

Implementation of Sustainable Development in Girimekar Village Through Health Education in Waste Management

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Abstract

Waste management is important because waste and waste generated from human activities can be a source of disease. Garbage is a serious problem for society. In Cigiringsing village RW 16 Girimekar Village has a community called KSM Puspa Berdikari which has made every effort so that the volume of waste can be reduced, the efforts made still need support in terms of proper waste management and have a sale value and are safe for health. Proper management starts from the use of personal protective equipment when processing waste, sorting organic/inorganic waste and utilizing waste into goods of economic value. Inappropriate management can have a negative impact on health, therefore through KSM partners Puspa Berdikari health education is carried out as a form of implementing sustainable development through health education and waste management, namely processing waste into eco enzymes. This is done to improve public health and environmental quality which is closely related to the lifestyle and culture of the community itself and to make waste a resource that can be utilized in a sustainable manner. Therefore, waste management requires community participation. The most effective method used is promotive action in the form of counseling and simulations to provide learning experiences for individuals and communities in order to influence positive behavior in order to maintain, maintain and improve health so that it is effective in efforts to manage waste in a sustainable manner.

Keywords: Garbage, Eco enzyme, Sustainable Development

INTRODUCTION

The Sustainable Development Goals (SDGs) are a global action plan agreed upon by world leaders, including Indonesia, to end poverty, reduce inequality and protect the environment. With these SDGs, our group takes the theme of Healthy and Prosperous Living which focuses on environmental sanitation, namely waste management (Linggarwati et al. 2021).

Garbage is material that is not useful, not used, or material that is wasted as the rest of a process (Widyatmoko, H., & Moerdjoko, M. S, 2002). In current developments, human activities always leave residues that are considered useless or discarded items called trash. Starting from household waste, markets, factory waste, or remnants of industrial production activities. Garbage is an important problem that needs to be addressed because the amount of waste is increasing along with the amount of waste generated from human activities which becomes a source of disease if it continues to accumulate without efforts to reduce the amount of waste. Not only has an impact on health but also on various sides of life (Yuliananda, S., Utomo, P. P., & Golddin, R. M., 2019). Therefore, it is important to do waste processing.

Waste management using the combustion method will cause various problems, namely, the smoke produced by combustion causes air pollution. According to the EFA agency, the smoke from burning garbage can release toxic substances into the air, such as nitrogen oxides, carbon monoxide, and pollution particles. In addition to producing toxic substances, burning waste will also have health consequences such as irritation, respiratory problems, disruption of the reproductive system, and can even cause cancer and death. (Rendi et al. 2021).

Environmental problems are issues that cannot be avoided. At present waste is a very serious environmental problem faced by Indonesian people in general. However, what is concerning is

that the waste generated is actually disposed of carelessly in various places, and the effect will be detrimental to the surrounding environment.

Based on the results of site observations and discussions with the head of RW 16 in Girimekar Village, Cilengkrang District, the results of a preliminary study in Girimekar Village RW 16, there is a waste management site that is not in accordance with standards which will eventually cause disease from waste pollution that cannot be decomposed. Thus, our goal is to take the theme of waste management because of its broad and sustainable coverage of public health. The following are some of the problems that arise in the general public, one of which is in Girimekar Village, Cilengkrang District, where the problems are as follows: (1) The landfills used have not been optimally arranged, and judging by the surrounding environment, they are also affected by being dirty and filled with flies, especially if garbage piles up and there are lots of stagnant water which can trigger mosquito nests, (2) In waste management, people are still less concerned about not using self-protection equipment that meets standards, (3) people's awareness and knowledge about processing or utilizing waste are not maximized environmental improvements that affect public health.

Problems with partners that make it possible to occur are the lack of understanding of implementation related to good and correct waste management by people from various groups, as well as the lack of knowledge about the importance of personal protective equipment when processing waste, so efforts are needed to control and handle it in reducing the amount of use or utilization of recycled waste. so that it can improve the welfare of the community with the quality of a healthy and beautiful environment. Therefore, the purpose of this community service activity is to utilize this waste into something that has benefits such as an eco enzyme.

