

Waste Bank as a Waste Management Solution in Lawang Kajang Village, Timpah District, Kapuas Regency

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ABSTRACT

Background. Changes in consumption patterns have resulted in an increase in the volume, types and characteristics of diverse waste. This makes waste the center of attention and becomes a national problem so that its management needs to be carried out comprehensively so that it can provide benefits both economically, health and safety for the environment, and can change the life patterns of the people of Lawang Kajang village.

Purpose. This research is qualitative in nature and aims to analyze and describe the patterns of community life in Lawang Kajang Village, Timpah District, Kapuas Regency regarding the final processing of household waste.

Method. In the research carried out by IAKN Palangka Raya Regular KKN participants, several village officials and administrators were involved who were used as data sources. And information or data collection is carried out using interview techniques.

Results. So based on the information obtained, the people in Lawang Kajang Village still do not understand how to process waste, especially waste originating from households, there is a lot of rubbish scattered in the bushes next to community settlements, which shows the lack or lack of facilities and infrastructure, namely places village waste disposal.

Conclusion. So starting from the problems that occurred at the KKN location, the IAKN Palangka Raya Group 1 Regular KKN team took the initiative to build a rubbish bin which was used as the main disposal site (TPSU) which was able to accommodate the entire waste while it was processed or processed to the final stage.

KEYWORDS

Door Kajang Village, Solution For Handling Waste, The Waste Bank

Citation: Kosdamika, C.Y., Gustina, G., Debi, D.P., Ardi, A. W.W, Write, N., Farmingga, R., Jayanti, L.D., Mariana, Septiana, Santri A, Tania, Turn E, Prasetiawati. (2024). *Waste Bank as a Waste Management Solution in Lawang Kajang Village, Timpah District, Kapuas Regency*. *Devotion: Journal Abdimas*, 2(3), 158-167.

<https://doi.org/10.55849/abdimas.v2i3.807>

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Received: September 12, 2024

Accepted: September 15, 2024

Published: September 31, 2024



INTRODUCTION

The increase in population and changes in consumption patterns have resulted in an increase in the volume, types and various characteristics of waste. However, current waste management is not in accordance with environmentally sound waste management methods and techniques, resulting in negative impacts on public health and the surrounding environment. Careless disposal of rubbish and low awareness of maintaining the cleanliness of the community are the main causes of environmental pollution. Inadequate space and ineffective waste processing methods are the main nests for harmful organisms to breed and become places for the spread of dangerous viruses which can disrupt daily activities and give rise to mosquitoes and flies which can cause disease. Good and correct waste management certainly involves facilities and infrastructure as well as the use of legal waste bins, waste collection, waste transfer, waste transportation, final disposal, management and final processing. Several factors are considered to influence and hinder the waste processing process, namely population distribution and population density, socio-economic and physical environmental characteristics, attitudes, behavior and culture of the local community (Khoiriyah, 2021:14).

Jambeck's opinion quoted by Purwaningrum states that Indonesia is ranked second in the world after China as a country producing plastic waste. The composition of waste originating from human activities is 60-70% organic waste and 30-40% non-organic waste. Meanwhile, 14% of non-organic waste is plastic waste which is the second largest waste (Purwaningrum, 2016:142). Based on location, waste is classified into city (urban) waste, namely waste collected from big cities and regional waste, namely waste originating from from areas outside urban areas.

Lawang Kajang Village is one of the villages in Timpah District, Kapuas Regency which is located on Jalan Tapan Kahui which has an area of 74.51 km², the population consists of 1,163 people, with the number of families being 427, and the population density in Lawang Kajang Village is 15.60 people/km². The number of Neighborhood Units is 5 RTs. Lawang Kajang Village has three (3) religions that are believed in by the people of Lawang Kajang Village, namely Islam, Christianity and Hindu Kaharingan. Based on the results of observations made by IAKN Palangka Raya regular KKN group 1 in Lawang Kajang Village, there is no rubbish disposal site available. in the village. This causes people living in Lawang Kajang Village to choose to throw rubbish in inappropriate places, such as in front of their yards, riverbanks, roadsides and gutters. This makes the environment around the village look less neat, because there are many emergency waste disposal locations located around residential areas and if this continues, it will gradually cause things that are not good for environmental sustainability and cleanliness. This scattered rubbish has become a national problem, so its management needs to be carried out comprehensively so that it can provide benefits both economically, health, and environmental safety, and can change people's patterns of life, especially with regard to waste management (Selomo, 2016: 233).

