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Increasing Environmental Conservation and Economic Value of Waste Through Waste Bank Management

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Abstract: The Trirejo Village Government, Loano District, Purworejo Regency has succeeded in educating its people to be aware of a clean and healthy environment. The mindset of the community needs to be changed that waste will be of economic value to improve welfare. One way to maintain a clean environment is the management of a waste bank that can be used as an economic value. The purpose of this activity is to increase environmental conservation and the economic value of waste through waste bank management. The community-based 3R (reduce, reuse, and recycle) waste management strategy is able to change the imagination of many people towards waste that has no economic value. The type of research used is descriptive qualitative. The method used in this research is the phenomenological method as a medium to examine and analyze life. individual in the form of experience of phenomena or appearances as they are which is commonly referred to as consciousness. The TPST 3R waste bank manages waste originating from household waste and other types of household waste. then the waste is also distinguished again between organic and inorganic waste.

Keywords: Waste Bank, Recycling, Economic Value, Environmental Preservation

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INTRODUCTION

Changes in people's varied consumption patterns resulted in an increase in the volume of waste. The increase in the volume of waste is not only in the amount but also in the types of waste that are increasingly varied. The problem faced by the Trirejo community today is how to manage waste. The amount of garbage scattered in the surrounding environment causes an unpleasant odor that invites flies and mosquitoes that carry disease. This is because the community needs to change the meanseat regarding waste that has no economic value (Asteria & Heruman, 2016).

Garbage banks are one of the community's alternatives to deal with waste problems. The community-based 3R (reduce, reuse, and recycle) waste management strategy is able to change the imagination of many people towards waste that has no economic value (Mohammed et al., 2020). In Purworejo district, Indonesia, several waste banks have been established. One of them is the TPST 3R waste bank in Trirejo, Loano which was pioneered by Vebrian Mahendra is now the main waste bank in Purworejo. In addition to being a pioneer in the establishment of the TPST 3R waste bank, he is also a speaker at various waste bank socializations (Fitria & Kadaria, 2018).

Based on Article 1 Number 5 of Law Number 18 of 2008 concerning Waste Management (Pasal 1 Ayat 5 Undang-undang Nomor 18 Tahun 2008 tentang Pengelolaan Sampah), Waste Management is a systematic, comprehensive, and sustainable activity that includes waste reduction and handling. Based on Article 1 Number 1 of Law Number 18 of 2008 concerning Waste Management, Waste is the remains of human daily activities and/or natural processes in solid form (Vijayan & Parthiban, 2020). According to the World Health Organization (WHO) waste is something that is not used, not used, not liked or something that is thrown away that comes from human activities and does not happen by itself (Aryenti, 2011).

Waste banks can be in the form of cooperatives or foundations (PERMEN LH No. 13 of 2012, Article 8) with a service area of at least 1 kelurahan (PERMEN LH No. 13 of 2012, Appendix I, part B, No 4.e.). Each saver in the waste bank can save 3 types of waste, namely: (a) Paper, paper waste includes newspapers, magazines, cardboard, and duplexes; (b) Plastic, plastic waste includes clear plastic, plastic bottles, and other hard plastics; (c) Metal, metal waste includes iron, aluminum, and tin (Arifin et al., 2020).

Seeing this problem, the researcher also wants to examine how the economic condition of the Sejiwan village community, Laono after the existence of the 3R TPST Waste Bank and how the 3R TPST Waste Bank does in order to increase the economic value of waste.

According to Mr. Vebrian Mahendara, the waste bank is a place to collect trash that has been split in a clean condition and later the waste will increase its economic value. The construction of the 3R TPST waste bank began with the enthusiasm of the youth of Trirejo village youth groups to make waste alms activities. The activity was carried out by taking garbage from the community around from house to house, the response from the community regarding this activity was very good. Through the waste alms activities, it became the basis for the establishment of the TPST 3R Waste Bank. There are many types of waste that can be taken based on Article 2 paragraph (1) of Law 18 of 2008 concerning Waste Management, waste can be managed into 3 types, namely: (a) Household waste is waste that comes from daily activities in the house stairs that do not include feces and specific waste; (b) Waste similar to household waste is household waste originating from commercial areas, industrial areas, special areas, social facilities, public facilities, and/or other facilities; (c) Specific Waste is waste which due to its nature, concentration, and/or volume requires special management. Specific Waste includes: Waste containing hazardous and toxic materials; Waste containing hazardous and toxic waste materials; Garbage arising from disasters; Building demolition debris; Waste that cannot be processed technologically; and/or Garbage that does not occur periodically (Mohammed et al., 2020).

The types of waste can be divided into several types, namely based on the nature, source, shape. Types of waste based on its nature can be divided into organic waste and inorganic waste. Organic waste - can be decomposed (degradable) Organic waste, namely waste that easily decomposes such as food scraps, vegetables, dry leaves, and so on. This waste can be further processed into compost, for example: leaves, wood, egg shells, animal carcasses, plant carcasses, animal and human waste, food waste, human waste, cardboard, paper, etc (Srivastava et al., 2020).