METHOD

The method used in this community service activity is carried out using 3 methods, namely socialization, education, and simulation. The purpose of implementing community service in Girimekar Village RW 16 is to utilize this waste into something that has a beneficial value such as an eco enzyme.

The implementation of the activities carried out began with healthy and prosperous activities, arrangement of the KSM Puspa Berdikari park, demonstrations of hand washing gymnastics at Early Childhood Education Tunas Bangsa, and ended/closed with counseling and educational activities with the theme "wise in managing waste" and a simulation of making eco enzyme from household waste was carried out. households to the community and partners in RW 16. The activities were carried out in Girimekar Village Kp. Cigiringsing RW16, after carrying out this activity it is hoped that there will be an increase in understanding and being able to simulate waste management so that it can be applied in everyday life.

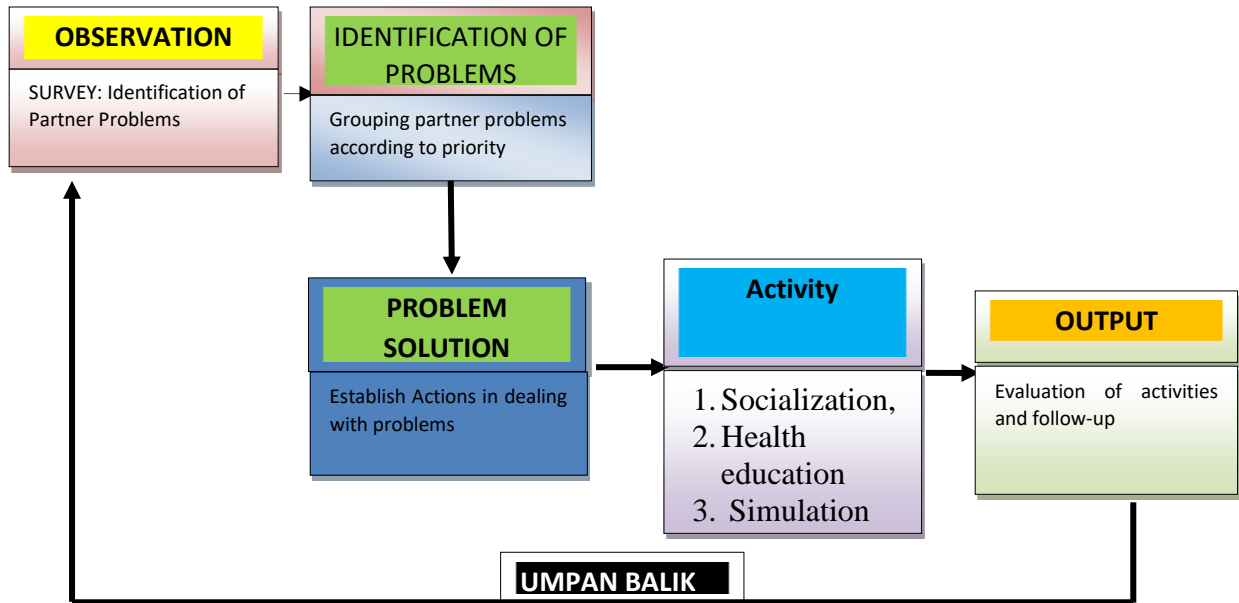


Figure 1. Problem-Solving Framework

RESULTS AND DISCUSSION

Activities are carried out according to the planned schedule. Starting with a survey and analyzing the problem, we agreed to take a location in Kp. Cigiringsing, Girimekar Village, Cilengkrang District RW 16, Bandung Regency. The activity ran smoothly thanks to good cooperation between the UBK community service team and the people of Cigiringsing Village RW 16 which was held for 5 days.

