J-Abdi
Jurnal Pengabdian Kepada Masyarakat
Vol.3, No.2, Juli 2023

SOCIALIZATION OF DOMESTIC WASTE REDUCTION PROGRAM UTILIZING REUSABLE PACKAGING AND WASTE MANAGEMENT THROUGH COMPOSTING

Oleh
Bintang Ekananda[1], Rian Sumendar[2]
[1,2] Program Studi Teknik Lingkungan, Fakultas Teknik, Universitas Muhammadiyah Sorong
E-mail: [1]bintangekananda@gmail.com, [2]rianfj23@gmail.com

Article History:
Received: 22-05-2023
Revised: 21-06-2023
Accepted: 26-06-2023

Keywords: *waste reduction, reusable packaging, community-based approach, Alner, waste management*

Abstract: *The alarming rise in uncollected waste volume in Jakarta, Indonesia necessitates an innovative, community-centered approach to waste reduction. This report details the socialization and training program initiated in the Cilandak region, South Jakarta, focusing on waste prevention at the source through a partnership with the startup company Alner. The program encourages the use of reusable packaging for everyday products and promotes composting organic waste. Lectures and practical demonstrations were employed to educate residents about the waste management hierarchy of reduction, reuse, and recycling. Over 50 participants adopted reusable Alner-packaged products, and several engaged in on-site composting. The initiative was successful in fostering a better understanding of proactive waste management strategies and the financial benefits of a circular economy. Given the positive feedback, the program may be considered for replication across other Jakarta regions to amplify its impact on waste reduction.*

INTRODUCTION

Law No. 18 of 2008 defines waste as the residue from daily human activities and/or natural processes which takes a solid form, and waste management as a systematic, comprehensive, and continuous activity encompassing waste reduction and handling. It is a pressing issue faced by almost all developing countries, including Indonesia (Monita et al., 2017).

Particularly, the waste issue in Jakarta, the capital of Indonesia, is a recurring subject of discussion due to the dense population and yearly population growth. The production of urban solid waste continues to increase year by year. For instance, in 2011, the total waste generated in the Jakarta area amounted to 5,597.87 tons/day, of which 4,986.31 tons/day was collected and 611.56 tons/day was not collected. In 2012, 6,356.88 tons/day of waste was produced with 6,004.2 tons/day collected and 352.68 tons/day uncollected. In 2013, the total waste generated reached 6,513.85 tons/day, with 5,636.90 tons/day collected and 876.95 tons/day left uncollected (Dinas Kebersihan Prov. DKI Jakarta). Even though the general waste handling in Jakarta has begun to adopt direct source handling approaches (Nugraha et al., 2018), these figures illustrate a persisting challenge.

Most waste handling in Indonesia today remains reactive, focusing on downstream processes such as recycling programs. However, according to the waste management hierarchy, before proceeding with recycling, waste handling should focus on prevention strategies such as reduction and reuse.

This report aims to detail the efforts of socialization and training for residents in the Cilandak area, South Jakarta, to initiate waste prevention measures from home based on a community and entrepreneurial approach. This was achieved through a collaborative program with a startup company named Alner (previously known as Koinpack) (www.alner.id), which is a provider of daily necessities packaged in reusable containers. The initiative intended to encourage the shift from single-use packaged products to those offered by Alner in reusable containers and promote composting of organic waste, as well as to provide the opportunity for additional income by becoming Alner sales partners. The aspiration is to see a rise in community awareness regarding waste reduction choices, resulting in a reduction of waste generated in the area and ultimately minimizing waste that needs to be disposed of in the landfill.

METHOD

This study employed a combination of lectures and hands-on practice. The procedure for executing this study is outlined below:

Preparation

In cooperation with Alner, we mapped out the targeted area for this program, sought composting activists who would act as trainers, booked the venue for the event, and promoted the socialization event in collaboration with local government officials at the sub-district level. Further preparations included setting up the stage and gathering supporting demonstration tools, ranging from Alner products for a demonstration to composting equipment.

Notably, the event was held at the Ruang Publik Terpadu Ramah Anak (RPTRA) Intan in Cilandak, South Jakarta. RPTRA is an Indonesian initiative for Integrated Public Spaces that are Child-Friendly. As these public spaces are designed to foster community engagement and safety, they provide an ideal location for residents to learn about important topics like waste reduction and sustainability.

Implementation

The waste reduction socialization program encouraged participants to transition from single-use packaging to reusable packaging provided by Alner. This was followed by a composting workshop for organic waste such as leftover food from households. The event concluded with a registration session for community members interested in becoming Alner reselling partners.

Evaluation

The evaluation phase was conducted to assess the success rate of the socialization and training carried out. The evaluation took into account participant feedback, observed changes in participant behavior and habits, and the number of individuals who signed up to be Alner reselling partners. This step was crucial in measuring the impact of the program and identifying areas for improvement.

