HOUSEHOLD WASTE MANAGEMENT

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Abstract

The waste problem is an environmental problem in society. Waste is a problem faced by people living in East Kalimantan Province. Based on data from the Ministry of Environment and Forestry in 2022, the source of waste based on the highest type of waste in East Kalimantan Province is household waste, which amounts to as much as 55.97%. This study aimed to determine the community mechanism for household waste management using the 3R method and to analyse the availability of adequate trash bins in Loa Ulung Village, Tenggarong Seberang District. The research conducted was qualitative research with a phenomenological approach. The data analysis method used in this research is source triangulation analysis, which connects the interviews with all informants and draws conclusions from the research. This study found that the community sorted waste before disposing of it in temporary shelters. Efforts to reduce, reuse, and recycle waste have also been made, and infrastructure for waste management, such as trash cans, is available in each house. However, there are still people who burn their waste after sorting. In this study, the community mechanism for managing household waste using the 3R method has been carried out. Still, its application has yet to be maximised, and improvement and support from the government are needed.
Keywords: Adequate Waste Bins, Household Waste Management, Reduse, Reuse, Recycle

Introduction

Waste is one of the environmental problems that is often in the spotlight in society. This problem has become severe, especially in big cities, not only in Indonesia but throughout the world. Many developed countries have made various efforts to overcome this problem but have yet to have a significant impact (Addahlawi et al., 2020).

The World Bank estimates the average global waste production based on household income levels. The average household waste collected in countries classified as high is 79 kg/capita/year, with household income levels classified as middle to upper at 76 kg/capita/year and countries with lower household income levels at 91 kg/capita/year (Forbes et al. 2021)

The main source of waste in Indonesia is household waste. Research (Ilma et al., 2021) says that the average survey of waste disposal in Indonesia is 0.5 per capita per day. By multiplying this data by the population in several cities in Indonesia, the estimated waste potential in Indonesia is around 100,000 metric tonnes per day.

Based on data from the Ministry of Environment and Forestry in 2022, household waste is the highest source of waste by type, as much as 38.38% (KLHK, 2022).

Waste needs to receive comprehensive and integrated treatment because it has developed into a national problem. Based on data from the Ministry of Environment and Forestry in 2022, household

waste is the largest source of waste in East Kalimantan Province, at 55.97%. (KLHK, 2022).

Waste is one of the biggest problems people in East Kalimantan province face, especially in Tenggarong City, Kutai Kartanegara Regency. Based on data by the Ministry of Environment and Forestry in 2022 on waste sources based on the type of waste, household waste is in second place with a value of 27.64% (KLHK, 2022). From this data, we can conclude that household waste occupies the highest position among the types of waste generated in Tenggarong.

Based on Kutai Kartanegara Regent Regulation Number 27 of 2019 concerning Regional Policies and Strategies for Household Waste Management and Waste Similar to Household Waste, which emphasises the need for policies on handling and reducing household waste and similar household waste, good household waste management is necessary to minimise the negative impact of large-scale household waste piles. 38.38% (KLHK, 2022).

According to Law No. 18/2008 on waste management, which emphasises the need for a change in mindset in managing waste, Article 4 of Law No. 18/2008 states that 'Waste management aims to improve public health and environmental quality and make waste a resource'. A change in mindset regarding waste can be achieved by applying the 3R method, namely reduce, reuse, and recycle (Helmi et al, 2018).

The application of the 3R method is an effort to reduce waste generation in the source environment. Reuse refers to the activity of reusing materials so that they do not become waste. Recycling refers to recycling a useless item (waste) into another usable item. The direct and indirect benefits resulting from applying the 3R method prove that waste can be used as an economically valuable resource. (Tiarapuspa et al, 2022).

Research Methods

The research conducted was qualitative research with a phenomenological approach. The data analysis method used in this research is source triangulation analysis, which connects the results of interviews with all informants and then draws conclusions as a result of the study. The informant selection technique uses purposive sampling, i.e., random selection of informants, but still according to predetermined criteria.

Research Results

1. Characteristics of Informants

The informants in this study were 4 (four) housewives and 2 (two) neighbours in Loa Ulung Village, Tenggarong Seberang Subdistrict, Kutai Kartanegara Regency, and 1 (one) sanitarian at Teluk Dalam Community Health Centre, Tenggarong Seberang Subdistrict, Kutai Kartanegara Regency.

