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## **Formation of Waste Banks and 3R Waste Management in Villages in Creating Healthy Independent Villages**

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### **Abstrak**

Kegiatan Pengabdian Kepada Masyarakat melalui sosialisasi dan praktek langsung kepada masyarakat dengan mendirikan bank sampah dan mengelola sampah berdasarkan prinsip 3R bertujuan untuk mengedukasi masyarakat tentang urgensi pengelolaan sampah dalam mewujudkan lingkungan yang bersih dan sehat. Kegiatan ini dilaksanakan di salah satu desa di Jawa Timur tepatnya di Desa Trewung, Kecamatan Grati, Kabupaten Pasuruan, Jawa Timur. Kegiatan ini diawali dengan survei dan koordinasi dengan perangkat Desa Trewung terkait permasalahan sampah yang dihadapi masyarakat. Kemudian menyusun tim pengabdian masyarakat dan meminta izin pada Pemerintah Desa Trewung, Serta pelaksanaan sosialisasi dengan mengedukasi masyarakat melalui kegiatan sosialisasi serta implementasi pendirian bank sampah dan pengelolaan sampah berdasarkan prinsip 3R. Hasil dari kegiatan pengabdian ini masyarakat Desa Trewung lebih teredukasi dan semakin memahami pentingnya mengatasi permasalahan sampah melalui pemanfaatan sampah yang dapat bernilai ekonomis serta pengelolaan sampah yang tepat berdasarkan prinsip 3R. Kegiatan ini membantu masyarakat dengan cara mensosialisasikan pentingnya menanamkan kebudayaan yang menciptakan lingkungan bersih dan sehat.

**Kata Kunci:** *Bank Sampah, 3R, Desa Mandiri*

### **Abstract**

Community Service Activities through socialization and direct practice to the community by establishing a waste bank and managing waste based on the 3R principle aims to educate the community about the urgency of waste management in creating a clean and healthy environment. This activity was carried out in one of the villages in East Java, precisely in Trewung Village, Grati District, Pasuruan Regency, East Java. This activity began with a survey and coordination with the Trewung Village apparatus regarding the waste problems faced by the community. Then form a community service team and ask for permission from the Trewung Village Government, as well as implementing socialization by educating the community through socialization activities and implementing the establishment of a waste bank and waste management based on the 3R principle. The results of this community service activity are that the Trewung Village community is more educated and increasingly understands the importance of overcoming waste problems through the utilization of waste that can have economic value and proper waste management based on the 3R principle. This activity helps the community by socializing the importance of instilling a culture that creates a clean and healthy environment.

**Keywords:** *Waste Bank, 3R, Independent Village*

## **INTRODUCTION**

The waste problem is not only a national problem but also occurs at the village level. Waste is a major factor in environmental pollution that has an impact on public health (Wojnowska-Baryła, 2022). To maintain and preserve a clean and healthy environment, one of which is by preparing a waste processing facility that can be utilized and has economic value for the community. To overcome the waste problem, a paradigm shift needs to be made that views waste as a resource that has economic value and can be utilized. What was originally just collecting, transporting and disposing of waste to the landfill has changed to waste management by implementing 3 R (Reduce, Reuse, Recycle) (Khoiriyah, 2021).

Getting a good and healthy environment is the right of every citizen which is explicitly guaranteed in the constitution. Maintaining a healthy environment can be seen from the simple mechanism in waste processing. Waste management that is directed at the 3R concept aims to reduce waste from its source, reduce environmental pollution, and provide benefits to the community, especially for public health. Management with the 3R concept is also expected to reduce the burden on the TPA (Final Processing Site) in receiving waste (Wibowo, 2021; Susilo, 2019).

