

WASTE MANAGEMENT STRATEGY OF THE KOTO TELUK VILLAGE GOVERNMENT, HAMPARAN RAWANG DISTRICT

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ABSTRACT

Waste management at the village level is a key challenge in achieving a clean and healthy environment. This study aims to examine the waste management strategy employed by the village government of Koto Teluk, Hamparan Rawang District. A qualitative research method was used, utilizing interviews and observations for data collection. The research findings indicate that: a) the formulation of the waste management strategy complies with regulations, specifically through the construction of a 3R (Reduce, Reuse, Recycle) waste facility as mandated by the Sungai Penuh City Government, alongside the provision of facilities such as three-wheeled waste collection vehicles and waste processing equipment; b) the waste management strategy currently implemented by the Koto Teluk Village Government encompasses collection, preliminary sorting, and transportation; and c) the village government actively participates in directly supervising the waste transportation process to ensure operations align with the plan. Furthermore, the village government routinely inspects supporting facilities such as waste bins and transport vehicles to ensure they remain in good, functional condition.

Keywords: *Strategy, Waste Management, Reduce, Reuse, Recycle*

INTRODUCTION

Waste remains a persistent issue and a classic topic of discussion in human society. Community life is inextricably linked to the problem of waste—whether from households or industrial activities—which is generated almost daily. Waste volume rises alongside population growth and increased human activity; furthermore, higher income levels correlate with a greater volume and variety of waste produced (Agustari, 2023). Certain types of waste, such as plastics and other hazardous materials, are particularly difficult to decompose and manage. World Bank data indicates that Indonesia is the world's second-largest contributor of plastic waste after China, with approximately 3.2 million tons of plastic waste entering the ocean annually (Wastec International, 2025). Even in developed nations with modern waste management

systems, controlling the rise in waste generation remains challenging due to high consumption patterns and the prevalence of single-use products (Sabrira, R.E. et al., 2026).

According to data from the National Waste Management Information System (SIPSN), managed by the Ministry of Environment and Forestry (KLHK), total waste generation in Indonesia reached 31.9 million tons in 2023. Of this total, 63.3% was managed, while the remaining 35.67% was unmanaged. Regarding composition, the largest source of waste was food waste (41.51%), followed by plastic waste (18.62%), wood or twigs (11.82%), paper or cardboard (10.6%), miscellaneous waste (6.76%), metal (3.2%), glass (2.53%), rubber or leather (2.25%), and textiles (2.71%) (National Waste Management Information System, 2023).

Effective waste management policy requires support from all stakeholders, including the community, local governments, and village governments. Village governments play a role in designing and implementing policies tailored to local needs (Ismayani, R.S. & Zainal, 2025). Consequently, the government regulates waste management through various governing regulations.

Sungai Penuh City faces similar waste-related challenges. To address this, in 2024, the Sungai Penuh City Government issued Mayor of Sungai Penuh Regulation Number 19 of 2024 concerning the Management of Household Waste and Waste Similar to Household Waste at 3R (Reduce, Reuse, Recycle) Waste Disposal Sites in villages within Sungai Penuh City. Article 1 defines waste management as a systematic, comprehensive, and continuous activity encompassing waste reduction and waste handling. Waste reduction activities are carried out through limiting waste generation, recycling, and reusing waste. Meanwhile, waste handling activities include: a) sorting—grouping and separating waste based on type, quantity, and/or characteristics; b) collection—gathering and moving waste from the source to the 3R site; and c) transport—hauling residual waste from the 3R site to the final disposal site. Furthermore, the regulation encourages waste management activities in every village.

Waste management at the village level requires the active participation of the village head and village officials, who serve as leaders and drivers of policy. The village head holds strategic authority to formulate local policies that support waste reduction, increased recycling, and the optimization of community-based waste management systems. With clear policies in place, waste management programs can operate systematically and sustainably (Baskoro Aji, 2026). Village governments act as both facility providers and catalysts for changing community behavior. Without participatory support from residents, waste management programs tend to be temporary and unsustainable. Therefore, collaboration between the village government and the community is necessary for the sustainability of the 3R program (Dika & Fabian P., 2026).

Koto Teluk Village, located in the Hamparan Rawang District, is part of the Sungai Penuh City administrative area. The village covers an area of approximately 1.02 km². Administratively, Koto Teluk Village is divided into seven (RT/neighborhood units) and four hamlets: Larik Dujun, Larik Tengah, Larik Melintang, and Larik di Air. This territorial division aims to facilitate village governance and the delivery of public services.

