

## Assistance in managing organic and non-organic waste in residential areas

Wilarso\*, Aswin Domodite, Asep Saepudin, Asep Dharmanto, Rudi Indrawan, Fauzi Ramdani

\* Sekolah Tinggi Teknologi Muhammadiyah Cileungsi, Cileungsi, Bogor, Jawa Barat, Indonesia

\* Jl. Angrek No. 25, Perum PTSC, Cileungsi, Bogor, Jawa Barat 16820

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#### \* *Korespondensi:*

**Wilarso**

wilarso@sttmcileungsi.c.id

### ABSTRAK

Good management of organic and non-organic waste has an impact on comfort in residential areas and currently, in the Cileungsi area, waste management has not been managed properly and hurts the environment. As for housing, RT, and RW environments, they are less active in terms of waste management. In the waste disposal process, each RT objected to the annual fee is increased. The fee charged for disposing of waste to the final shelter is around Rp. 12,500, - per head of the family. It has been more or less 5 years since the levy fee has not been increased, due to reason that the fee is used for other needs. Another problem also occurs in the Pesona Vista residential area, where garbage is collected by related parties, which takes 3-4 days each week. Under these conditions, discomfort arises in the environment, starting from the smell of garbage, because the rats eat the trash. The solution offered in this community service activity is organic and non-organic waste management to improve the economy of the community around the housing and create a healthy atmosphere in the housing environment. Organic waste will be managed to become liquid or solid compost. In the process of managing this organic waste using a counter, where there is a need for training on proper and correct operating and maintenance procedures. Meanwhile, plastic waste will be managed, to be sold to collectors.

Keywords: Management, organic waste counter, training on how to operate, safety in operation.

## 1. INTRODUCTION

At this time the organic waste is taken by the cleaning staff to be sent to the final disposal site. If it is too late to pick up the wet garbage, there will be a buildup of garbage which results in a pungent odor [1]. This culture in waste management is an obstacle for the community to create a comfortable, clean, and environmentally friendly atmosphere [2]

The main problem for housing residents in the Mekarsari area is in managing organic and non-organic waste, where the waste has not been managed properly. The retribution fee for each citizen objected to being increased, for various reasons. This becomes a burden on the RW management to find a solution so that there is a settlement for the management of organic and non-organic waste [3].

In previous research, where the waste management is recycled it becomes a craft and exhibits it. Then the organic waste is made into compost [3]. Waste management activities for residents that are often carried out are counseling, training, and mentoring [4]. The results of the activity show an increase in commitment and a change in attitude toward the importance of waste management. Increasing the ability of administrators in managing household organic waste and waste sorting techniques (3R) [5]. Based on the analysis, it is obtained the influence of the role of the Independent Waste Management



Network. So it is important to map locations, potentials, and challenges while restructuring the main organization so that it can provide performance in the process of mentoring, coordinating, and liaising with various stakeholders [6].

Garbage accumulation if not handled immediately will affect the comfort around the housing, and will interfere with the health of the surrounding community. The second problem is regarding facilities and infrastructure in the management of organic and non-organic waste [7]. Where these facilities and infrastructure become a place to manage organic and non-organic waste, and can run according to plan [8]. So far, the place used for rent is the yard of a house that is not occupied by residents. This is very necessary for the management of organic and non-organic waste [9]. The data recording technique used a voice recorder and camera, data analysis was carried out using qualitative data analysis. The process is done by data reduction, data presentation, and conclusions. The data validity technique used is the triangulation technique. The results of this study are: the process of community empowerment through waste management uses 5 stages the empowerment process namely, Enabling, Strengthening, Protection, Support, and Maintenance [3].

The purpose of this service is to provide an induction to residents in housing, so that they can improve their welfare, by managing organic and non-organic waste.

## 2. METHOD OF IMPLEMENTATION

The methods that will be applied to Community Service (PkM): 1) This literature study is to find out research that has been done by previous researchers so that they know what developments can be done. 2) This briefing is to provide input to residents, to differentiate each waste that will be sold to collectors, as well as to clean some of the plastic as a label on the bottle. So that the bottle is clean, and has a high selling value. 3) Implementation with residents in managing waste to be sorted which is organic waste and which is non-organic. An increase in landfills that far exceeds the capacity of existing services and management facilities, so that waste accumulates everywhere, especially in temporary waste disposal sites (TPS), which will cause various negative impacts such as reduced environmental hygiene and health, as well as environmental beauty [10].

## 3. RESULTS AND DISCUSSION

Situation analysis in carrying out community service, where organic waste is collected by cleaning staff to be sent to the final storage site. If it is too late to pick up the wet garbage, there will be a buildup of garbage which results in an unpleasant and pungent odor [1].

This culture in waste management is an obstacle for the community to create a comfortable, clean, and environmentally friendly atmosphere [2]. Table 1 provides an overview of how the process of managing organic waste starts in residents' homes. When sorted, it makes it easier to pick up trash every day. Meanwhile, Table 2 provides an overview of non-organic waste management.

**Table 1.** General description of organic waste

Aspect	Conditional
The rest of the household	After processing, the remaining organic waste is disposed of in the waste bin, which is in the form of vegetable waste and other types, and finally, it is picked up by mobile waste officers to be disposed of in a landfill.