The waste problem is also felt by the people of Trewung Village, Grati District, Pasuruan Regency, East Java. The surrounding community has not utilized plastic waste for something that can generate economic value. So far, plastic waste has only been burned because it cannot be dissolved by the soil. This condition is supported by the knowledge that is not yet known whether plastic waste or waste is useful for the local community. In fact, plastic waste if processed into craft materials has high economic value, selling value and lasts a long time. Waste reduction must start from the community itself, namely by cultivating the habit of throwing garbage in its place and separating dry and wet waste so that it can be recycled and can be utilized so that it has economic value for the community (Saleh, 2023).

Waste management through the formation and principles of 3R has become a trend that needs to be implemented by the Trewung Village community. A waste bank is one of the strategies in implementing 3R in waste management at the community level. This innovative solution asks the community to be better able to sort waste, because indirectly waste also has economic value. In addition to creating a healthy environment, waste banks are also expected to have a positive impact on the environment in improving economic conditions in a particular community or area (Widayat, 2021).

The purpose of implementing community service activities through the formation of a waste bank and waste management based on the 3R principle is to provide written ideas or ideas regarding alternative solutions in handling waste processing in the Trewung Village environment by providing education to the community about waste banks starting from establishment to waste management mechanisms based on the 3R principle.

Through this article as a result of community service activities, the need for the formation of a waste bank and 3R waste management in Trewung Village, Grati District, Pasuruan Regency, East Java can be implemented properly. Through community service activities, it is hoped that it can Realize a Healthy Independent Village.

## **IMPLEMENTATION METHOD**

The method of implementing community service activities in line with the waste problem in Trewung Village is carried out by educating the community through socialization activities and implementing the establishment of a waste bank and waste management based on the 3R principle. This method is considered effective in solving the problems experienced by the Trewung Village community.

To achieve the utilization of the establishment of a waste bank and waste management based on the 3R principle in Trewung Village, a community service activity program in the form of socialization has been designed and implemented by the author and team. The stages carried out in this activity include:

1. This activity begins with a survey and coordination with the Trewung Village apparatus regarding the waste problems faced by the community.
2. Establishing a community service team and taking care of permits with the Trewung Village Government.
3. Implementing socialization by educating the community through socialization activities and implementing the establishment of a waste bank and waste management based on the 3R principle.

The output target of community service activities through the establishment of waste banks and waste management based on the 3R principle is to create a healthy independent village.

## **IMPLEMENTATION RESULTS**

Based on the identification of environmental conditions in Trewung Village, it shows that some people are indifferent to waste management in the surrounding environment. Lack of public awareness in handling scattered waste causes the environment to become increasingly polluted. People think that waste management can only be done by paying for transportation services which ultimately spend money on household waste needs.

Based on the identification of problems, the core program in the implementation of this activity is formulated, namely the implementation of socialization and direct practice for the community in Trewung Village in order to increase community understanding and knowledge in managing waste into economic value and the formation of a waste bank in Trewung Village. Thus, community service activities in Trewung Village aim to provide solutions to waste problems by providing an understanding in the form of how to handle waste through the formation of a waste bank and waste management based on the 3R concept.

Community service activities through the formation of a waste bank and waste management based on the 3R principle are carried out with the hope of being able to re-grow public sensitivity or concern regarding waste problems that cannot be underestimated. Choosing a waste bank as one of the household waste management is the right thing to do because it has social and economic value and can maintain the household environment so that it remains beautiful and healthy. Participants were also given several tips/ways to deal with waste, one of which was by making Ecobricks.

This activity helps the community by socializing the importance of instilling a culture that creates a clean and healthy environment. The community will have a high level of awareness of the environment and uphold a culture of cleanliness. In addition, it also helps the community by becoming a customer of a waste bank, so that waste will be saved and provide results instead of spending money on waste transportation. The community will get additional income through waste savings at the waste bank.

The target audience generally has an adequate level of knowledge about the dangers of waste to public health conditions. However, most people still do not have the right knowledge in waste management, especially regarding 3R which is still not widely understood by the community. The potential benefits obtained if the 3R concept is implemented are also not widely known. The habit of people burning their waste is still considered not to damage the environment.

