

# The Role of the Reduce, Reuse, Recycle Temporary Shelter (TPS 3R) in Tapis Village in Household Waste Management in Tapis Village Community

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This research explores the role of the Reduce, Reuse, Recycle (TPS 3R) Temporary Shelter in Tapis Village in managing household waste. The main objective is to analyze the contribution of TPS 3R to household waste management practices by the Tapis Village community. The research method used was in-depth interviews and participatory observation to collect data from selected respondents who were involved in waste management. Research findings reveal that TPS 3R in Tapis Village has a significant role in increasing community awareness and participation in household waste management practices. TPS 3R also helps in facilitating waste sorting, promoting the principles of reduce, reuse, recycle, as well as creating additional sources of income through recycling activities. However, challenges such as a lack of understanding of the benefits of TPS 3R and the need for improved infrastructure and stricter regulations need to be addressed to increase the effectiveness of household waste management in Tapis Village. This study provides valuable insight into the importance of TPS 3R in the context of waste management at the village level and provides recommendations for further improvements in the implementation and development of similar programs in rural communities.

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## INTRODUCTION

Waste is still one of the polemic problems being faced by all elements in Indonesia. Garbage is unwanted residue after the end of a process. In simple terms, waste is divided into two types. Organic waste is waste that comes from living creatures. This type of waste is easily decomposed naturally (degradable). However, this type of waste takes a long time to decompose. Paper waste will decompose within two to six months. Ordinary plastic bags take ten to 12 years to decompose. Plastic bottles last even longer. Because the polymer is more complex and thicker, plastic bottles have 20 years to

break down. Meanwhile, ordinary styrofoam, which is often used in Indonesia, takes 500 years to completely disintegrate. Inorganic waste is a type of waste that cannot be decomposed (undergradable).

According to data from the Ministry of Environment and Forestry in 2022, it was recorded that there were 19.45 million tons of waste produced by Indonesia, the majority of which was household waste.

The volume of household waste collected by the Tapis Village TPS 3R transport team can be said to be abundant. In one month TPS 3R Tapis Village can collect approximately 50,000 kg of

household waste originating from 7 RTs in Tapis Village.

The landfill space provided by the Paser Regency government is limited, so it is impossible if all the waste piled up at TPS 3R is simply transported to the landfill, so action is needed.

There are three techniques that can be applied to process waste. These three techniques are usually called 3R. Reduce means reducing, Reuse means reuse, and Recycle means recycling.

The Reduce, Reuse, Recycle (TPS 3R) Temporary Storage Site can be an effective container for use as a waste management site, especially for household waste. Reduce, Reuse, Recycle (TPS 3R) Temporary Shelter is a pattern of waste management approach at a communal or regional scale, involving the active role of the government and community, through a community empowerment approach. The Reduce, Reuse, Recycle (TPS 3R) Temporary Storage Site Program aims to reduce the quantity and/or improve the characteristics of waste, which will be further processed at the waste final processing site (TPA) and play a role in ensuring that the need for less land is needed to provide a waste landfill. in urban areas.

It is hoped that the existence of TPS 3R Tapis Village can become a forum and can carry out its role as a center for environmentally friendly and sustainable waste management, especially in managing household waste resulting from the remainder of the daily activities of the community in Tapis Village, Tanah Grogot District, Paser Regency, Kalimantan East.

Based on the background of this problem, the problem of this action research is, "What is the role of TPS 3R Tapis Village in managing household waste?" This research aims to determine in detail the role of TPS 3R Tapis Village in managing household waste.

## RESEARCH METHOD

This type of research is case study research with a qualitative approach. Case study research with a qualitative approach is carried out by collecting individuals who are used as research subjects. This research will be carried out in Tapis Village, Tanah Grogot District, Paser Regency, East Kalimantan. The research will be carried out on June 19 2023. Considering that this research uses qualitative methods. So we don't use populations and samples, but instead use research data sources. This is based on the nature of qualitative research which departs from social phenomena or situations or the behavior of a person or group of people and even cases.

Population and samples in a qualitative approach are better known as data sources in certain social situations (Djam'an Satori, 2007: 2). Spradley (Sugiyono, 2017: 297) says that a social situation consists of 3 elements, namely place, actors, activity which interact synergistically. In this research, the data source was obtained directly from sources related to TPS 3R Tapis Village. Learning outcomes test

In this research, the research instrument used was direct observation in the field, conducting a question and answer session between the interviewer and the resource person using a prepared set of questions.