Law Number 18 of 2008 regarding Waste Management emphasizes the need to change conventional waste management patterns to waste management that relies on reducing and handling waste. Waste management is an activity carried out to handle waste from the time the waste arises until the final disposal stage. Waste management in general includes controlling waste generation, collection, transportation, management and final disposal (Sejati, 2004). The problem with waste includes three parts, namely first, in the downstream part, waste disposal occurs continuously, second in the process part, there are limited resources from both the community and government, and third in the upstream part, low optimization of the system applied in final processing (Mulasari, 2016) .

The waste management process is said to be a very complex process because it includes several aspects such as technical, economic and sociopolitical. Waste management is also an effort to organize and manage waste from the process of containing, collecting, transferring, transporting, processing, to the final disposal stage (DPU Cipta Karya, 1993).

To solve the problem above, group one took the initiative to build a Main Waste Disposal Site (TPSU) in the Lawang Kajang village area. This is done to make it easier for people to dispose of waste, both organic waste and non-organic waste. So, with the availability of the main rubbish dump in Lawang Kajang Village, people will no longer throw rubbish carelessly, such as in front of their yards, riverbanks, roadsides and gutters. By not having people throwing rubbish carelessly, the rubbish problem in the village can be overcome. Because waste is an object or material that is no longer used by humans. Community stigma is related to waste, namely all waste is disgusting, dirty, etc. so it must be burned or disposed of properly (Mulasari, 2012). All forms of community activity will definitely generate waste. This is of course not only the responsibility of the government, but all citizens or communities are also involved in processing or handling waste so that it does not have a negative impact on the surrounding environment (Hardiatmi, 2011).

RESEARCH METHODOLOGY

Lawang Kajang Village is a village in Timpah District, Katingan Regency, Central Kalimantan Province with a total population of 15.60 people. In research carried out by Regular KKN students of the State Christian Institute (IAKN), field research or *field research* with a descriptive approach. Where researchers directly go into the field and see phenomena and analyze and obtain a detailed and objective picture to obtain accurate data using methods *Participatory Action Research* (PARTICIPATORY ACTION RESEARCH). Participatory Action Research is a research method that is carried out or pursued in accordance with the specifications of the rules and principles, namely involving the aspirations of community participation. The approach taken in this method is problem solving and participation of the community or parties concerned, because it is considered the most relevant to community empowerment efforts (Muhtarom, 2018). This research was conducted in Lawang Kajang Village, Timpah District, Kapuas Regency. The research subjects are Regular KKN students of the Palangka Raya State Christian Institute (IAKN) combined from two batches in the odd semester of 2023. The object of the research is solutions for dealing with waste in Lawang Kajang Village and the data sources in this research are the village head, chairman BPD and RT head as well as residents in the village. Information or data collection techniques are carried out using interview techniques and literature studies are used to obtain a theoretical basis which becomes a reference or basis for research activities. The steps taken are as follows: a) identify the problem, especially the problem of waste being dumped in any place by making observations. Meanwhile, the problem found from the results of observations and field research was that the main waste dump was not found in Lawang Kajang Village. This has resulted in the people of Lawang Kajang Village choosing to create a private rubbish dump around their homes. Apart from that, there are also some people who choose to throw rubbish in rivers, in ditches and on the side of the road. If this continues, it will result in environmental pollution and damage to the ecosystem in Lawang Kajang Village; b) Focus Group Discussion, holding discussions with the village government and surrounding communities to resolve problems; c) the preparation stage for program action, the action carried out by group 1 of the IAKN Palangka Raya Regular KKN, namely creating a permanent trash bin in Lawang Kajang Village which will later become the Main Waste Disposal Site (TPSU); d) program implementation, implementation of

the waste management program carried out by group 1 of the IAKN Palangka Raya Regular KKN, namely working together with the surrounding community to build large rubbish bins which it is hoped will become a place to accommodate village rubbish so that it is not scattered around settlements.

The KKN program will be implemented for approximately 35 days starting from July 17 2023 to August 21 2023. There are various types of service activities carried out, one of which is helping overcome the waste problem in Lawang Kajang Village. By implementing these program activities, it is hoped that it can overcome the waste problem in the village.

