

Empowerment of Business Management at TPS3R Taruna Jaya, Desa Adat Tojan, Blahbatuh, Gianyar

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ARTICLE INFO

Keywords: Compost, TPS3R Taruna Jaya, Gianyar

Received : 20, July

Revised : 22, August

Accepted: 24, September

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ABSTRACT

Gianyar, a prominent cultural tourism destination in Bali, has evolved into a global tourist hotspot, prompting local modernization with waste management emerging as a critical issue. TPS3R Taruna Jaya in Desa Adat Tojan, Blahbatuh, Gianyar, exemplifies a solution through its waste management infrastructure, converting waste into compost to benefit environmental conservation. Universitas Warmadewa engages in enhancing the compost potential of TPS3R Taruna Jaya through initiatives in production management, marketing, and finance. This collaboration aims to augment production capacity, bolster marketing efforts, enhance human resources, and increase sales and company assets for the TPS3R Taruna Jaya group. Implementation involves mentoring and training in waste sorting, compost packaging, storage systems, label creation, promotional strategies, financial reporting, and equipment acquisition.

INTRODUCTION

Urban waste management in Indonesia has become a pressing issue in line with the increasing population, resulting in a higher volume of waste generated (Mahyudin, 2017). Waste is a trigger for environmental problems that can affect human health, environmental aesthetics, and pollute the environment if not managed properly, necessitating appropriate waste management to create a clean and healthy environment (Aulia et al., 2021). However, several challenges are faced in waste management, such as the lack of a strong legal framework, inadequate disposal facilities, and insufficient landfill management systems (Mahyudin, 2017). Sources of waste include residential areas, households, accommodations/hotels, offices, educational facilities, industries, and markets, producing various types of waste (Subekti, Basuki, & Purwaningrum, 2020).

In Indonesia, World Bank data indicates that national solid waste production reaches 151,921 tons per day. This means that each Indonesian citizen generates an average of 0.85 kg of solid waste per day. The same data also reveals that only 80% of the total waste generated nationally is successfully collected, with the remainder polluting the environment. According to Willyan Djaja, household waste comprises approximately 60% organic waste, 25% inorganic waste (plastic and paper), and 15% other waste (metal, cloth, glass). Thus, the potential for organic waste amounts to 6.0 tons, which, after processing into compost/organic fertilizer, becomes 4.2 tons per day (a reduction of 30%) (Djaja, 2008). The impact of waste management is both positive and negative. Such influences are crucial to human life; for instance, the aesthetic quality of the environment deteriorates, the decomposition of waste by microorganisms produces gases causing foul odors, waste burning can lead to air pollution and wider fire hazards, and waste disposal into water channels disrupts water flow and causes siltation (Budiman, 2006).

Gianyar is one of the tourist areas in Bali known for its Culture-Based Tourism. Being a prominent global tourist destination, Gianyar has experienced a societal shift towards modernity, where waste management has become a significant challenge in this modern era. One solution to this waste issue is establishing waste management facilities and systems, such as the TPS3R Truna Jaya in Desa Adat Tojan, Blahbatuh, Gianyar. TPS3R stands for Tempat Pengelolaan Sampah (waste management site) Reduce, Reuse, Recycle, a system and technology for waste processing from the source. TPS3R Truna Jaya serves the areas of Banjar Dinas Tojan Tegal, Banjar Dinas Tojan Kajinan, Perumahan GSM Kaja, and Perumahan Tojan Permai.

TPS3R Truna Jaya has implemented a community waste segregation program, where the waste is subsequently processed into compost. This initiative is supported by Peraturan Daerah Kabupaten Gianyar Nomor 17 Tahun 2022 concerning the Processing and Utilization of Organic Waste through a Composting System. Composting is the process of decomposing organic materials into humus, which serves as a natural fertilizer for the soil. The composting process involves the breakdown of organic materials by microorganisms such as bacteria, fungi, and soil invertebrates. Various organic materials, including food scraps, dry leaves, straw, dry grass, and other organic

matter, can be used for composting. TPS3R employs the Osaki composting system, which originated in Osaki City, Japan. This system starts with segregating household waste into organic, inorganic, and residual categories, with organic waste comprising food scraps and leaves processed into compost. The compost produced from organic waste becomes a source of economically valuable recycling material.