RESULT

Following the implementation of the training and socialization program, the residents gained a better understanding of the waste management hierarchy: reduce, reuse, and recycle. They learned the importance of maximizing the reduction and reuse of items before resorting to recycling.

The focus of this program was on the reduction and reuse of packaging materials, especially non-recyclable multilayer single-use packaging such as sachets or pouches, which significantly contribute to environmental pollution. Residents were encouraged to minimize waste from their daily necessities, including detergents, shampoos, bath soaps, cooking oils, and others, which are typically packaged in these non-recyclable multilayer sachets or pouches.

The solution offered was the adoption of Alner's reusable packaged products. Residents were given the option to exchange empty Alner packaging for new products at Alner selling points in Jakarta or request home pick-up and exchange, similar to the water gallon system in Indonesia. Moreover, residents were also equipped with knowledge on how to compost organic waste from their homes.

The program resulted in more than 50 residents trying out products in Alner's reusable packaging. Their primary motivation, apart from reducing single-use packaging waste, was the discounted prices received after returning the empty packaging (as they only pay for the contents). The returned packaging is then cleaned, sanitized, and refilled by Alner, thereby creating a closed-loop system that prevents single-use plastic waste at its source and reduces plastic pollution. In addition, more than five residents practiced composting on-site with trainers. This hands-on experience was intended to enable these residents to apply their newly acquired composting knowledge at their own homes.

Figure 1. The author conducts a socialization about the Alner reusable packaging system

Figure 2. The Alner team distributes products in reusable packaging

Figure 3. Composting Practice 1

Figure 4. Composting Practice 2

Figure 5. Composting Practice 3

Figure 6. Booth for demonstrating Alner products

DISCUSSION

The fact that over 50 residents were motivated to try Alner's reusable packaging products, with plans to continue using them, demonstrates a positive community response to the waste management socialization program. The discount incentive system for returning empty containers not only drove customer adoption but also contributed to the creation of a sustainable, closed-loop system. This indicates that such a model can be a practical solution to combatting the issue of single-use plastic waste.

The success of this program suggests that public understanding and acceptance of waste reduction strategies can be significantly enhanced through training and socialization. Therefore, such programs should be considered in other areas struggling with similar waste management issues.

Moreover, the composting training provided another layer of waste management strategy that can be applied at the household level. Although the number of residents who practiced composting was small, their participation shows promise for broader acceptance and implementation of composting practices, given the right support and guidance.

This program demonstrates the power of community-based interventions in promoting sustainable waste management practices. Further research could explore other factors that could drive adoption and long-term commitment to these practices.

CONCLUSION

This study has shed light on the beneficial impact of community-based initiatives aimed at improving the understanding of the waste management hierarchy: reduce, reuse, and recycle. Much of the current waste management effort is reactive, primarily focusing on recycling or repurposing waste after it has been produced. This program, however, offered a fresh perspective on proactive waste prevention strategies at the source, particularly in the context of single-use plastic packaging from daily necessities and personal care products, which are closely intertwined with people's everyday lives.

Moreover, the program also imparted practical knowledge on composting, enriching participants' skills in managing organic waste from their homes. The overall response from participants was exceedingly positive. Such a favorable reception underscores the program's

effectiveness and the general public's openness to more sustainable waste management practices. The request from local government to extend similar activities to other areas within DKI Jakarta serves as further testament to the program's success and its potential for wider implementation.

In conclusion, community-based prevention and management strategies, coupled with hands-on learning opportunities such as composting, can significantly enhance waste management efforts. The success of this program paves the way for further adoption and scaling of similar initiatives in different communities, ultimately contributing to a broader, more sustainable solution to our global waste management challenges.

ACKNOWLEDGEMENTS

I, Bintang Ekananda, wish to extend my gratitude to my team at Alner, particularly Trian Effransa, Delanny Nugrahini, and Ridwan Firdaus, as well as the entire Sales and Operations team. I also acknowledge the support from Enviu, Alner's venture builder, and Environmental Engineering Study Program, Universitas Muhammadiyah Sorong, which underpinned this research. Your support and expertise have been invaluable in this project's success.

REFERENCES

[1] Monita, L., Sutjahjo, S.H., Amin, A.A., and Fahmi, M.R. "Pengolahan Sampah Organik Perkotaan Menggunakan Larva Black Soldier Fly (Hermetia illucens)." Jurnal Pengelolaan Sumberdaya Alam Dan Lingkungan (Journal of Natural Resources and Environmental Management) 7, no. 3 (2017): 227-234.

[2] Nugraha, A., Sutjahjo, S.H., and Amin, A.A. "Analisis Persepsi dan Partisipasi Masyarakat terhadap Pengelolaan Sampah Rumah Tangga di Jakarta Selatan." Jurnal Pengelolaan Sumberdaya Alam Dan Lingkungan (Journal of Natural Resources and Environmental Management) 8, no. 1 (2018): 7-14.