### 1. Observation

According to W. Gulo (2002:116) observation is a data collection method where researchers record information as they witness it during research.

Observations were carried out by recording what facilities were used to manage household waste.

### 2. Interview

According to Moleong (2005: 186), an interview is a conversation with a specific purpose, the conversation is carried out by two parties, namely the interviewer who asks questions and the

interviewee who provides answers to the questions.

### 3. Documentation

The documentation method is a search for data regarding things or variables in the form of notes, transcripts, books, newspapers, magazines, meeting minutes, agendas and so on (Arikunto, 1998:236).

Documentation was carried out by looking for data about the activities of TPS 3R Tapis Village in managing household waste as well as the structure of TPS 3R management in Tapis Village. The documentation obtained will later be in the form of images.

The data analysis method used in this research is a qualitative descriptive method. The method intended is to describe the information that has been collected without making generalizations. According to Mukhtar (2013: 10) the qualitative descriptive research method is a method used by researchers to discover knowledge or theories regarding research at a certain time.

In this research, the researcher will organize the data obtained from observations, interviews and documentation and then arrange it according to scientific principles so that it is easy to understand. From the arrangement of the data, the researcher will draw conclusions.

## **RESULTS AND DISCUSSION**

### **RESULT**

The following are the results of research conducted by researchers.

#### 1. Observation

Observations were carried out by recording all the facilities used by the TPS 3R manager of Tapis Village in the process of managing household waste. The facilities at TPS 3R Tapis Village which are used in household waste processing activities are as follows.

##### a. Garbage container

This body is a garbage truck owned by the Paser Regency Environmental

Service. The tank is used by the management to accommodate rubbish that has been collected by the transport team at night from residents' houses in several RTs in Tapis Village.

##### b. Compost Processing Machine

The compost processing machine has the function of processing organic waste into compost. Processing compost fertilizer goes through several process stages, namely as follows.

- 1). Activate the drive of the compost processing machine.
- 2). Enter the main ingredient in the form of organic waste into the machine through the input funnel of the compost processing machine.
- 3). The waste will be chopped with a knife in the compost processing machine tube.
- 4). The chopped results will be directed to the output funnel of the compost processing machine.

##### c. Three-wheeled motorbikes and pick-up cars

These motorbikes and cars are used to transport rubbish collected from residents' houses at night. Then the collected waste is transported back to TPS 3R Tapis Village.

##### d. Compost Sifter Machine

This machine has the function of sifting compost to the required size. The sieving process is carried out in a rotating cylindrical tube. The time used for sifting compost is relatively fast.

Interview

Speaker 1

Name: Jamhur

Status: Manager of TPS 3R Tapis Village

Question

- 1) What do you know about the role of TPS 3R Tapis Village? When was TPS 3R Tapis Village established?

Answer :

According to Mr. Jamhur, TPS 3R is a program designed by the central government. TPS 3R Tapis Village was established in 2016. The role of TPS 3R is as a container for collecting household

waste and then separating the waste. Organic waste will be processed, while inorganic waste which is categorized as waste that cannot be processed will be sent to the TPA (Final Disposal Site).

2) Household waste consists of two types, organic waste and inorganic waste. Between the two, is there a difference in terms of the processing carried out by TPS 3R Tapis Village?

Answer :

According to Mr. Jamhur, organic waste will be processed into compost, while inorganic waste which is greater in quantity than organic waste will be sent to the TPA (final disposal site).

3) With operational vehicles used to transport waste, can the capacity of these vehicles cover all RTs in Tapis Village?

Answer :

According to Mr. Jamhur, operational vehicles are still an obstacle for TPS 3R Tapis Village. The operational vehicle owned by TPS 3R Tapis Village is still a three-wheeled motorbike, while to transport more rubbish in Tapis Village a pick-up truck is needed. The car owned by TPS 3R Tapis Village is still temporary because it is still rented from a second party. There are 7 RTs that can be reached by operational vehicles from TPS 3R Tapis Village, namely RT 2, RT 3, RT 4, RT 5, RT 6, RT 7, and RT 8.

4) How is community participation in managing household waste in Tapis Village?

Answer :

According to Mr. Jamhur, residents were very enthusiastic in accepting the existence of TPS 3R in Tapis Village.

5) What are the obstacles faced by TPS 3R Tapis Village in carrying out household waste management operations?