RESULT AND DISCUSSION

Careless disposal of rubbish and low awareness of maintaining the cleanliness of the community are the main causes of environmental pollution. Inadequate space and ineffective waste processing methods are the main nests for harmful organisms to breed and become places for the spread of dangerous viruses which can disrupt daily activities and give rise to mosquitoes and flies which can cause disease. Good and correct waste management certainly involves facilities and infrastructure as well as the use of legal waste bins, waste collection, waste transfer, waste transportation, final disposal, management and final processing. Several factors are considered to influence and hinder the waste processing process, namely population distribution and population density, socio-economic and physical environmental characteristics, attitudes, behavior and culture of the local community (Khoiriyah, 2021:14).

The waste bank is a concept developed by the Ministry of the Environment, which means it is a waste storage place that is capable of holding large amounts of waste with the aim of helping to deal with waste problems and making people aware of a healthy, neat and clean environment (Suryani, 2014:75) .

IAKN Palangka Raya Regular KKN students took the initiative to solve this problem by building a Main Waste Disposal Site (TPSU) in Lawang Kajang Village which will later become a Final Waste Disposal Site (TPSA). The strategy carried out by group 1 students in implementing the program to build the main rubbish dump for the people of Lawang Kajang Village. By conducting observations and social interactions with the people of Lawang Kajang Village regarding the complaints and hopes of the people of Lawang Kajang Village with the implementation of the Community Service Program in Lawang Kajang Village. Social interaction is necessary because interaction is the main requirement for social activity to occur (Setyorini, Sukiswo, & Subali, 2011). Based on the opinion expressed by Mex Weber that interaction is an action that can influence individuals in the social environment (Hizba, et. Al, 2015).



Figure 1. Observation & Social Interaction With Village Communities

Apart from carrying out social interactions, Group 1 of the Regular KKN also coordinated with village officials and also the Lawang Kajang village head, namely conveying objectives related to the implementation of work programs that would be implemented in Lawang Kajang village. Coordination is very important in implementing the KKN program because through coordinating all goals and activities at several different unit levels can be unified (Gusni Ayu, et. Al, 2021).



Figure 2. Coordination with the RT head 5

Based on the results of observations made, information was obtained that the people of Lawang Kajang Village do not have a public waste collection site in the village, so that the people have become accustomed to throwing rubbish in random places such as burning around the house, throwing it in the grasslands, and most people even throwing it in the river. . Meanwhile, handling waste by burning is one of the waste processing techniques, but the smoke from burning is difficult to control. The best burning is done with an incinerator so as not to cause disturbances, but the drawback is the cost (Ikhsandri, 2014).

According to the EPA (*Environmental Protection Agency*) in 1998 which discusses illegal dumping sites, which are places that are deliberately used as rubbish dumps to avoid the costs, time and effort required to dispose of rubbish in legal or proper places. Illegal shelters show the low level of community behavior in implementing a clean and healthy lifestyle. Apart from having an unpleasant view, this also has an unpleasant impact on the surrounding air and pollutes the environment and water conditions (Elamin, 2018:369 and Asti, 2014). Apart from that, illegal waste dumps are places that are deliberately used as rubbish dumps by the community for the reason of avoiding the time, costs and energy required to go to legal dump sites (Khoiriyah, 2021:14).



Figure 3. Cleaning Up Illegal Trash Cans

Lagging behind in information, knowledge and technology is also a problem that influences activities carried out in villages, especially the problem of environmental cleanliness, namely

limitations in providing storage and waste management (Elamin, 2018: 369). Through direct outreach activities related to waste management, it can encourage community participation in waste management, thereby building public awareness of the importance of a clean environment (Rizal, 2011). Due to the unavailability of a main waste disposal site, people throw household waste on a large scale on empty land and tabaks which are used as final disposal sites.

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Therefore, regular KKN students, through community service activities, have developed a program to overcome the waste problem in the village by building a public waste disposal site (TPSU) called a waste bank. It is called a waste bank because in its understanding a waste bank is a place that can accommodate large amounts of waste (Suryani, 2014:75). In this case, the main waste bank can be an alternative in overcoming the waste problem. The main waste bank was also created as an initiative for the local community in an effort to overcome the problems that occurred. The main waste bank is an activity of a *naturesocial engineering* which teaches and builds public awareness to manage waste and becomes the main disposal site for all waste in the environment. Waste management involves the utilization and utilization of facilities and infrastructure that have been provided such as the main waste bank, in this case also requires the responsibility and role of the community in protecting the environment (Selomo, 2016: 233). The main waste bank can also be an alternative in dealing with waste problems. The main waste bank was also created as an initiative for the local community in an effort to overcome the problems that occurred. The main waste bank is an activity of a *naturesocial engineering* which teaches and builds public awareness to manage waste and becomes the main disposal site for all waste in the environment. Waste management involves the utilization and utilization of facilities and infrastructure that have been provided such as the main waste bank, in this case also requires the responsibility and role of the community in protecting the environment (Selomo, 2016: 233).