Inorganic waste that does not decompose (undegradable) Inorganic waste, namely waste that does not decompose easily, such as plastic food packaging containers, paper, plastic toys, bottles and drinking glasses, cans, wood, and so on. This waste can be used as commercial waste or waste that can be sold to be used as other products. Some of the inorganic waste that can be sold are plastic food packaging containers, bottles and used drink glasses, cans, glass, and paper, both newsprints, HVS, and cardboard. 10 Types of waste based on the source, can

be divided into: natural waste, human waste, household waste, consumption waste, office waste, industrial waste, and nuclear waste.

The TPST 3R waste bank manages waste originating from household waste and other types of household waste. Then the waste is also distinguished again between organic and inorganic waste. For the management of organic and inorganic waste is distinguished.

The TPST 3R Trirejo, Loano waste bank was established in 2014 with a total of 300 customers. Then in 2016 received financial assistance from the province to manage organic and inorganic waste. In 2017 it was declared a Parent Waste Bank and there have been around 30 unit waste banks joined, so that the total customers of the TPST 3R Waste Bank are currently around 9000 customers. Each waste bank unit has 100 customers.

To increase the number of customers at the TPST3R waste bank, it is necessary to improve the management of the waste bank and change the meanseat of the community regarding waste. It is necessary to study the factors that influence participation in becoming customers so that the results of this study can be used as a reference for the management of the TPST 3R waste bank. Therefore, researchers are interested in conducting research on increasing environmental conservation and the economic value of waste through the management of the 3R TPST waste bank in the village of Trirejo, Loano.

METHOD

The type of research used is descriptive qualitative. According to Sugiyono (2016), the qualitative descriptive method is a research method based on the philosophy of postpositivism which is commonly used to examine the condition of natural objects, where research acts as a key instrument and describes a situation objectively or based on visible facts. The method used in this research is the phenomology method. According to Schutz, phenomenology as a method is formulated as a medium for examining and analyzing the inner life of individuals in the form of experiences regarding phenomena or appearances as they are commonly known as consciousness.

The study was conducted in Sejiwan village, Loano sub-district, Purworejo regency, where the 3R TPST Waste Bank is located in October 2021. Data collection techniques were carried out by observing and interviewing waste bank management officers. According to Suharsimi Arikunto, observation is direct observation of an object that is in the environment, whether it is currently ongoing or still running, which includes various activities of attention to an object study using sensing. Actions that are carried out intentionally or consciously and

in sequence. Observations were carried out directly at the TPST 3R waste bank to find out how the waste management process started from selection to pressing.

According to Koentjaraningrat, interview is a method used for certain tasks, trying to obtain information and verbally forming respondents, to communicate directly. The interviews we conducted using interview questionnaires. The interview questionnaire that we made was used to find out some data from the sources, such as: (1) The early history of the establishment of the 3R TPSP waste bank; (2) What was the initial purpose of the establishment of the 3R TPST waste bank; (3) Obstacles faced by waste banks in empowering the economy to improve; (4) What solutions are provided by the waste bank to overcome the existing obstacles; (5) How is the management system for waste bank customer savings books; (6) how much (volume) of waste is obtained in a matter of per day, per month, and per year; (7) how is the potential for community improvement through waste banks; (8) what are the social impacts after the existence of the waste bank; and (9) how many types of waste are managed and how to manage them.

FINDING AND DISCUSSION

Finding

Based on the results of observations made, it shows that the villagers do not have a low level of awareness about environmental cleanliness. This can be seen from the habit of disposing of waste, the environmental conditions of the village and the understanding of residents regarding waste management as well as the limitations of TPS facilities to accommodate household waste that is generated every day. Garbage banks are one of the community's alternatives to deal with waste problems. The community-based 3R (reduce, reuse, and recycle) waste management strategy is able to change the imagination of many people towards waste that has no economic value.

Characteristics of waste that can be reused (reused) such as paper, plastic bottles, cardboard and others that can be resold at different prices. This is as stated by Vabian: “plastic cups, syrup glass bottles, soy sauce glass bottles can be sold again, the prices vary from Rp. 500 to Rp. 2,000 per kilo. Types of waste that can be reduced (reduced) such as the use of plastic waste, but people are still not aware of the harmful effects of plastic waste (Ruj et al., 2015). Nearly 60% of the waste generated by households is plastic waste. Meanwhile, waste that is recycled (recycled) includes dry leaves, unused vegetables, used rice and others (Byun & Han, 2021; Gregson & Crang, 2015).

Discussion

Several factors that influence waste processing which are considered as system barriers are population distribution and density, socio-economic and physical environmental characteristics, attitudes, behavior and culture in the community (Maya et al., 2018). The environmental problem that often occurs is the accumulation of household waste. All households produce waste, both organic and inorganic which has the potential to pollute the environment. Several factors that influence waste processing which are considered as system barriers are population distribution and density, socio-economic and physical environmental characteristics, attitudes, behavior and culture in the community (Sanusi & Istanti, 2020).

