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## Evaluation of Waste Bank Program: Transformative Impact on Community Welfare, Environment, and Economy

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### Abstract

This research addresses the pressing challenges of waste management in the context of population growth, economic shifts, and changing consumption patterns. Emphasizing the need for a paradigm shift in perceiving waste as valuable, the study advocates for holistic waste reduction involving government, businesses, and the public. Focusing on waste bank programs in Indonesia, particularly the Wijaya Kusuma Waste Bank in Bekasi, West Java, the research evaluates their impact on community empowerment, environmental preservation, and economic improvement. The study employs a qualitative approach and the Context, Input, Process, and Product (CIPP) evaluation model to assess the waste bank program comprehensively. The results highlight the existing conditions of the Wijaya Kusuma Waste Bank, its objectives, and the community's response. The waste items deposited by customers are categorized for effective management. A comprehensive evaluation explores the legal basis, human resources, and funding aspects, revealing strengths and areas for improvement. The waste bank program's transformative potential is discussed, emphasizing its positive impact on social, economic, and environmental dimensions within the Griya Persada Elok community. The conclusion underscores the commendable success of the Wijaya Kusuma Waste Bank, outlining the need for continued support, organizational enhancements, and strategic planning to ensure sustained positive outcomes and serve as a model for community-driven environmental initiatives.

### Keywords

Waste management, community empowerment, environmental preservation, economic improvement, waste bank program.

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## 1. Introduction

The waste problem is closely related to population growth, economic development, and changes in societal consumption patterns. Currently, waste management still poses difficult-to-control issues (Mangindaan et al., 2022). The community's approach to waste is grounded in collection, transportation, and disposal. Moreover, people still view waste as useless and lacking economic value. Both urban and rural areas generate waste daily, often disposed of by burning to reduce the existing waste volume. However, burning waste is not a sustainable solution (Kumar & Singh, 2021). With the increasing local population in Indonesia, waste management issues intensify, leading to a growing waste volume.

Waste generation in society will not decrease because people continually discard unused or no longer useful items. Waste reduction efforts need to involve all layers of society, including the government, businesses, and the public. As the population and consumption patterns increase, the waste volume is expected to rise continuously. Waste will persist as long as human activities continue. Therefore, according to Law Number 18 of 2008 on waste management systems, there is a need to change the public's perception of waste and how to handle it. The shift should emphasize that waste is not useless but has value and utility. The community must abandon the practice of indiscriminate disposal.

The lack of public concern for waste management needs improvement. Independent and sustainable waste management is essential. Given the lack of awareness about waste management, there is a need for both formal and informal awareness campaigns (Aparcana, 2017). Existing institutions or programs for waste management should be suitable to mobilize waste management efforts and raise public awareness. Proper waste management is crucial to prevent significant environmental and health impacts. Current human resource issues also require attention to drive waste management and necessitate socialization to minimize waste problems.

Waste management commonly follows the 4 Rs principle (reduce, reuse, recycle, and replant), but in practice, replanting is often neglected. Waste management programs, such as the waste bank, implement the 3 Rs (reduce, reuse, recycle). Waste separation at the community level is vital. The waste bank program helps local governments manage dry (inorganic) waste, with the community as its main target. The program aims to raise awareness and knowledge among the public about waste management's economic benefits (Rudiyanto et al. 2022).

Aligning with the Ministry of Environment Regulation Number 13 of 2012, waste bank programs are crucial for addressing and reducing waste piles. Besides maintaining a clean environment, waste banks play a significant role in the local economy, turning waste into valuable goods. The goal of the Waste Bank Program is to provide a written idea or concept about alternative solutions for waste processing, educating the public about the Waste Bank Program from establishment to administrative mechanisms (Raharjo et al., 2017). The program aims to have a positive impact on the environment and improve the economic conditions of a specific community or area.

Despite the positive goals, many people have not participated in the Waste Bank Program. A gradual change in people's perception of waste is necessary to emphasize that waste can be

valuable and economic. This initiative can address social, environmental, and economic issues. Waste banks need to monitor waste development and growth actively. Coordination and cooperation between waste collectors, waste bank cadres, and active community participation are essential for waste bank programs to succeed (Supriansyah et al., 2022). The success of the waste bank program requires active involvement from the community. People must actively manage waste independently and sustainably, collaborating with local governments. Community participation can contribute to realizing the vision of building an environmentally friendly region, creating new job opportunities.