Answer :

According to Mr. Jamhur, there are several obstacles in carrying out household waste management operations in Tapis Village, namely as follows.

a) Operational vehicles

The amount of household waste in Tapis Village has exceeded the carrying capacity of operational vehicles owned by TPS 3R Tapis Village. So more adequate vehicle facilities are needed.

b) Trash can

The number of rubbish bins that have been distributed by administrators in front of residents' houses is still insufficient, so there are still residents who use plastic bags to collect their rubbish.

6) What plans or steps will TPS 3R Tapis Village take to increase the effectiveness and efficiency of household waste management in the future?

Answer :

According to Mr. Jamhur, the plan for TPS 3R Tapis Village will be carried out later, management will be handed over to a third party so that the administrators of TPS 3R Tapis Village will only facilitate the needs of the management.

7) What ideas or ideas are the basis for establishing TPS 3r in Tapis village?

Answer :

According to Mr. Jamhur, the beginning of the establishment of TPS 3R Tapis Village started with a group gathering. Then the group took the initiative to form a Community Self-Help Group (KSM). In 2015, a Community Self-Help Group (KSM) was formed which was named SENYUM (Healthy, Aesthetic, Comfortable, Independent Business). As the KSM progressed, the thought came to mind to provide a car that could help in the process of transporting waste. The KSM then submitted a proposal to the provincial government to establish a 3R TPS in Tapis Village. This proposal was granted in 2016.

8) Was there an increase in the volume of household waste from year to year during the establishment of TPS 3R in Tapis Village? what causes this?

Answer :

According to Mr. Jamhur, the amount of waste in Tapis Village always

increases every year. This can be seen from the fact that the waste storage tanks at the TPS are always full, and sometimes the rubbish ends up outside the tanks because the tanks are too full. The factor in this is the increase in population in Tapis Village.

9) How does the worker recruitment system work at TPS 3R? Are they recruited from the local community with low incomes or are there certain criteria?

Answer :

According to Mr. Jamhur, at the beginning of the establishment of TPS 3R Tapis Village, workers were taken from local residents and residents outside Tapis Village. However, it did not last long. Over time, workers from within Tapis Village decided to quit this job. This was because the workers were embarrassed by their jobs. Until now, those who still survive are workers from outside Tapis Village.

10) What do you hope for residents to increase awareness of waste management in Tapis Village?

Answer :

Mr. Jamhur's hope for the future is that residents will have the awareness to dispose of waste in appropriate places, residents will have a sense of responsibility towards waste, and residents can take their role in handling waste in their respective homes.

Interviewee 2

Name: Asniah

Status: Resident of Tapis Village

Question

1) What do you know about TPS 3R in Tapis village?

Answer :

According to Mrs. Asniah, TPS 3R Tapis Village is the place where community waste (household waste) is collected after the waste collection activity by the transport team from TPS 3R Tapis Village at night using three-wheeled motorbikes or pick-up cars. After being collected, the waste is sorted again by workers at TPS 3R

Tapis Village. After sorting the waste, it is transported back to the final disposal site (TPA).

2) What do you think about the existence of the Tapis Village TPS? What benefits did you experience?

Answer :

According to Mrs. Asniah, the existence of TPS 3R Tapis Village is very beneficial for local residents. There have been several changes since the existence of TPS 3R in Tapis Village, including: previously there was no place to collect rubbish, now there is a place used to collect rubbish, previously there was still a lot of rubbish strewn on the streets, now it is no longer visible.

3) Have you noticed any changes since the existence of TPS 3R in Tapis Village?

Answer :

According to Mrs. Asniah, there are many visible changes. As in the past there were still residents who threw rubbish on the side of the road, now they just have to wait for officers to pick up the rubbish at home.

4) Have you ever participated in TPS 3R Tapis Village activities involving residents?

Answer :

According to Mrs. Asniah, when there are important activities, TPS 3R Tapis Village always involves residents in it.

5) What are your suggestions for TPS 3R in Tapis Village in the future?

Answer :

According to Mrs. Asniah, the Community Self-Help Group and the Paser Regency Environmental Service can repair the waste storage tank at TPS 3R in Tapis Village to make it even better in the future.