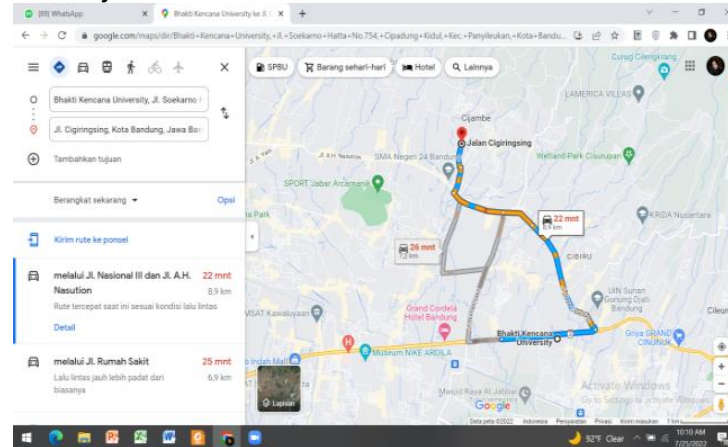


Figure 2. Girimekar Village location map



Figure 3. The signing of an agreement letter with a partner

Sorting and Management of Waste as well as Provision of Education related to the Importance of Personal Protective Equipment

The first achievement of the activities that have been carried out is the sorting and management of waste which is located not far from the KKN location in RW 16 to be precise at KSM Puspa Berdikari which was previously the RW 16 program itself which was established in 2021. the waste management program is finished in the smallest unit so that no one comes out of the RW 16 area. With the agreement, all residents must pay 2000 rupiah every 1 week for 3 withdrawals for a total of 6000 rupiahs. Garbage by officers is sorted into several parts, namely organic waste such as rotten vegetables and fruits is made fermented for maggot feed and some are used as compost. Meanwhile, inorganic waste such as plastic, drink bottles/cans, plastic bags, used tires, iron, glass, cables, and electronic goods is sorted again if there is an economic value that is collected for operations and additional staff wages. Then the remaining 20% is burned in a kiln facility using a 12-meter-high chimney. In addition, land that belongs to one of the residents allows his land to be used for waste processing. However, the spatial planning and the availability of personal protective equipment for workers are insufficient for workers to manage this waste. Therefore, we went down directly to the waste management site and took part in sorting the waste according to its type and continued by providing Personal Protective Equipment in the form of gloves, masks, and mask storage boxes, and at the end of the event gave souvenirs in the form of 2 large trash bins as a form of appreciation to the workers who have carried out waste management to avoid diseases caused by this waste. The changes that occurred after the activities were carried out by the workers in waste management were getting used to using Personal Protective Equipment such as masks which were kept securely in place and special gloves were available in the waste management area. The day after the implementation of Thematic KKN, monitoring was carried out and the result was that workers and the community had implemented positive habits such as having awareness of the aspects of mindset, behavior, and the environment. On the other hand, the community has also experienced an increase in skills and awareness as well as a sense of togetherness by paying attention to the importance of environmental health.



Figure 4. The condition of Puspa Berdikari KSM before being arranged



Figure 5. The condition of KSM Puspa Berdikari after the arrangement
Arrangement of Independent Puspa Parks and Utilization of Plastic Waste

The second program, which was carried out on the same day on Monday 1 August 2022, was to arrange a garden located at the entrance to the Puspa Berdikari waste management site. By repairing dead plants by replacing them with new plants, then tidying up the bamboo gazebos that have weathered and collapsed, and rearranging the irregular plant media. The positive impact of arranging this garden is that apart from being organized in its placement, it also avoids insects such as the many ants that anchor on weathered bamboo which affects the survival of the plants. As well as the managers who usually arrange the layout of the plants and water the plants are constrained because it is difficult to reach the process of watering the plants which are too high hung on the gazebo. Therefore, the program implemented to improve the garden is to make it easier for local residents and workers to water the plants which has an impact on their survival of these plants.