Figure 4. Mutual Cooperation To Clean The Village

The waste bank was built with the aim of assisting in waste management, apart from that it aims to make the public aware of a healthy, neat and clean environment. Waste banks have several benefits both for humans and the environment, where with the existence of waste banks the

environment becomes cleaner and public awareness of the importance of cleanliness increases, especially when processed waste can create economic value.

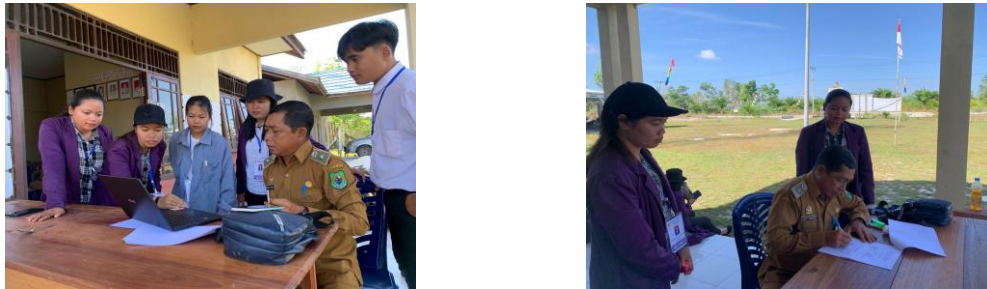


Figure 5. Consultation & Requesting Approval From The Village Head

Before implementing the KKN program, members of the KKN group first prepared activity proposals and carried out consultations and asked the head of Lawang Kajang Village for suggestions on the location for building a waste collection site. The location used as a place for the construction of the Main Waste Disposal Site (TPSU) is on the side of the road, empty land owned by local residents and which has received approval from the owner. Group 1 of the Regular KKN together with several residents carried out inspections and provided benchmarks for the boundaries of the land where the Main Waste Disposal Site (TPSU) would be built as well as cleaning the location.



Figure 6. Inspection of Project/Program Development Locations

After inspecting and clearing the land, the Regular KKN members consulted and asked for advice regarding the amount of materials and tools needed in the TPSU construction process from the builders who were none other than village residents, then prepared the tools and materials according to the specified quantities.



Figure 7. Cleaning of Project/Program Locations

The process of building a TPSU which is used as a waste bank cannot be separated from citizen intervention as a form of participation and cooperation between KKN students and residents. The work process began in the 3rd week on August 4 2023 and was completed in the 5th week on August 19 2023. The work process took quite a long time because there were village activities and other programs being carried out which clashed with preparations. 78th Indonesian Independence Day.

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Figure 8. Process of Working on A KKN Project/Program



Picture 9. Final Stage



Figure 10. Main Waste Disposal Site (TPSU)

The evaluation or (follow up) stage needs to be carried out, this is intended to assess the extent of the progress of the achievements that have been implemented, whether they are in accordance with the plan or not. The evaluation stage also aims to see the shortcomings and advantages of the activities that have been carried out, as well as being a means of finding solutions to cover all existing deficiencies and it is hoped that this can become a reference material for increasing the advantages achieved.

By conducting group evaluations while carrying out KKN activities, you can find out the advantages and disadvantages of each group work program that has been planned, so that KKN activities can be carried out and run smoothly and well until completion.

CONCLUSION

Based on the description above, it can be concluded that the problem discovered by the KKN group 1 team while conducting observations in Lawang Kajang village was the unavailability of the main waste disposal site in Lawang Kajang village. This causes people to choose to throw rubbish in inappropriate places. Because of this problem, the KKN team took the initiative and tried to build a main rubbish dump in Lawang Kajang village so that the community could keep the environment clean and sustainable and keep it beautiful.

AUTHORS' CONTRIBUTION

Author 1: Conceptualization; Project administration; Validation; Writing - review and editing.
 Author 2: Conceptualization; Data curation; In-vestigation.
 Author 3: Data curation; Investigation.
 Author 4: Formal analysis; Methodology; Writing - original draft.
 Author 5: Supervision; Validation.
 Author 6: Other contribution; Resources; Visuali-zation; Writing - original draft.

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