Residents of *Perumahan Griya Persada Elok* Bekasi generally care about the environment. However, waste management, especially for inorganic waste, is not maximized. The primary goal of empowering the community is to help improve cleanliness through the Waste Bank Program. The Waste Bank Program in this area has not attracted many visitors seeking training on utilizing waste for economic gain. Lack of awareness and interest in learning about the economic benefits of household waste utilization is a significant challenge. Waste bank implementers need to provide infrastructure and facilities, ensuring they meet waste management standards. The active participation of residents will impact waste bank performance positively.

Real challenges include a lack of human resources for waste sorting and minimal understanding of waste types. The organizational structure needs analysis and ideal job specifications. Proper training related to waste administration is essential. Information from residents suggests that management does not organize regular gatherings to discuss program implementation and waste bank management. Professional management involving stakeholders with funding access can develop and reduce unemployment. The Waste Bank Program initially received enthusiastic support, but a decline in registered users and limited community awareness and participation hindered optimal implementation. Evaluation is crucial to determine the program's effectiveness in empowering the community of *Perumahan Griya Persada Elok Bekasi*.

This research aims to tackle waste management challenges linked to population growth, economic shifts, and societal consumption changes. It highlights the need for a shift in waste perceptions, emphasizing its economic value. Focusing on Indonesia, the study advocates for holistic waste reduction involving all societal layers. It stresses the importance of awareness campaigns, aligning with legal frameworks, and promoting sustainable waste management. Evaluating waste bank programs, the research aims to gauge their impact on community empowerment, environmental preservation, and economic improvement in *Griya Persada Elok Housing*, Bekasi. The goal is to offer insights for informed policy decisions and community initiatives.

## **2. Literature Review**

Novianty (2013) conducted an in-depth analysis of the impact of waste bank management on the community's behavior in Binjai, Medan city. The study aimed to assess the community's enthusiasm for waste bank initiatives, revealing positive outcomes such as increased income, enhanced environmental health, and improved social interactions among community members. This analysis highlighted the multifaceted benefits of waste bank programs, positioning them as drivers of positive social and economic change.

Asri & Insari (2020) evaluated the effectiveness of waste banks, particularly in Kedungsari village, Kendal regency. While the study addressed the overall effectiveness of waste banks, it lacked a detailed exploration of the specific outcomes of waste management within these banks. The evaluation uncovered challenges, including a lack of response from the village government, inadequate public outreach, deficient training, and insufficient facilities, all contributing to suboptimal program performance. In a distinct context, Santifa et al. (2019) conducted an evaluation of the Mawar Bestari Waste Bank Program in Sijambi, Tanjungbalai city. Their study provided an in-depth analysis of the program's optimal functioning and the establishment of robust cooperation between the local government and the community. The findings highlighted the successful execution of waste management practices, with tangible benefits observed in environmental, social, and economic domains.

Muntazah (2015) shifted the focus to the program management of Bintang Mangrove Waste Bank in Gunung Anyar Tambak, Surabaya. The study revealed that the program's effectiveness aligned with fundamental management functions, encompassing planning, organizing, implementing, and evaluating. By stressing the importance of these management principles, the research emphasized the critical role they played in achieving the waste bank program's objectives. Meanwhile, Hapsari et al. (2019) explored community empowerment through the *Manfaat* Waste Bank in Bolorejo Village, Tulungagung. The research delved into the positive impacts experienced by the community, emphasizing the program's success in addressing environmental, social, and economic aspects. It demonstrated that beyond waste management, waste banks contributed significantly to the overall well-being of the community.

In another perspective, Azizah et al. (2020) discussed waste banks as an alternative strategy for community empowerment in developing Kampung Putih, Malang City. The study aimed to raise awareness of environmental issues and elucidate the benefits of waste management through waste banks. By emphasizing the role of waste banks in promoting environmental consciousness and fostering community engagement, the research highlighted their significance in broader community development initiatives. Lastly, Wartama et al. (2020) focused on community empowerment in household waste management through the waste bank in Sidakarya Village, South Denpasar. The study expressed optimism about the sustainable evolution of the waste bank over time, underscoring the program's relevance as a socially and economically valuable initiative that not only managed waste effectively but also contributed to maintaining a healthy and vibrant local environment.

### 3. Research Methods

In line with the nature of the research object, this study employs a qualitative method, which is used to investigate objects that cannot be measured in numbers. Moleong (2007) defines qualitative research as a procedure that produces descriptive data in the form of written or spoken words from individuals and observed behaviors of phenomena that occur. Meanwhile, according to Nasution (2020), Qualitative research essentially involves observing people in their environment, interacting with them, trying to understand their language, and interpreting their views on the surrounding world. The research design adopts the program evaluation approach using the Context, Input, Process, and Product (CIPP) evaluation model by Stufflebeam (2000),

conducting evaluations at the contextual, input, process, and product levels. The evaluation program design follows the CIPP model.