Table 1. Characteristics of Main Informants

No	Code	Age	Last Education	Work
1	W.A.OS.X	50	HS	Housewife
2	W.A.YMR.X	49	HS	Housewife
3	W.A.DP.X	49	HS	Housewife
4	W.A.KT.X	28	S1	Housewife

Table 2. Characteristics of Key Informants

No	Code	Age	Last Education	Work
1	W.B.MZ.X	50	HS	Head of neighbourhood
2	W.B.AS.X	50	HS	Head of neighbourhood

Table 3. Characteristics of Key Informants

No	Code	Age	Last Education	Work
1	W.C.AS.X	32	D3	Sanitarian

2. Result

This research explores in-depth information about the community mechanisms in Loa Ulung Village, Tenggarong Seberang Subdistrict, and Kutai Kartanegara Regency for household waste management and how trash bins are available in each household. obtained from the results of interviews with primary informants, supporting informants, and critical informants when conducting field research as follows:

a. Community mechanisms in household waste management using the 3R method in Loa Ulung Village, Tenggarong Seberang Sub- district, Kutai Kartanegara Regency.

Based on the interviews conducted by researchers with the primary informants regarding household waste management mechanisms using the 3R method, it is known that the four primary informants have different household waste management mechanisms. Where the primary informants, W.A.OS.X. and W.A.DP.X., manage their waste by sorting between organic and non-organic waste, then non- organic waste is burned if the volume of waste is not significant. The main informant, W.A.YMR.X, manages his waste by sorting it and disposing it directly to the TPS, and the informant, W.A.KT.X, manages his waste by sorting it. After sorting, some waste is landfilled, and the TPS directly disposes of some.

Quote 1

"Oh, if we look at it this way, if the waste is only a little and if we burn it, it doesn't disturb the smoke, then we can burn it. If we look at the smoke, what is it? It's light; okay, we can burn it, but if the smoke is disturbing, we can dispose of it at the TPS"

Quote 2

"Some are disposed of to the TPS, and some are stockpiled, so it's like that; it's only divided into three parts of the trash if the compress is stockpiled in the garden; food scraps or vegetables are given to livestock if the plastic is disposed of to the TPS"

1) Reduce waste management (Reduce)

The results of the primary informant interview show that one of the informants has made efforts to reduce waste, but it still needs to be improved. However, some informants still need to do it.

Quote 3

''Sometimes I use plastic; sometimes I use that, so it depends. If I want to shop a lot, I bring this gin bag; if the shopping is impromptu, we use plastic from the stall"

2) Waste Management by Reuse (Reusin)

According to the results of interviews with the primary informants, all the primary informants reused items that were no longer suitable but needed improvement. The results show that informants use items that are no longer suitable, such as making flower pots

from broken buckets and using mineral glass as containers for chilli nurseries.

Figure 1. Flower pots and mineral glass containers for chilli seedlings

Quote 4

"Sometimes if the bucket leaks, it becomes a place for flowers."

3) Waste Management by Recycling (Recycle)

Based on the results of interviews with the main informants, it was found that all main informants have applied the principle of recycling, namely making handicrafts from items that are no longer suitable for use by incorporating mineral glass into basket bags or making flowers from used straws.

Figure 2. Basket bag

Quote 5

" Yes, I have made, from tea cups, handicrafts, baskets for lifting clothespins, and dry clothes put in there"

b. Adequate trash bins are available for household waste management in Loa Ulung Village, Tenggarong Seberang Subdistrict, Kutai Kartanegara Regency

The results of the main informant interview show that the community in the research location already has a trash can for each house and is separated between organic waste and non-organic waste. The infrastructure and facilities used for non-organic waste are sacks or plastic, while for organic waste, they are baskets or buckets.

Figure 3. Rubbish bins

Quote 6

"Yes, it is separated and set aside for food; leftover food is for pets if the plastic waste is immediately thrown into the trash can"

Discussion

Based on the presentation of the results of the interviews and observations above, the author will further discuss the analysis of household waste management in Loa Ulung Village, Tenggarong Seberang District, Kutai Kartanegara Regency. Based on the results of the author's findings in the field, it will be discussed as follows:

Community mechanisms in household waste management using the 3R method in Loa Ulung Village, Tenggarong Seberang Subdistrict, Kutai Kartanegara Regency

According to the results of research obtained in the field while researching community mechanisms in household waste management using the 3R method through interviews with the primary informants, it is known that the mechanism of homemakers in carrying out waste management is that, before the waste is disposed of, the household sorts the waste into different parts. Organic waste in the form of food is collected and used by homemakers and neighbouring communities to feed livestock. Organic waste in the form of vegetable scraps or fruit peels is directly disposed of at the farm, where the community uses it as fertiliser.