Based on a survey related to waste problems in Trewung Village, which shows that organic waste is the dominant type of waste. This community service activity was carried

out to provide knowledge to the community in Trewung Village regarding the utilization and management of waste to create a healthy village. From the source, organic waste must have been sorted for composting using various methods, including biopore holes and simple composters. The usefulness of biopore holes in addition to being a place for composting organic waste also allows rainwater to be absorbed into the soil, thereby reducing waterlogging. A simple composter can be made using a modified used drum so that the compost results can be in the form of solid fertilizer and liquid fertilizer.

In addition to organic, inorganic waste in Trewung Village needs to be managed using a waste bank. Good sorting can be the basis for the development and operation of a waste bank. To make the value of waste more efficient, the formation of a waste bank can be planned. If the number of customers increases and the amount of waste deposits increases, the frequency of opening the bank can be increased. Increasing the value of waste can be done by shredding plastic collected in the waste bank. In addition, recycling plastic into several products such as ecobricks or paving blocks also increases the functional value of waste.

In its handling, waste must be managed properly, involving all parties, especially the community. Currently, waste management is directed at the 3R concept (Reduce, Reuse, Recycle) which aims to reduce waste from its source, reduce environmental pollution, and provide benefits to the community. Management with the 3R concept is expected to reduce the burden on the TPA (Final Processing Site) in receiving waste.

Trewung Village is an environment that has been struggling with waste problems for a long time, both waste with a certain volume and unpleasant odors that pollute the air in an environment. Community Empowerment is a development process in which the community takes the initiative to start a social activity process to improve their own situation and condition, community empowerment can only happen if the community itself participates. Community empowerment in overcoming environmental problems can be offered on the basis of mutual cooperation, in order to reduce the negative impact of waste that occurs in the surrounding environment with the media of waste banks and 3R management.

Written idea about the establishment of a Waste Bank in Trewung Village As a result of community service activities, it will provide an understanding to the community about one way to handle waste that can also have economic value. Waste banks are not only beneficial for the environment, but can also be reviewed as beneficial for the economy, education, empowerment and social. The establishment of a waste bank is an activity that is social engineering in nature where the community learns to sort waste and raises public awareness in processing waste wisely and in turn will reduce waste transported to the TPA.

Environmental problems are the background to the establishment of the Waste Bank located in Trewung Village by facilitating the Trewung Village community. Several points were chosen because they are close to several waste collectors and TPS. The planning for the establishment of a waste bank was carried out carefully and resulted in approval of the establishment of a waste bank and the administration system and devices that will be on duty. The establishment of a Waste Bank will maximize community empowerment in managing their household waste through periodic waste collection and savings as Waste Bank customers.

If waste management can run optimally, it will certainly have a good impact on the community and the environment, such as organic waste can be used as fertilizer, plastic waste can be used for various crafts, while B3 waste is separated and disposed of directly at the TPA. If waste is reduced, the incidence of disease will also decrease because diseases such as insects also decrease due to the absence of piles of waste and the environment

becomes clean and comfortable.

The solution to the waste problem is not only done by relying on cleaning staff. All levels of society must help the government to work together in dealing with the waste problem by implementing the 3R system (reduce, reuse, recycle) in the form of a waste bank in Trewung Village. This system is useful for managing waste by accommodating, sorting, and distributing waste to waste processing facilities in this case to the TPS in Trewung Village. So that waste in the final disposal site can be reduced and can even have economic value.

## CONCLUSION

The results of community service activities in the form of implementing socialization and direct practice for the community in Trewung Village show that the community is more educated and increasingly understands the importance of overcoming waste problems through the utilization of waste that can have economic value and proper waste management based on the 3R principle. This activity helps the community by socializing the importance of instilling a culture that creates a clean and healthy environment. The community in Trewung Village will have a high level of awareness of the environment and uphold a culture of cleanliness so that a healthy independent village is created.

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