This study was conducted at Waste Bank Wijaya Kusuma within the timeframe of March 30, 2022, to April 20, 2022. The research location is at Waste Bank Wijaya Kusuma in *Griya Persada Elok* Housing, Mustika Jaya Subdistrict, Mustika Jaya City, Bekasi. Informant selection in this research was done using purposive sampling. According to Sugiyono (2008), purposive sampling is a technique for sampling data sources with specific considerations. These specific considerations may include the person being considered the most knowledgeable about what we expect, or perhaps they hold a position of authority, making it easier for researchers to explore the social object under investigation. The data collection techniques employed include participatory observation, in-depth interviews, and documentation.

## 4. Results and Discussion

### 4.1 Existing Condition of Wijaya Kusuma Waste Bank

The Wijaya Kusuma Waste Bank currently has a total of 130 customers in its vicinity, with 30 actively engaging in savings. The waste bank has not implemented specific strategies to boost the number of savers, as its primary objective is to serve the local community, particularly within the *Griya Persada Elok* housing area. Wijaya Kusuma Waste Bank openly invites anyone to join. Nevertheless, a considerable number of residents have not yet participated, citing reasons such as a lack of willingness, awareness, and the inconvenience of the waste bank's distant location, which makes it challenging for them to regularly deposit their waste.

Based on an interview with Mrs. Karmini, the head of the Wijaya Kusuma Waste Bank program, the waste collected by the bank is quite diverse. In her area, all types of waste can be sorted, but the waste accepted by the Wijaya Kusuma Waste Bank is limited to inorganic waste. Surprisingly, even items such as broken buckets and pans can be deposited in this waste bank. The following outlines the most common types of waste deposited by the customers.

**Table 1.** Profile of Wijaya Kusuma Waste Bank

Category	Explanation
Name	Wijaya Kusuma
Address	Griya Persada Elok Housing, Mustika Jaya, Bekasi, West Java
Director	Mimin Karmini
Year of Establishment	2014
No of Customer	130
Recycled Product	Non-organic Waste

The waste items are categorized into various types based on their materials and characteristics. In the category of plastic waste, the items include grocery bags, PP/HDPE bottles, wrappers, PP straws, and plastic containers. The paper waste category comprises archives, gray paper, newspapers, cardboard, duplex, notebooks, and cement sacks. Toys and miscellaneous items in the third category consist of buckets, Aqua cups, and hard plastics. Moving on to metal waste, this category includes cabinets, zinc, aluminum, copper, and steel. The bottles category

encompasses flint glass, cans, and Niumsari. Lastly, the miscellaneous category covers items like flip-flops/shoes, lightbulbs, batteries, and pots. The classification facilitates effective waste management and recycling efforts by systematically organizing different types of waste materials.

#### **4.2 Evaluating the Wijaya Kusuma Waste Bank Program**

Based on the research conducted by the researchers through interviews, observations, and documentation of informant subjects, this discussion revolves around the Evaluation of the Waste Bank Program to Empower the Community in Griya Persada Elok Housing using the CIPP evaluation model. The interview results are discussed as follows. In the context, the objectives of the waste bank program at Wijaya Kusuma Waste Bank in Griya Persada Elok are to provide additional income for the community by collecting and managing waste. It aims to stimulate the economic potential of the community and instill environmental consciousness. The program encourages cleanliness, reduces waste accumulation, promotes environmental health, and has economic value, as expressed by the founder, Mrs. Hj. Mimin Karmini. The community's response emphasizes the program's utility for both the environment and individuals, demonstrating the positive impact on waste management.

Regarding inputs, the planning of the Wijaya Kusuma Waste Bank program is geared towards empowering the community in waste management, allowing them to handle their waste independently and benefit from it. Legalization is considered essential to provide legal strength and bind the government apparatus to planning documents. The interview indicates that there is a specific regulation supporting the waste bank program. However, challenges arise in workload distribution and the need for specialized personnel. While the government's support is acknowledged, the waste bank operates independently, emphasizing self-sufficiency.

In the process of implementation, active community participation is crucial. Incentives, particularly financial incentives, play a role in maintaining this active involvement. The criteria for becoming a waste bank customer are simple: having waste to deposit. The community actively segregates waste at home, transporting it to the waste bank. Despite initial challenges, a significant number of residents have embraced waste segregation, supporting the waste bank's operations.

Concerning the product or the outcome of the waste bank program, the success is evident in the positive impact on the environment, social dynamics, and the economy. The waste bank significantly contributes to national waste reduction efforts, providing employment opportunities and additional income for the community. The founder emphasizes that the waste bank not only transforms the community's mindset towards waste but also enhances environmental cleanliness and greenery. Testimonies from community members further underline the positive changes, including cleaner surroundings and increased economic value from waste.