According to village government data, the population of Koto Teluk Village stands at 1,889 people. This high population density impacts the volume of household waste generated daily. Waste volumes rise in tandem with population growth and increased community activity (Novardi, M. Farhan, et al., 2022). Consequently, this necessitates

an effective waste management system; otherwise, it could lead to waste accumulation, environmental pollution, and a decline in the community's quality of life. Improperly managed waste can have various negative effects on the environment and public health. Soil and water pollution caused by plastic waste and other hazardous materials can damage ecosystems and threaten the sustainability of natural resources. Indiscriminate waste disposal also causes flooding, as waterways become clogged with debris (Wastec International, 2025).

The Koto Teluk Village government has provided waste management facilities in the form of disposal bins distributed across every neighborhood unit (RT). Each RT is equipped with three types of color-coded bins corresponding to specific waste categories: green bins for wet or organic waste, yellow bins for dry or inorganic waste, and red bins for hazardous and toxic waste (B3). Providing these facilities is one of the village government's efforts to encourage residents to sort their waste at the source. However, waste management in the community is currently limited to the collection and transportation stages, after which the waste is handed over to the relevant municipal agency. Given this situation, this study was conducted to examine the village government's waste management strategy in Koto Teluk Village and to identify the various obstacles encountered during its implementation.

RESEARCH METHODS

This study employs a qualitative approach. Qualitative research allows the researcher to freely interpret phenomena without relying on numerical measurements; it aims to examine phenomena in their natural setting and focuses on generating findings that yield genuine understanding (Lubis Z. et al., 2019). This approach was selected because the study aims to gain an in-depth understanding and description of the Koto Teluk Village Government's waste management strategies, based on facts observed in the field.

Data collection involved interviewing informants and conducting observations in Koto Teluk Village, Hamparan Rawang District, to assess environmental conditions and ongoing waste management activities. Through these observations, the researcher could obtain a realistic picture of the phenomenon under study.

Informants were selected using purposive sampling—a technique involving selection based on specific criteria (Sugiyono, 2017). The informants for this study included Koto Teluk village officials, local waste management personnel, and members of the Koto Teluk community. They were deliberately chosen because they possess knowledge of and are directly involved in waste management activities in Koto Teluk Village, making them both capable and willing to provide information relevant to the research focus.

Data analysis utilized the interactive analysis model developed by Miles and Huberman, comprising three stages: data reduction, data display, and conclusion drawing. To ensure the reliability of the data, the researcher employed data validity techniques involving both methodological triangulation and source triangulation. Triangulation is a validation technique that verifies data by comparing information obtained from various sources and through different data collection methods (Sugiyono, 2017).

RESULTS AND DISCUSSION

According to the theory of Geoff Mulgan (cited in Ali Nur AA et al., 2026), a strategy is a systematically structured plan designed to achieve specific objectives; its implementation involves various components—such as goals, the environment, the execution process, and evaluation—serving as a form of learning for continuous improvement. To examine the waste management strategy employed by the Koto Teluk Village government, the researcher utilized the theory proposed by David (cited in Eddy Yunus, 2016), which identifies three key indicators for measuring strategy: strategy formulation, strategy implementation, and strategy evaluation. Strategy formulation is the initial stage, encompassing problem identification, analysis of the internal and external environments, goal setting, and the development of various strategic alternatives for implementation. Strategy implementation is the execution phase of the formulated strategy, involving resource allocation, work program development, task delegation, and the carrying out of activities in accordance with the established plan. Meanwhile, strategy evaluation is the process of assessing strategy execution to determine its success rate, identify obstacles encountered, and determine corrective measures to ensure the strategy remains relevant to evolving conditions and organizational needs.

Based on research findings obtained through interviews with informants and observations in Koto Teluk Village, the waste management strategies employed by the Koto Teluk Village government include:

1. Strategy Formulation

The waste management strategy utilizing TPS 3R (3R-based Waste Collection and Processing Sites) was mandated to the Koto Teluk Village Government, Hamparan Rawang District, through a 2024 Mayor's Regulation concerning the management of household waste and waste similar to household waste at TPS 3R facilities in villages within the Sungai Penuh City area. The city government formulated this strategy based on Law Number 18 of 2008 concerning Waste Management, aiming to ensure that waste generated by village communities is properly managed, does not become a source of ongoing problems, and does not cause adverse or hazardous impacts in the future. The Mayor's Regulation stipulates that village governments receiving funds and facilities must be capable of organizing operations to ensure implementation proceeds according to plan.

