

## Household Waste Management As An Effort Improving The Quality Of The Community Environment

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### ABSTRACT

This community service activity aims to increase community awareness and skills in household waste management through a participatory approach. The program was implemented through outreach, training, and mentoring methods in various regions, with a focus on sorting organic and inorganic waste, composting, and utilizing waste banks. The results of the activity showed an increase in community understanding and behavior towards waste management, although there are still obstacles such as limited facilities and consistency of implementation. This activity demonstrates that active community involvement, support facilities, and economic incentives are key to the success of sustainable household waste management.

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## 1. INTRODUCTION

Waste is an increasingly complex environmental problem due to population growth, changes in consumption patterns, and lifestyles. Data from the Ministry of Environment and Forestry (KLHK, 2022) shows that Indonesia produces approximately 68 million tons of waste per year, with household waste contributing the largest portion, reaching 60–65%. This type of waste is mostly organic waste (food scraps, leaves) and inorganic waste (plastic, metal, glass, paper) (Zamhari et al. 2022). The main problem in household waste management is the low level of public awareness of the importance of sorting waste at the source (Subianto et al. 2023). Most people still view waste as having no value, leading them to dispose of it without proper management (Rahim, Endang Sri Mulyawati L, and Juliana 2024). As a result, piles of waste often end up in landfills (TPA) without adequate processing. This triggers various negative impacts, such as soil, water, and air pollution, as well as public health risks. Furthermore, the waste management system in many areas still relies on collecting, transporting, and disposing, without optimal efforts to reduce, reuse, and recycle (3R) (Kristina et al. 2025). However, if household waste is managed properly, it can provide economic benefits through the reuse of valuable materials. For example, organic waste can be processed into compost, while inorganic waste such as plastic and metal can be sold to waste banks (Austin 2021).

This paradigm shift from "throw away" to "process" requires the active involvement of all levels of society. Community service activities in the form of education, training, and mentoring are important strategies for fostering the habit of sorting and processing household waste (Austin 2021). In this way, the waste problem can be controlled and environmental quality can be improved (Maharani 2025). These community service activities are designed to provide the community with an understanding of the importance of proper household waste management, while equipping them with practical skills in processing waste into something useful (Oka Ariartha 2025). The approach used is participatory, so that the community becomes not only the object, but also the subject of behavioral change in waste management (Rindyani, Eryati, and Ritonga 2024).

## 2. METHODS

### 2.1. Location and Time

This community service activity was carried out in several residential areas and settlements in urban and rural areas that have household waste problems. The location selection was carried out generally to reflect the various characteristics of the community. The program implementation period was 3 months, covering the preparation, implementation, and evaluation stages.

### 2.2. Activity Stages

1. Preparation
  - a. Initial survey to identify waste problems in the target neighborhood.
  - b. Preparation of educational modules on household waste management.
  - c. Coordination with neighborhood unit (RT/RW) heads or community leaders.
2. Implementation of Education and Training
  - a. Socialization: Providing materials on the negative impacts of waste and the benefits of proper management.
  - b. Waste Sorting Training: Separating organic and inorganic waste.
  - c. Recycling Practice: Making compost from organic waste and crafts from inorganic waste.
  - d. Institutional Strengthening: Establishing or strengthening waste banks.
3. Assistance and Monitoring
  - a. Assisting the community in implementing waste sorting and processing habits.
  - b. Monitoring progress and evaluating implementation results.

### 2.3. Approach Method

- a. Participatory: Actively involving the community in every stage.
- b. Demonstrations: Hands-on practice of waste processing.
- c. Group Discussions: Exploring ideas and solutions from the community.

## 3. RESULTS AND DISCUSSION

The implementation of this community service activity showed that the majority of residents initially did not have the habit of sorting their waste. Organic and inorganic waste were usually mixed in one container and disposed of at the landfill. The main contributing factors were a lack of knowledge, facilities, and motivation. Through educational programs, public awareness of the negative impacts of poor waste management increased. Outreach using simple language and engaging visual media helped the community understand more easily.

Waste sorting training, accompanied by hands-on practice in the community, showed positive results. Residents began to understand the difference between organic waste, which can be processed into compost, and inorganic waste, which can be sold or recycled. Household-scale composting has become a favorite activity for residents, especially housewives. The resulting compost is used as fertilizer for yard plants, providing immediate benefits. Meanwhile, plastic and metal waste is collected for sale to waste banks, which provides additional income for residents.

Obstacles faced in program implementation include limited facilities, such as separate containers for waste sorting, and the persistence of residents who are inconsistent in implementing waste sorting. Therefore, the program's sustainability is needed through support from local governments, NGOs, and the private sector. From this activity, it can be concluded that a participatory and practical approach is more effective in changing community behavior than simply providing theory. The involvement of community leaders and the provision of economic incentives are key factors in its success.

## 4. CONCLUSIONS

Community service activities on household waste management have successfully increased residents' awareness and skills in sorting and processing waste. The application of the 3R principle (Reduce, Reuse, Recycle) has been proven to reduce the volume of waste disposed of at landfills (TPS/TPA). The utilization of organic waste into compost and inorganic waste through waste banks provides environmental and economic benefits.

### Recommendations:

1. Ongoing mentoring is needed to ensure that waste management habits are maintained.
2. Local governments need to provide supporting facilities such as sorting containers and separate transportation systems.

3. Similar activities should be expanded to other areas by adapting the approach to the characteristics of local communities.
4. Multi-stakeholder collaboration is needed between the government, communities, the private sector, and academics to strengthen the integrated waste management system.

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