#### **4.3 Comprehensive Analysis of Legal Basis, Human Resources, and Funding**

The comprehensive evaluation of the Waste Bank Program at Wijaya Kusuma brings to light three critical criteria: Legal Basis, Human Resources, and Funding. In terms of the Legal Basis, the program stands out with a high level of actualization, benefitting from a well-defined legal foundation embedded in its policies. This legal framework, notably governed by the Mayor's Regulation, ensures not only compliance but also the effective and lawful execution of the waste

bank program. The presence of such a clear legal basis provides a robust foundation for the program's operations, reflecting its commitment to regulatory standards.

However, the Human Resources component reveals a moderate level of actualization. The organizational structure lacks a solid foundation built upon an in-depth analysis and specification of ideal job roles. This suggests a potential area for improvement in optimizing the program's human resources. Addressing this aspect could enhance efficiency and effectiveness, aligning human capital with the program's objectives and operational requirements. Strengthening the organizational structure may contribute to a more streamlined and coordinated implementation of the waste bank program.

**Table 2.** Waste Bank Program Planning Criteria Evaluation

Criteria	Fact	Results			Additional
		Low	Medium	High	
<b>Legal Basis</b>	The Waste Bank Program at Wijaya Kusuma has a clear legal basis in its policies, ensuring effective implementation (Mayor's Regulation)			V	Based on the factual conditions, the evaluation of inputs shows a high actualization in the components of legal foundations and financing. Meanwhile, in the human resources component, it is in a moderate state of actualization.
<b>Human Resources</b>	The organizational structure is not based on an analysis and specification of the ideal job roles.		V		
<b>Funding</b>	The presence of clear funding sources for the implementation of the waste bank program is derived from the local government's budget			V	

On the financial front, the Funding criterion indicates a high level of actualization. The program benefits from well-defined funding sources, primarily derived from the local government's budget. This financial clarity ensures stability and resource availability, contributing significantly to the successful implementation of the waste bank program. The existence of clear and reliable funding sources not only enhances the program's financial sustainability but also underscores the local government's commitment to supporting initiatives that promote environmental sustainability and community well-being. In essence, the robust financial foundation serves as a pillar for the program's continued success and impact. Overall, the evaluation provides valuable insights into the program's strengths and areas for enhancement, offering a roadmap for strategic development and sustained positive outcomes.

#### **4.4 Wijaya Kusuma Waste Bank Program Impact and Transformative Potential**

The Wijaya Kusuma Waste Bank Program has been observed to exert a significant influence on the local community. The benefits of the waste bank, however, are contingent upon the adherence of the waste bank management to established procedures. The ensuing discussion highlights the multifaceted advantages accrued by the community in Griya Persada Elok, encompassing social, economic, and environmental dimensions. The introduction of the Wijaya Kusuma Waste Bank is anticipated to foster increased interaction among community members in its vicinity.

This, in turn, is expected to instill a sense of ownership and responsibility, ultimately contributing to the creation of a more comfortable and cohesive environment. Despite these prospects, observations reveal that the community's engagement and collaborative efforts in waste management through the waste bank remain somewhat limited. The waste bank program adds value to waste materials, transforming them from perceived liabilities into potential assets due to their market value. Furthermore, the waste bank serves as a novel avenue for employment opportunities within the community. Participation in the program, either as waste bank administrators or customers, provides a tangible source of income.

Residents in Griya Persada Elok have reported economic benefits, including additional income generated from deposited waste and a notable shift in the negative perception associated with waste. Active community participation in the waste bank program contributes significantly to environmental well-being. This involvement helps mitigate air pollution resulting from waste incineration within the community and reduces the volume of waste accumulating in nearby disposal sites. It is crucial to emphasize that this environmental initiative stems from grassroots efforts within the community.

The Waste Bank Program's positive impact extends across various facets of community life. From observed trends, the program has the potential to induce long-term transformations in the social strata, stimulate waste separation practices, create employment opportunities, impart education on waste management, and foster financial literacy by emphasizing the importance of saving. The waste bank, therefore, emerges as a catalyst for positive change within the community.