**Table 2.** General description of non-organic waste

Aspect	Conditional
Non-organic waste	Separation of non-organic waste is separated for each house after a lot of it is collected and handed over to non-organic waste collectors, such as (plastic bottles and cups, cardboard, iron, books, etc.)
Non-organic waste collector	Receiving non-organic waste is to be separated according to the type of goods received and then sorting the goods according to their type. Plastic

bottles and cups must be cleaned from the labels so that they have a high-selling value

In the implementation of community service carried out in one of the housing areas in the Cileungsi area. One alternative to supporting the waste bank strengthening program is by increasing knowledge, understanding, and skills support in the field of marketing communications. For waste bank managers, this activity can improve marketing communication skills to be more creative in conveying the benefits of waste banks and prospects for waste marketing [11]. Occupational Safety and Health (K3) in the electricity sector so that work equipment in the form of machines that are operated using electricity and their installations comply with applicable standards and SOPs, with the hope of zero accidents for safety and health in the workplace environment. Electrical Occupational Safety and Health (K3) Training for Waste Bank Managers in one of the housings areas in the Cileungsi area aims to increase knowledge, handling and what preventive steps must be taken when unsafe use and installation is found or which can threaten work safety or threats fires due to short circuits and so on and prioritize or prioritize Occupational Safety and Health (K3) in general and especially Electricity so that managers become educated on how Occupational Safety and Health (K3) especially Electricity can be carried out in activities and daily life both in the Garbage Bank environment in one of the housing in the Cileungsi area and elsewhere [12]. Figure 1 is the result of the collecting waste and plastic bottles by residents



**Figure 1.** Collection of glass and plastic bottle waste by residents

Used goods collected from residents are then sorted and selected according to the type. Then after sorting, the plastic is cleaned so that it has a high selling value when it is handed over to collectors, in Figure 2 below is the storage of used goods after sorting



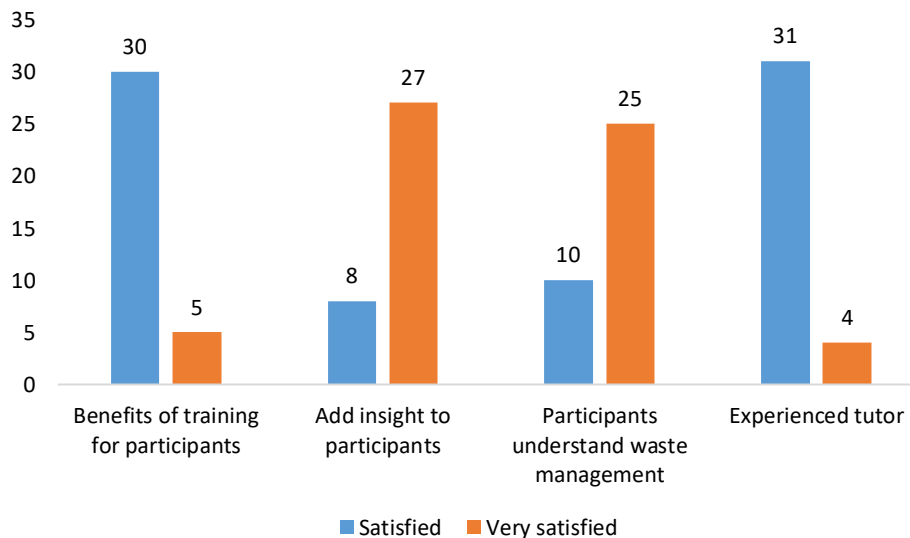
**Figure 2.** Storage of used goods after sorting

After sorting the used goods, starting from plastic cups, plastic bottles, and cardboard, they are collected together to be deposited to the used goods collectors. In the delivery of used goods, this collector needs to be managed properly, so that the used goods have more selling value. Research on waste bank management in community empowerment, namely: increasing community awareness of waste, and increasing income in waste exchange. The role of waste banks is needed in the residential environment [13]. Figure 3 is the collection of used goods by collectors.



**Figure 3.** Collection of evidence by collectors

Goods that have been collected by residents are taken by collectors to be sold. The proceeds from this sale are managed by environmental officials and distributed to residents who have contributed to waste management. From the questionnaire delivered to the participants, a total of 35 participants who filled out the questionnaire were satisfied and very satisfied. In Figure 4, the participants are happy and very satisfied with the assistance in organic and non-organic waste management, and add insight into online marketing



**Figure 4.** Graph of participant satisfaction following training activities

The main activity in this waste management program is waste transportation by officers every 2x/week. Based on pre-test and post-test data processing using the Wilcoxon test, a probability value of 0.000 or less than 0.006 ( $p < 0.06$ ) was obtained [14]. In managing waste in the form of paper it is used for handicrafts, but making these crafts requires perseverance in managing them. In the development of waste management, web-based mobile can be developed that can run on smartphones with Android and IOS operating systems [15].

An organic refuse counter was given to the housing area in conjunction with the PkM implementation. This tool will eventually be used to chop organic waste, and the resulting liquid compost fertilizer will be made from the chopped organic waste. where residents pay 70% of the price for this tool and the service delivery team pays 30% in figure 5.



**Figure 5.** Garbage counter tool

#### 4. CONCLUSION

The waste management carried out by residents in housing has a positive impact, especially to provide education regarding environmental hygiene, as well as improve the welfare of the surrounding residents. From mentoring waste management to providing education to every citizen, so they can distinguish the waste that will be disposed of. Every waste has a high economic value, and if it is managed properly, it will increase income for the residents who manage it. From the questionnaires submitted, 79% of residents were satisfied with these activities, and 61% were very satisfied. At the end of the activities carried out by the residents in the housing, they were given a grant for an organic waste counter, where the grant was a subsidy of 65% from residents and 45% from universities.

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