Figure.1 The CSA Unwar Team Conducting Observasi at TPS3R Taruna Jaya



Figure.2 Piles of waste TPS3R Taruna Jaya



Figure.3 Waste Sorting Process at TPS3R Taruna Jaya



Figure.4 Composting using the Osaki System at TPS3R Taruna Jaya



Figure.5 Compost Product and Storage Area at TPS3R Taruna Jaya

Based on the aforementioned societal phenomena, efforts to properly manage waste, such as converting it into compost, have been widely implemented. The next step is to ensure that the compost acquires economic value and is well-distributed so that its benefits can be felt by the community. Regarding partner management, the problems faced by the partner can be described as follows: 1) The partner still face limitations in procuring raw materials for compost. Data obtained from TPS3R indicates that during January to December 2023, the average daily waste intake was 950kg/day, consisting of 160kg/day of organic waste, 35kg/day of inorganic waste, and 745kg/day of residual waste. The high volume of residual waste is attributed to the lack of public awareness regarding waste segregation. 2) The partner do not have strategies for production and inventory management prior to marketing their product. The compost produced is simply packaged in sacks and stored in an open warehouse, making it prone to weight loss. 3) The partner lack marketing systems, such as a website or social media presence, as well as offline marketing strategies to increase awareness in the community and village. Consequently, the compost remains stockpiled in the warehouse due to the lack of marketing

efforts. 4) There is no labeling or branding for the compost products. Lastly, 5) The partner do not have or know how to maintain financial records regarding income, expenses, production costs, and profits and losses.

IMPLEMENTATION AND METHODS

The community service conducted through the empowerment of TPS3R Taruna Jaya in Desa Adat Tojan, Blahbatuh, Gianyar, aims to address the issues faced in developing their business. The implementation methods proposed to solve the partner' problems include:

Regarding the issue of procuring raw materials for compost, the community service Unwar team collaborates with the Desa Adat apparatus and the Waste Bank managed by Desa Adat Tojan to provide education on waste segregation. This effort aims to raise public awareness about segregating waste. Organic waste (food scraps, kitchen waste, leaves, etc.) can be used as raw material for compost, inorganic waste (plastic bottles, plastic packaging, paper, etc.) can be submitted to the Waste Bank as community savings, and residual waste destined for final disposal will be minimized.

For production issues related to compost packaging and storage, the community service Unwar team assists in creating proper packaging systems by packing compost in sacks lined with plastic and sewing the sacks with a machine. For storage, FIFO (first in, first out) system is recommended to ensure the oldest compost is used first, preventing product deterioration.

Marketing involves planning and implementing pricing, promotion, and distribution strategies to create satisfaction between the company and its customers (Alma, 2016). For compost marketing, the community service Unwar team creates labels to be printed directly on the compost packaging. With product labeling, TPS3R compost is expected to gain better recognition within the community. The community service Unwar team also facilitates compost distribution through a consignment system in local shops and stores around Desa Adat Tojan. Currently, compost is only available directly at TPS3R Taruna Jaya, but with broader distribution in local shops and stores, sales are expected to increase, preventing stockpiling at TPS3R Taruna Jaya. Additionally, the community service team prepares promotional brochures for TPS3R Taruna Jaya compost to be distributed via WhatsApp and other social media platforms. This online promotion method is deemed effective given the limited skills of the human resources at TPS3R Taruna Jaya and the current production scale.