Initial Conditions of Waste Management

Waste management in Trirejo Village comes from the source of waste, namely household waste that is still mixed.

Collecting System

The collection is carried out in each house, while the technical method of transportation is by door to door, the garbage officer takes the garbage to the residents' homes. Garbage collection is done once a month.

Waste management

Waste management program through the type of waste or waste that has economic value is put into used sacks and then stored next to the house. Plastic waste such as bottles are collected based on color and pressed using heavy equipment and then tied up, each bundle of 70 kilograms. For organic waste, it is processed into fertilizer. By going through several stages. The first stage of organic waste is entered into the chopping machine. After being chopped, mixed with soil and allowed to stand for 2 weeks. After 2 weeks filtered and then packaged. The use of organic fertilizer from the TPST 3R waste bank can be directly used for plant planting media.

The establishment of a waste bank in Trirejo Village has opened public awareness to manage their own waste and has a positive impact on the community in managing various kinds of waste. People think that garbage is useless and throw it anywhere. Like in the yard of the house on an empty land which makes the environment slum. Garbage banks teach people to sort waste, raise public awareness of managing waste wisely in order to reduce waste. The benefits of the ability of residents to manage waste by applying the 3R principles and saving waste have provided direct benefits, not only economically, but also the realization of environmental health, with community conditions that are clean, green, comfortable, and

healthy (Johari et al., 2012). The purpose of the waste bank is to help deal with waste processing in Indonesia and make people aware of the environment and change the community's paradigm regarding waste (Safiah & Julipriyanto, 2017).

In the 3R waste processing, there are a number of workers whose duties are divided into TPS consisting of administrators and workers. The board of directors consists of a chairman, secretary and treasurer. As for the workers, they are divided into carriers, sorters, and presses. All activities are devoted to the community so that they are able to sort out organic, inorganic and residue waste from the source first. So that community participation in the knowledge of sorting waste can be in line with the 3R program from the government.

The environment that is maintained in its sustainability must also be motivated by the level of public awareness in protecting and preserving the environment (Abdul-Wahab, 2008). People who have a high awareness of the importance of the environment for life maintain, maintain and preserve the environment (Solihin et al., 2019). Awareness of the importance of the environment for life and positive behavior towards the environment is a noble value that must continue to be developed in the maintenance and preservation of the environment (Febiola, 2021).

Based on interviews that have been carried out by researchers, it can be seen that the beginning of the establishment of the 3R TPST waste bank was started from waste alms activities by youth groups and taken from residents for free then saved at the Karang Taruna basecamp. After collecting a lot of waste it was sold and the results obtained it is put into the youth organization treasury and used for youth activities. As time goes by, the youth organizations in Trirejo village, Loano sub-district want to change from a waste alms activity to a waste bank program and receive assistance in 2014. From the waste bank program, the community is given savings, with the reason that people can feel the benefits of a clean environment as well as benefits economical from waste. The management of the savings book for the community uses a profit-sharing system and will be distributed once a year before the Eid al-Fitr holiday called Hari Raya savings. The distribution of the results of the savings uses a 90% system for the community, 10% for youth groups.

In 2017 the TPST 3R waste bank was used as the main waste bank. There are already around 30 units of waste banks that have been incorporated. For waste taken from the waste bank, the unit uses a price list system (Nugroho, 2022). Before buying waste, a price list per kilogram of waste is usually given based on the type of waste. So, for the purchase of waste at

the unit waste bank, after being picked up and weighed, it is immediately paid for, not using a savings system.

With the creation of the 3R TPST waste bank, people are increasingly concerned about the environment. One of them is by collecting plastic waste to be given to the waste bank. will later manage and dispose of the waste in the place/temporary shelter (TPS) provided. Changing the mindset (mindset) of the community is not easy because there are things that are considered mystical, and have become entrenched. The existence of this environmental preservation is an effort that requires extraordinary encouragement and support, especially from himself. When there is a will, everything is possible. Then it will be influenced by environmental factors which can strengthen beliefs or even weaken beliefs.

CONCLUSION

Preservation of a clean environment and increasing the economic value of waste can be carried out through waste management activities. Based on research that has been done at the Sejiwan 3R TPST waste bank. Loano can be seen after the existence of a waste bank, the environmental conditions around Sejiwan have improved, people have become more concerned about waste, there are no residents who litter. Waste management at the TPST 3R waste bank is divided into 2, namely organic and inorganic waste. For organic waste, it is processed into fertilizer, while for inorganic waste it is managed by sorting waste, then the waste that has been sorted is pressed and then after being collected a lot of it is taken by the factory to be processed again into new goods. In addition, the community also experienced an increase in the economy from the results of waste bank savings. Even now, the village of Sejiwan, Loano has become a more developed village because of the 3R TPST waste bank.

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