### **5. Conclusion**

The Wijaya Kusuma Waste Bank Program in Griya Persada Elok demonstrates commendable success and impact. The waste bank, with its clear legal basis, efficient financial support, and a moderate emphasis on organizational structure improvement, has significantly contributed to community welfare. The program not only facilitates waste management but also stimulates economic growth, enhances environmental consciousness, and fosters positive societal changes. The transformative potential is evident in economic benefits, improved waste perception, and the program's role as a catalyst for lasting community changes. The findings emphasize the need for continued support, optimization of human resources, and strategic development to ensure the sustained success and positive influence of the Wijaya Kusuma Waste Bank Program. Looking ahead, sustained support, organizational refinements, and strategic planning will be key to maximizing the program's impact. The Wijaya Kusuma Waste Bank stands as a model for

community-driven environmental initiatives, showcasing the potential for long-term positive changes at the grassroots level.

## References

- Aparcana, S. (2017). Approaches to formalization of the informal waste sector into municipal solid waste management systems in low-and middle-income countries: Review of barriers and success factors. *Waste management*, 61, 593-607.
- Asri, T. M., & Insari, F. F. (2020). Evaluasi Program Corporate Social Responsibility (Csr) Program Bank Sampah Delima Pada Pt Pertamina Ep Asset 4 Field Cepu. *Profetik: Jurnal Komunikasi*, 12(2), 309-332.
- Azizah, W. N., Ishom, M., & Widiyanto, E. (2020). Bank Sampah Sebagai Alternatif Strategi Pemberdayaan masyarakat dalam mengembangkan kampung wisata tematik “kampung putih” Kota Malang. *Diklus: Jurnal Pendidikan Luar Sekolah*, 4(2), 88-100.
- Hapsari, R. S., Suwasono, E., & Daroini, A. (2020). Bank sampah sebagai upaya pemberdayaan masyarakat. *REVITALISASI: Jurnal Ilmu Manajemen*, 8(2), 226-231.
- Kumar, P., & Singh, R. K. (2021). Selection of sustainable solutions for crop residue burning: an environmental issue in northwestern states of India. *Environment, Development and Sustainability*, 23, 3696-3730.
- Mangindaan, D., Adib, A., Febrianta, H., & Hutabarat, D. J. C. (2022). Systematic literature review and bibliometric study of waste management in Indonesia in the COVID-19 pandemic era. *Sustainability*, 14(5), 2556.
- Muntazah, S. (2015). Pengelolaan Bank Sampah Sebagai Upaya Pemberdayaan Masyarakat di Bank Sampah Bintang Mangrove Kelurahan Gunung Anyar Tambak Kecamatan Gunung Anyar Surabaya. *E-Journal UNESA*, 4(1), 1-13.
- Nasution, A. G. J. (2020). *Metodologi Penelitian: Kualitatif dan Kuantitatif*. Yogyakarta: Pramasta Pustaka Ilmu
- Novianty, M. (2013). Dampak program bank sampah terhadap sosial ekonomi masyarakat di kelurahan Binjai, Kecamatan Medan Denai, Kota Medan. *Welfare State*, 2(4), 222073.
- Raharjo, S., Matsumoto, T., Ihsan, T., Rachman, I., & Gustin, L. (2017). Community-based solid waste bank program for municipal solid waste management improvement in Indonesia: a case study of Padang city. *Journal of Material Cycles and Waste Management*, 19, 201-212.
- Rudiyanto, T., Liiamaa, J., Toure, S., Afulani, O., & Johnstonee, A. (2022). Organizing Fundraising Event: A Qualitative Assessment of Project Plan in Save The Children Phoenix, Arizona. *Economic and Business Horizon*, 1(1), 40-49.
- Santifa, M., Warjio, W., Harahap, D., & Isnaini, I. (2019). Evaluasi Program Pemberdayaan Masyarakat Melalui Bank Sampah Mawar Sejadi di Kelurahan Sijambi Kecamatan Datuk Bandar Kota Tanjung Balai. *Strukturasi: Jurnal Ilmiah Magister Administrasi Publik*, 1(1), 89-98.
- Stufflebeam, D. L. (2000). The CIPP model for evaluation. In *Evaluation models: Viewpoints on educational and human services evaluation* (pp. 279-317). Dordrecht: Springer Netherlands.
- Sugiyono, D. (2008). *Metode Penelitian Bisnis*. Bandung: Pusat Bahasa Depdiknas.

Supriansyah, M., Syafari, M. R., & Nur, M. A. (2022). Community empowerment through waste bank program in Mandar Sari kelurahan Banjar regency. *International Journal Political, Law, and Social Science*, 3(1).

Wartama, I. N. W., & Nandari, N. P. S. (2020). Pemberdayaan Masyarakat Dalam Pengelolaan Sampah Rumah Tangga melalui Bank Sampah di Desa Sidakarya Denpasar Selatan. *Parta: Jurnal Pengabdian Kepada Masyarakat*, 1(1), 44-48.