



Article

## **Enhancing Community Awareness Through Waste Bin Provision at Pangkalan Bunut Market to Achieve a Clean and Healthy Environment**

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**Abstrak**

Kesadaran dan kepedulian terhadap kebersihan lingkungan masih menjadi permasalahan umum, tidak hanya di daerah perkotaan tetapi juga di wilayah perdesaan. Di Kelurahan Pangkalan Bunut, permasalahan pengelolaan sampah masih terjadi, terutama karena rendahnya kesadaran masyarakat serta minimnya fasilitas tempat pembuangan sampah. Untuk mengatasi hal tersebut, Tim Pengabdian kepada Masyarakat melaksanakan program pengadaan tempat sampah di Pasar Kelurahan Pangkalan Bunut. Program ini bertujuan untuk mendorong masyarakat membuang sampah pada tempatnya, meningkatkan kesadaran lingkungan, serta mewujudkan lingkungan yang bersih dan sehat. Hasil kegiatan menunjukkan beberapa dampak positif: (1) meningkatnya pemahaman masyarakat mengenai pentingnya pengelolaan sampah dan kepedulian lingkungan; (2) tersedianya tempat sampah yang memadai di pasar sehingga mendukung terciptanya lingkungan yang lebih bersih; dan (3) perubahan perilaku masyarakat yang semakin peduli terhadap kebersihan lingkungan. Program ini diharapkan menjadi model dalam menjaga kebersihan dan kesehatan lingkungan di Kelurahan Pangkalan Bunut.

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**KATA KUNCI**

*Tempat sampah;  
Pengelolaan sampah;  
Kebersihan pasar;  
Kesehatan lingkungan;  
Pangkalan Bunut*

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**Abstract**

**KATA KUNCI**

*Waste bin provision;  
Waste management;  
Market cleanliness;  
Environmental health;  
Pangkalan Bunut;*

Environmental awareness and concern for cleanliness remain common challenges, not only in urban areas but also in rural communities. In Pangkalan Bunut Village, the issue of poor waste management persists, largely due to limited community awareness and the lack of adequate waste disposal facilities. To address this problem, our Community Service Team implemented a program to provide waste bins in the Pangkalan Bunut Market. This initiative aimed to encourage proper waste disposal practices, improve environmental awareness, and promote a clean and healthy environment. The program produced several positive outcomes: (1) increasing community understanding of the importance of waste management and environmental care; (2) providing accessible waste bins at the market to support cleaner surroundings; and (3) fostering behavioral change, as residents became more aware of the importance of proper waste disposal. This initiative is expected to serve as a model for sustaining cleanliness and environmental health in Pangkalan Bunut Village.

## 1. INTRODUCTION

Pangkalan Bunut is one of the urban villages in Bunut District, Pelalawan Regency, Riau Province. It consists of two neighborhoods, namely Tanjung Sialang and Sungai Bunut. Based on data from 2020, the population of Pangkalan Bunut Village was recorded at 1,748 inhabitants (Badan Pusat Statistik, 2021). According to the Central Bureau of Statistics (BPS) of Pelalawan Regency in 2019, the total area of Pangkalan Bunut Village is 38.35 km<sup>2</sup> or 3,885 hectares (Badan Pusat Statistik, 2020).

The area of Pangkalan Bunut Village is traversed by the Kapojah River, which is utilized by fishermen and plantation farmers as a transportation route for fruit distribution. Pangkalan Bunut Village also contains several historical buildings and facilities that were formerly assets of the Kampar Regency Government prior to the establishment of Pelalawan Regency, including the Sub-district Office, the Community Health Center (Puskesmas), a public library, the Maharaja Dindo multipurpose hall, and the Pangkalan Bunut Village Office. In addition, the village is equipped with a fish market and the traditional Bunut market. Pangkalan Bunut Village serves as the location for the community service program, with the main activity focusing on the construction of a temporary waste disposal site (TPS) to create a clean and sustainable environment (Anam et al., 2019). One of the major environmental issues is sanitation and cleanliness (Rahayu et al., 2022). Waste management remains a challenging problem; however, it can be mitigated in several ways, one of which is the provision of waste bins (Wahyuni et al., 2021).