## **DISCUSSION**

TPS 3R Tapis Village is a place for collecting waste, most of which is household waste. TPS 3R Tapis Village, which was founded in 2016, started from the idea of a Community Self-Help Group (KSM) called SENYUM

(Healthy, Aesthetic, Comfortable, Independent Business). In 2015, KSM SENYUM submitted a proposal to the provincial government to build a 3R TPS around the Tapis Village area. This proposal was finally granted in 2016. After that, a TPS was built located at the Korpri Tapis Housing Complex RT 5, Tanah Grogot District, East Kalimantan. TPS 3R Tapis Village was then ratified on December 26 2018 by the late. Drs. H. Yusriansyah Syarkawi, M.Sc. who at that time served as Regent of Paser.

With the existence of TPS 3R Tapis Village, the management and local residents have high hopes for creating a healthy and clean Tapis Village. The existence of TPS 3R Tapis Village brings its own changes to the appearance of Tapis Village. Before there was TPS 3R in Tapis Village, there were still many residents who threw rubbish carelessly, some even threw it on the side of the road. This of course has a negative impact on the residents of Tapis Village itself, such as creating an unpleasant odor and even being a precursor to the spread of diseases such as ISPA (Acute Respiratory Infection), diarrhea, skin diseases, and so on.

In their operational activities, the TPS 3R of Tapis Village, in this case the administrators and workers of TPS 3R of Tapis Village, have their own obstacles. According to the manager of TPS 3R Tapis Village after an interview, the obstacles faced by those from TPS 3R Tapis Village were varied. The following are operational obstacles from KSM 3R Tapis Village.

a) Operational vehicles

The amount of household waste in Tapis Village has exceeded the carrying capacity of operational vehicles owned by TPS 3R Tapis Village. So more adequate vehicle facilities are needed.

b) Trash can

The number of rubbish bins that have been distributed by administrators in front of residents' houses is still insufficient, so there are still residents who use plastic bags to collect their rubbish.

However, to increase the effectiveness and efficiency of TPS 3R Tapis Village operations, the management will hand over part of the management to third parties.

The operational hours of TPS 3R Tapis Village start at 22.00 WITA. 4 officers who are part of the transport team will pick up the rubbish stored in the bins provided by TPS 3R Tapis Village. Process Transportation is carried out using two operational vehicles, a three-wheeled motorbike and a pick-up truck and is divided into each region. The area reached by these operational vehicles only consists of 7 RTs, namely, RT 2, RT 3, RT 4, RT 5, RT 6, RT 7, RT 8. This is due to the transport capacity of each operational vehicle, whereas for RT 1 and RT 9 whose waste cannot be reached by operational vehicles are forced to dispose of their own waste directly at TPS 3R Tapis Village. After the transportation activity is complete, the next day the waste will be weighed and then sorted by workers at TPS 3R Tapis Village. Waste is sorted based on type, namely organic and inorganic.

All types of organic waste received by TPS 3R Tapis Village are not immediately transported to the Final Disposal Site (TPA). Organic waste will be reprocessed into compost using a compost processing machine. Organic waste that has been processed into compost will be sifted again in the sieving machine tube to obtain the size that suits your needs. Meanwhile, some inorganic waste which cannot be processed will be transported to the final disposal site. In order to reduce the

quantity of inorganic waste that accumulates in landfills, some inorganic waste that cannot be processed will be recycled. Trash such as cardboard, bottles, used packaging such as oil packets, noodle packets and detergent packets will be collected individually based on type. This inorganic waste will be reused to be converted into more creative and efficient items such as plastic bags made from oil wrappers, flower vases made from used bottles, and many more. This is the role of TPS 3R Tapis Village in order to reduce the quantity of waste that has accumulated at the Final Disposal Site (TPA)

To improve cleanliness in Tapis Village, the management of TPS 3R Tapis Village hopes that the people in Tapis Village will increase their awareness of disposing of rubbish in the right place and have a sense of responsibility for rubbish, because the presence of rubbish is their responsibility.

## CONCLUSION

Based on the discussion presented by the researcher. Can the following conclusions are drawn.

In terms of household waste management in Tapis Village, TPS 3R Village Tapis which is under the auspices of the District Environmental Service Paser has a role as a place for collection, processing, and utilization of household waste collected from all RTs in Tapis Village. The role of TPS 3R Tapis Village in managing waste is proven effective despite several obstacles. Proven Village TPS 3R Tapis smoothly applies the 3R concept to waste piled up in Tapis Village. This is influenced by the facilities owned by the Village TPS 3R Filter, the management structure is running well and strengthened with support from local residents who feel the impact positive from the existence of TPS 3R Tapis Village.

TPS 3R Tapis Village was established so that there would be a place or container which can be used as a waste collection site before. The waste is processed or transported to the landfill.

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