Many people dispose of non-organic waste directly at the TPS, but some are stockpiled with waste, such as compresses or sanitary napkins, after sorting. However, some people burn their waste if they feel that the volume of waste is not large, and if burned, it does not cause too much smoke.

1) Reduce waste management. (Reduce)

Based on the results of research conducted in the field, it is found that some people have made efforts to reduce waste but need to improve again, such as one informant, namely (W.A.OS.X), who, in his waste reduction efforts, applies the principle of reducing by bringing his own shopping bag from home when going out shopping.

The other primary informants, W.A.YMR.X and W.A.DP.X, did not make efforts to reduce waste. This aligns with the statement from supporting informants, who said that not all people try to reduce waste because they continue to rely on the plastic provided by the figures they visit.

2) Reuse Waste Management (Reusing)

From the results of research conducted at the research location, it is known that some people have implemented efforts to reuse goods that are no longer suitable but not optimal. It is said that this is not optimal because the community needs to know what items can be reused, so the application is not optimal. This aligns with the research conducted (Apriyani et al., 2021). According to this study, people have yet to make efforts to reuse goods that are no longer suitable because they do not know what items can be reused or have changed their function.

This is in line with the statements of supporting informants, namely (W.A.MZ.X) and (W.A.AS.X), where they said that to reuse goods that are no longer suitable for use, the community usually only uses damaged and mundane items to function in other forms because there is no one to guide and direct the community to be more creative so that people only do what they consider easy and not difficult to reuse damaged goods.

3) Waste Management by Recycle (Recycling)

Based on the research conducted at the research location, the results show that the community has applied the principle of recycling, namely making handicrafts from items that are no longer suitable for use or waste by utilising beverage cups into basket bags or making flowers from used straws. As one of the primary informants has done (W.A.YMR.X), if there is free time and the materials have been collected, this informant will make a basket bag where the results can be used daily for gardening. In contrast, the informant (W.A.DP.X) accommodates dried clothes or laundry.

Availability of adequate trash bins for household waste management in Loa Ulung Village, Tenggarong Seberang Subdistrict, Kutai Kartanegara Regency.

The research results at the research location show that each house has a separate trash can for organic and non-organic waste. For non- organic waste, the tools and equipment used are sacks or buckets, while for organic waste, the tools and equipment used are baskets or buckets. Bins that are considered suitable for non- organic waste are well-packed.

This is in line with the results of interviews conducted by critical informants, namely public health centre sanitarians in this study, who said that a suitable trash can is a trash can that meets the standards, but research (Luh et al., 2019) noted that trash cans that can be used in households can be adjusted to the situation, such as plastic buckets, plastic bags or unique trash bags, trash cans, and most importantly, marked in each container.

This is in line with the research, which shows that people in each house have bins made of plastic, buckets, sacks, or baskets.

Tenggarong, Seberang Regency Kutai Kartanegara Regency as follows: :

Conclusion

Conclusion Based on the results of data analysis and discussion, the author obtained findings that can be drawn from research on the analysis of household waste management in Loa Ulung Village, Tenggarong Seberang Subdistrict, Kutai Kartanegara Regency, as follows:

1. The community has carried out the community mechanism in household waste management using the 3R method in the research location; both the mechanism and waste reduction efforts, reuse, and recycling efforts have all been done but need to be improved so that the community can be more creative. Then there are people who, after sorting their waste, choose to burn it.

2. With the availability of adequate trash bins for household waste management in Loa Ulung Village, Tenggarong Seberang Subdistrict, Kutai Kartanegara Regency, it was concluded that the community already has a trash can for each house and is separated between organic waste and non- organic waste but does not meet the standards.

Based on the conclusions regarding research on the analysis of household waste management in Loa Ulung Village, Tenggarong Seberang Subdistrict, Kutai Kartanegara Regency, the researcher has several suggestions, namely as follows :

1. Communities, especially homemakers, are expected to apply the 3R principle through the reduction, utilisation, and recycling of goods that are no longer suitable or waste in their waste management.

2. The government hopes to cooperate with surrounding companies to provide adequate and standardised bins so that waste can be sorted quickly.

3. The government should increase counselling and training activities for the community on good waste management mechanisms for managing organic waste and non-organic waste using the 3R method, namely reduce, reuse, and recycle. It is hoped that special training will be provided for the community on how to make compost from organic waste generated by the community.

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