Based on field observations and interviews with the Head of Pangkalan Bunut Village, the primary issue identified in the area is the accumulation of waste in the market, which remains poorly managed due to the absence of adequate temporary waste disposal site (TPS). This situation has given rise to several problems, such as potential health risks, unpleasant odors, and an unattractive physical environment (Ermal et al., 2023). Similar challenges in waste accumulation and environmental pollution are observed globally, particularly in developing countries where rapid urbanization is not matched by adequate waste management infrastructure. International studies have highlighted that effective waste management requires not only physical facilities but also behavioral and policy interventions to ensure sustainability (Ghisellini et al., 2016; Giacovelli, 2018; Wilson et al., 2006).

The waste is also disposed of into the river, which disrupts the surrounding community and causes environmental degradation within the urban village. The environment serves as the setting in which life occurs for all living organisms, including humans, plants, and animals (Ermal & Maarasid, 2023). One of the primary causes of environmental degradation is pollution resulting from the accumulation of waste produced by human activities (Siregar et al., 2020). Waste management in the urban village constitutes a strategic effort to realize a healthy and clean Pangkalan Bunut Village. In response to the aforementioned primary issue, the proposed theme is "Desa Peduli Lingkungan" This theme is intended to serve as a solution for managing market waste in Bunut Village through the implementation of planned programs.

People's intention to perform pro-environmental actions such as proper waste disposal is influenced by their attitudes toward the behavior, subjective norms, and perceived behavioral control (Ajzen, 1991). When individuals believe that waste management benefits the community, that others expect them to act responsibly, and that facilities are available to support such behavior, the likelihood of performing the desired action

increases.

The success of this community program was strongly supported by the active participation of local residents throughout both the planning and implementation stages. Their direct involvement helped create a sense of ownership, strengthened commitment to environmental cleanliness, and encouraged communication based on shared social norms. Such participatory and norm-driven engagement is recognized as an effective approach for sustaining long-term behavioral change (McKenzie-Mohr & Psychologist, 2011).

The proposed work program focuses on waste management, in which the community service team will establish a temporary waste disposal site as an initiative to preserve and improve the environmental quality of Pangkalan Bunut Village. Furthermore, to enhance public awareness regarding environmental conservation in the health sector, the program includes the cultivation of Tanaman Obat Keluarga (TOGA) through the utilization of residents' vacant land.

## 2. METHODS

Before implementing the work program, it is essential to first develop a detailed schedule of planned activities to be carried out over the course of one month. This planning aims to facilitate coordination and ensure the smooth execution of the community service program. The planning process involves preparing a series of structured and continuous activities. The stages undertaken include the following:

### 1. Preparation Stage

This stage includes the following:

- a. Division of roles and responsibilities for the Community Service Program team.
- b. Conducting surveys and situational analyses in Pangkalan Bunut Village, which serves as the location for the Community Service Program.
- c. Identifying and analyzing problems as well as potential areas for development.
- d. Coordinating among team members involved in the Community Service Program to design a 40-day work plan.
- e. Coordinating with the Pangkalan Bunut Village authorities and other relevant stakeholders who support the implementation of the program

### 2. Implementation Stage

In this stage, the implementation activities include the following:

- a. Introducing the Community Service Program team to the residents of Pangkalan Bunut Village.
- b. Presenting an overview of the programs to be carried out.
- c. Establishing collaboration with the community to ensure the effective and smooth execution of the program.

### 3. Qualitative Research Approach

This community service program applies a qualitative descriptive approach to understand the behavioral and social dynamics related to environmental awareness. The data collection involved two primary techniques: observation and interviews.

#### 3.1. Observation Method

Observations were conducted directly in the Pangkalan Bunut market area over a period of one week before and after the waste bin installation. The research team observed the conditions of waste accumulation, the placement of existing waste bins, and community behavior in disposing of waste. Field notes and photographs were used to record changes in the market's cleanliness and usage of the new bins.

#### 3.2. Interview Method

Interviews were carried out informally at the market and village office. Each session lasted approximately 20–30 minutes, focusing on three themes, awareness of waste management, perceived barriers to proper waste disposal, and community response to the waste bin provision. Interviews were conducted with key community stakeholders, including the head of Pangkalan Bunut Village, five market vendors, two sanitation workers, and several youth organization members involved in the implementation.

Data were analyzed using a thematic approach to identify recurring patterns of community awareness and behavior change

## 3. RESULT AND DISCUSSION

The primary work program implemented in Pangkalan Bunut Village focused on improving environmental conditions, particularly the cleanliness of the market area. The main activity involved the construction and installation of waste bins to enhance local waste management and reduce littering. The

objective of this program was to encourage residents to recognize the importance of maintaining environmental hygiene and to minimize the accumulation of waste in public spaces.

