in solid form. Waste can be categorized based on its material. Organic waste originates from nature, such as food residues, fruits, vegetables, leaves, or branches. Organic waste is easily biodegradable. In contrast, inorganic waste is derived from human-made products, such as plastic, cans, or paper, which are resistant to natural decomposition (Indonesia, 2008).

Regional Regulation Number 8 of 2014 concerning waste management stipulates that, in order to create a cleaner city and improve public environmental health, it is necessary to address the increasing volume and diversity of waste. Unmanaged waste may pollute the environment and negatively affect public health. Therefore, a regional regulation that can address the problem of waste in the community is needed, aiming to manage waste effectively in Pekanbaru City (Pekanbaru, 2014).

Waste management is a structured and coordinated activity that aims to reduce or handle waste effectively. Waste does not automatically decompose naturally, and many materials are non-biodegradable. With the continuous increase in waste, communities require programs that can reduce waste volumes. Government-initiated waste management aims to create a cleaner and greener environment, improve public health, and transform waste into a valuable resource. Waste management is critical in a growing country, particularly in urban areas, due to urban migration, the emergence of slums, and increasing waste volumes, all of which require governmental intervention.

Pekanbaru City, the capital of Riau Province, consists of 13 sub-districts with a population of 1,085,000. The research was conducted in Pekanbaru due to ongoing complaints from the community regarding inadequate waste management. Some residents attempt to reduce waste improperly by dumping it into rivers, causing water pollution and clogged waterways that lead to flooding. Others burn waste, resulting in air pollution, or bury waste, causing soil contamination. These issues, combined with the daily increase in waste, necessitate governmental roles in raising public awareness and actively participating in waste reduction and empowerment programs (Pekanbaru, 2022).

According to the official Pekanbaru City government website, the Environmental and Sanitation Agency (DLHK) has managed waste relatively well. Residential and commercial waste from markets and malls is managed in collaboration with the Muara Fajar Final Disposal Site (TPA). The city has surpassed the national waste management target, achieving 23.14%, while the national target is only 16.12%. However, a significant portion of residential waste is still handled illegally. Approximately 40% of residential waste is disposed of in illegal landfills, 30% is managed privately and dumped at transfer depots, and only 30% is officially managed by the Pekanbaru government.

TPA Muara Fajar, located in Rumbai Pesisir Sub-district, covers 8.6 hectares and is approximately 18.5 km from the city center. Most of the site is already filled with waste. Every day, trucks bring waste from various areas in Pekanbaru, and the mixed waste composition complicates management. Only one bulldozer and one excavator are operational, which are insufficient to manage the increasing waste volumes. A composting unit operates by first separating organic waste, but it cannot perform efficiently due to inadequate facilities and infrastructure (Ernawaty et al., 2019).

The Pekanbaru City government has been unable to fully manage waste due to the daily increasing volumes. As a result, private third parties are engaged to provide additional infrastructure, facilities, and labor. The involvement of private waste management companies must consider three factors: process, including the rationale for involving the private sector, SOPs, and objectives; partner, in which private parties are responsible not only for collection and disposal but also for proper waste

management; and structural, which includes clarity on contracts, division of responsibilities, and obligations agreed upon by both parties (Isril et al., 2018).

Waste management is generally implemented using the 3R method: Reduce, Reuse, and Recycle (Farisyah, 2021). Reduce refers to minimizing consumption to decrease waste generation. Reuse encourages the community to extend the lifespan of items through maintenance or repair. Recycle involves processing waste into useful and valuable products, which may also serve as business opportunities.

Community participation is essential in achieving a cleaner Pekanbaru and improving environmental health. The government conducts socialization programs to raise awareness, including education on the 3R principle, establishing waste banks, and training community groups to create value-added products from waste (Febrianti, Dewi, & Mardiah, 2022).

Despite government efforts, achieving the national waste management target does not guarantee effective waste handling. The continuous increase in waste, coupled with inadequate facilities and infrastructure, indicates that existing policies have not fully resolved the problem (Dailiati, 2021). Regarding policy equity, waste collection is divided into three zones. Zone 1 includes Tampan, Marpoyan Damai, and Payung Sekaki; Zone 2 includes Sukajadi, Pekanbaru Kota, Tenayan Raya, Senapelan, and Limapuluh Sail; Zone 3 includes Rumbai and Rumbai Pesisir. Collection routes in Zones 1 and 3 rely on main roads, leaving areas outside these roads unserved. This shows that the equity of waste management policies has not been maximized (Kemala Hayati, Kusumaningrum, & Amri, 2022).

A policy should address community problems effectively. In this regard, Pekanbaru City Regional Regulation Number 8 of 2014 on Waste Management has not been sufficiently responsive. Many improvements are needed in waste collection systems, waste management, infrastructure, and human resources. Therefore, the regulation cannot yet be considered an appropriate reference for waste management in Pekanbaru City.

4. Conclusion

In raising public awareness regarding waste issues, the government conducts socialization programs to inform citizens of the necessary actions they should take. These programs may include education on a lifestyle guided by the 3R principles (Reduce, Reuse, Recycle), awareness campaigns regarding waste banks, and training or the establishment of home-based business groups focused on creating valuable and marketable products from waste materials. However, the daily accumulation of waste continues, while waste management remains neither effective nor efficient, compounded by inadequate infrastructure and facilities. Waste located outside main collection routes cannot be transported, indicating that the equitable implementation of government waste management policies has not yet been fully achieved. Furthermore, Pekanbaru City Regional Regulation Number 8 of 2014 has proven insufficient in managing the city's waste. Significant improvements are still required in waste collection systems, management practices, infrastructure, and human resources, which remain far from adequate. This situation represents a critical concern for the government, necessitating immediate corrective measures.

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