Figure 6. The condition of Taman Puspa Berdikari before it was organized into community service activities



Figure 7. The condition of Taman Puspa Berdikari after it was arranged in community service activities

Demonstration of Handwashing Exercise

The program that was carried out next was a demonstration of hand-washing exercises at Tunas Bangsa PAUD. In addition, to be able to enliven the activity, an educational game was held related to good and correct hand washing and its impact and then giving door prizes in the form of masks and stationery to encourage children to play while learning.



Figure 8. Handwashing demonstration for Tunas Bangsa PAUD children

Hand washing behavior is one of the preparedness efforts to prevent disease. This alert behavior is carried out continuously and informed on an ongoing basis because with a continuous process an attitude of preparedness will be built and it is hoped that it will have an impact on diligent hand-washing behavior as a new habit pattern with the implementation of health protocols (Muslim, D. N. A., et al, 2021).

Carry Out Counseling Related to Waste Management and Health Education with The Theme "Wise in Managing Waste"

The last program that has been realized is carrying out outreach to the community and partners with the theme "Wise in managing waste" by showing videos of activities in Kampung Cigiringsing RW 16, providing education about the impact of waste on the environment and health, showing video demonstrations and explaining alternative methods as input or solutions. for the community in waste management, a simulation of processing household waste into eco enzymes.

Waste management can be developed into goods that have beneficial value, such as in the village of Kalanganyar, Sidoarjo, which processes organic waste and household waste to produce organic liquid fertilizer with economic value. (Nuroini, I., & Istanti, E, 2022)

Managing waste into beneficial eco enzymes for the environment, eco enzymes can be used for daily needs and are environmentally friendly as stated by Ginting & Mirwandhono, (2021); Patel, Solanki & Mankad, (2021) that eco-enzymes are useful materials, have economic value and are environmentally friendly and this is also supported by Abidin, Y., Yunansah, H., Irianto, D. M., Herlambang, Y. T., & Wahid, R. (2022) which states that eco-enzymes provide benefits in the development of community environmental literacy in Pasir Biru Village, Cibiru District, Bandung City. Eco enzyme has the advantages of 1) being economical, 2) environmentally friendly, 3) reducing pollution, 4) being made from natural ingredients, 5) being easy to make so anyone can make it according to Wen, Lin & Teo (2020)

Activities are carried out starting from an explanation of 1. What is waste, 2. How to manage waste, 3. Products that come from waste, 4. Simulation of making eco-enzymes. After that, door prizes were given to mothers who contributed to a question-and-answer session as a form of understanding of what had been explained by the speaker. Thursday, 4 August 2022, which coincided with counseling, held a closing that was attended by the head of the local RW 16, namely Mr. Nandang Sudrajat, and partners who had worked together.



Figure 9. The counseling activity "Be wise in managing waste" with residents of Kp. Cigiringsing RW 16

Health education using counseling methods and simulations about waste management can increase the understanding of the RW 16 community, this is shown by the participants being able to explain again how to manage waste and also being able to simulate the manufacture of eco enzymes from household waste. The simulation method in providing health education is effective in increasing knowledge (Khotimah, N. I. H. H., et al, 2022).

Training activities for making eco enzymes can develop environmental literacy (Abidin, Y., Yunansah, H., Irianto, D. M., Herlambang, Y. T., & Wahid, R, 2022). Simulations for making eco enzymes and waste management carried out in the village of Giri Mekar increased knowledge in waste management for the people of Girimekar Village.

CONCLUSIONS AND RECOMMENDATIONS

Health education activities with counseling, and waste management simulations as a form of community service with Giri Mekar Village partners demonstrate an increase in knowledge and skills in waste management simulations that can be implemented to support sustainable development. So that the transfer of knowledge through routine activities is carried out from the village level to the RT so that all components can carry it out.

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