Waste management is conducted in compliance with regulations by establishing TPS 3R facilities as mandated by the Sungai Penuh City Government. Interviews with village officials revealed that the Koto Teluk Village Government has constructed a waste management facility—specifically, a TPS 3R building. Koto Teluk Village is also equipped with various facilities, such as three-wheeled vehicles for waste transport and waste processing equipment. This aligns with research by Rosadi (2023), which indicates that the success of waste management strategies is heavily influenced by the availability of facilities, management technology, and community participation.

Figure 1.

Koto Teluk Village TPS 3R Facility



Source: Researcher's documentation, 2026

The Koto Teluk Village Government carries out initial sorting of waste collected from the community. Waste suitable for processing at the TPS 3R (Reduce, Reuse, Recycle Waste Processing Site) is temporarily stored in designated facilities, while waste that cannot be processed there is disposed of at a roadside Temporary Waste Collection Point (TPS). Waste at this collection point is subsequently hauled away by service vehicles from the Sungai Penuh City Environmental Agency. This system has been consistently implemented over the past few years.

2. Implementation

In practice, the Village Government provides three types of waste bins, distinguished by color and function, to facilitate initial sorting by residents. Green bins are used for organic or wet waste, such as food scraps and foliage. Yellow bins are designated for inorganic or dry waste, such as plastics, paper, and bottles. Meanwhile, red bins are used for hazardous and toxic waste (B3) and sharp objects, such as leftover medication, needles, and used batteries.

**Figure 2.
Trash Bin**



Source: Researcher's documentation, 2026

The village government has actively conducted outreach to encourage the residents of Koto Teluk Village to sort their waste by type and to participate actively in maintaining environmental cleanliness. Although this sorting system has been

introduced, its implementation has not yet reached its full potential. According to a survey conducted by the village government, the volume of waste generated in Koto Teluk Village reaches approximately 500 kilograms per day, with wet waste accounting for about 80 kilograms of that total.

Following the waste sorting process, village sanitation workers collect the waste daily, typically at 5:00 PM (WIB). However, under certain circumstances, collection may also take place in the morning around 6:00 AM. Workers use three-wheeled vehicles provided by the village government to transport waste from communal disposal points and directly from residents' homes. The collected waste is then taken to a roadside temporary disposal site (TPS) to facilitate further transport by official vehicles from the Sungai Penuh City Environmental Agency.

Figure 3.
Waste transportation process.



Source: Researcher's documentation, 2026

Consequently, the waste management strategy currently implemented by the Koto Teluk Village Government is limited to collection, preliminary sorting, and transport, without extending to advanced processing stages. Responsibility for further waste processing remains with the Sungai Penuh City Government.

3. Evaluation and Control

The village government actively participates in directly supervising the waste transport process to ensure operations proceed according to plan. It also routinely inspects supporting facilities—such as waste bins and transport vehicles—to ensure they remain in good, functional condition.

The village government is currently preparing to fully implement the TPS3R (Reduce, Reuse, Recycle-based Waste Disposal Site) strategy and plans to educate the community about the policy. When asked whether efforts had been made to communicate this policy to the community collectively, the village government stated that this had not yet been done, as they are awaiting the completion of road repairs that currently hinder access to the TPS3R facility. Furthermore, the village government plans to establish a waste bank once the TPS3R becomes fully operational, thereby generating benefits for both the community and the village.

CONCLUSION

Based on the research findings and discussion, it can be concluded that the waste management strategy in Koto Teluk Village, Hamparan Rawang District, encompasses the following: a) Strategy formulation carried out in accordance with regulations specifically the establishment of a 3R (Reduce, Reuse, Recycle) waste facility mandated by the Sungai Penuh City Government alongside the provision of facilities such as three-wheeled waste collection vehicles and waste processing equipment; b) Implementation of strategies currently applied by the Koto Teluk Village Government, consisting of collection, preliminary sorting, and transportation; and c) Evaluation and control, achieved through active participation in the direct supervision of the waste transportation process. These measures ensure that implementation proceeds according to plan. The village government also routinely inspects supporting facilities, such as trash receptacles and transport vehicles, to ensure they remain in good, functional condition.

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