Furthermore, the community service Unwar team emphasizes the importance of maintaining simple financial records. After providing an understanding, the partner are given a blank book to organize their financial reports. According to Kasmir (2019), financial reports show the financial condition and business results of a company at a specific time or over a period. Financial reports indicating the current condition of a company reflect its financial status at a particular date (for the balance sheet) and over a specific period (for the income statement). The partner are guided by the proposing team to compile simple financial reports, recording all costs and revenues related to production and marketing, including wages for their workers. With this

understanding, it is hoped that the partner can ensure the smooth operation and growth of their business.

In addition, the community service Unwar team is implementing regular financial review meetings with the partner to reinforce their understanding and practice of financial management. These meetings will provide a platform for the partner to discuss their financial records, address any challenges they encounter, and receive continuous support and advice. By fostering a culture of financial accountability and transparency, the partner can better manage their resources, plan for future investments, and improve their decision-making processes. This ongoing support aims to build the partner's confidence in financial management and contributes to the long-term sustainability of their business endeavors.

RESULTS AND DISCUSSION

This community partnership program has had several economic and social impacts on the partner, including:

Table 1. Activity Performance Indicators

No.	Description	Before community service	After community service	Progress
1.	Asset	35 million	39,5 juta	+/- 11%
2.	Average turnover per month	17 million	21 juta	+/- 20%
3.	Average number served per month	700 household	1163 household	+/- 30%



Figure 6. Graph showing the development of TPS3R Taruna Jaya, Desa Adat Tojan

During the implementation of the community service activities, the partner significantly contributed by preparing the venue for the training sessions and participating enthusiastically. The first activity began with a site survey, during which the community service Unwar team was provided with information regarding the background, management, and operations of TPS3R Taruna Jaya. Subsequently, the community service Unwar team was invited to collaborate in waste segregation education at the Balai Banjar Desa Adat Tojan and participate in the Waste Bank activities. The partner were also very cooperative in receiving the training and equipment provided by the community service Unwar team. The training included methods for packaging compost using sacks and sack-sewing machines, as well as compost storage techniques. The partner were eager to receive input on labeling, consignment systems for compost distribution, and promotional brochures to increase community awareness and sales of TPS3R Taruna Jaya compost. Lastly, regarding the creation of simple financial reports, the partner willingly followed the instructions to record income and expenses related to compost production, thereby enabling them to understand their financial position, whether in profit or loss.



Figure 7. The Inauguration of the Community Service and Handing Over of Equipment to TPS3R Taruna Jaya, Desa Adat Tojan



Figure 8. Socialization Activities on Waste Segregation and the Waste Bank of Desa Adat Tojan with the Community Service Unwar Team



Figure 9. Training Activities on Compost Packaging and Storage



Figure 10. Training and Assistance in the Preparation of Simple Financial Reports



Figure 11. Labels, Brochures, and Distribution of TPS3R Taruna Jaya Compost

CONCLUSIONS AND RECOMMENDATIONS

The conclusions from this community service activity are as follows: (1) The partner can raise awareness among the Desa Adat Tojan community to start segregating household waste. (2) The partner can increase their compost production and implement a proper inventory storage system. (3) The partner can boost compost sales by adopting the marketing strategies provided, such as labeling/branding and product distribution in the surrounding area. (4) The partner understand the importance of creating financial reports to ascertain their business's profit or loss condition.

However, the community service Unwar team faced several challenges. The first challenge was the limited duration of the community service, which spanned only a few months, preventing the team from optimally assisting and supervising the ongoing community service activities. The second challenge was encouraging the entire Desa Adat Tojan community to actively participate in the community service activities. During the community service implementation, only a small portion of the community participated, mainly women from the PKK group of Desa Adat Tojan, TPS3R managers, and village administrators. Men and youth groups could not be involved due to their busy schedules with work, school, and other activities. The third challenge was the collection of compost raw materials, as some community groups refused to segregate waste, believing that they already paid high waste collection fees. In this regard, the village administrators are working on an informative approach to educate the community about waste segregation, potentially leading to the implementation of penalties..

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