The success of this initiative can be observed through several measurable outcomes. A total of 20 waste bins were successfully produced and distributed across key public areas such as the market, mosques, schools, the village office, and public fields. These facilities provided convenient access for waste disposal and visibly improved the surrounding cleanliness. Before implementation, field observations showed that the market area generated approximately eight to ten bags of mixed waste per day, much of which was disposed of haphazardly around the stalls and riverbanks. One week after the bins were installed, the observed waste volume decreased to three to four bags per day, and littering around the market significantly declined.

This improvement is not only physical but also behavioral. Interviews with local residents and market vendors revealed a positive shift in waste disposal habits. Approximately 70% of vendors reported using the newly installed bins regularly, compared to only about 20% before the intervention. The residents also noted that they began separating organic and inorganic waste more consistently. This behavioral change demonstrates a growing awareness of cleanliness and environmental responsibility among the community.

The behavioral improvements observed among the residents of Pangkalan Bunut indicate that changes in waste disposal habits were influenced by several psychological and social factors. Residents' motivation to keep their environment clean was strengthened by a combination of positive attitudes toward cleanliness, increasing social expectations from their community, and the availability of facilities that made proper waste disposal easier to perform. These findings suggest that environmental behavior is shaped by attitudes, social norms, and perceived control over the behavior (Ajzen, 1991). Similar behavioral dynamics have been observed in other environmental programs worldwide, where interventions targeting social norms and perceived behavioral control have proven effective in fostering sustainable actions (Schultz, 2014; Steg & Vlek, 2009).

The improvement in waste management practices observed in Pangkalan Bunut has also contributed to better public health and environmental hygiene. The availability of adequate disposal facilities and the increased participation of residents in maintaining cleanliness have helped minimize the potential spread of waste-related diseases such as Dengue Fever. This outcome demonstrates that proper waste handling and active community involvement can significantly reduce environmental health risks (Apriliana et al., 2022).

The participatory nature of this program greatly influenced the success and sustainability of the initiative. Local youth groups, village officials, and residents collaborated in constructing, painting, and distributing the waste bins, which created a strong sense of ownership and collective responsibility. Their involvement not only increased participation during implementation but also encouraged ongoing maintenance of the facilities. The lasting behavioral commitment shown by the community illustrates that meaningful engagement is essential for sustaining environmental change (McKenzie-Mohr & Psychologist, 2011).

Overall, the combination of infrastructure provision, behavioral engagement, and community participation produced significant outcomes for Pangkalan Bunut Village. The program successfully enhanced environmental cleanliness, reduced unmanaged waste, and strengthened social responsibility toward maintaining a healthy living environment. These results indicate that applying behavioral and community-based approaches in waste management can lead to sustainable environmental improvement at the community level.

These findings highlight that simple infrastructural interventions, when supported by behavioral and community engagement strategies, can significantly enhance waste management effectiveness in rural market contexts. The Community Service Team, together with the residents and youth of Pangkalan Bunut, carried out the construction of waste bins to be distributed at several locations identified as having a high potential for indiscriminate waste disposal. The processes and outcomes derived from the implementation of this work program are as follows:

1. painting of containers as part of the process for constructing waste bins.



Fig. 1. Painting waste bins

2. Completing the painting process of containers as part of the waste bin construction activity.



Fig. 2. Completing the painting process

3. Collecting bamboo as part of the preparation for constructing waste bins, which will be used as stands to support the bins.



Fig. 3. Collecting bamboo

4. Preparing the collected bamboo materials for use in the construction of waste bins.



Fig. 4. Preparing the collected bamboo

5. Distribution of 20 waste bins (at TK Negeri, Musholla Al Muflihun, Musholla Polsek, Musholla Sungai Medang, the IPKPB Secretariat Building, the Village Office, the Subdistrict Office, Astaka Field, and the Village Market).



Fig. 5. Distribution waste containers

#### 4. CONCLUSION

The Community Service Program in Pangkalan Bunut aims to raise public awareness of environmental preservation, particularly waste management. The program focuses on providing waste bins to encourage active community participation in maintaining cleanliness and creating a healthy environment. It also emphasizes behavioral changes toward responsible waste disposal and sustainable habits. Furthermore, the initiative expects to expand waste management facilities to households and public spaces, especially in the market area, which serves as a vital center for the community's daily activities and economic interactions, promoting long-term environmental responsibility.

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