

ECO-FRIENDLY LIVING: PROMOTING SUSTAINABLE CONSUMPTION AND WASTE MANAGEMENT AMONG MSMES IN MALAYSIA

Dudi PERMANA^{1*}, Lenny Christina NAWANGSARI², Indra SISWANTI³, Augustina KURNIASIH⁴, Agus ARIJANTO⁵

^{1,2,3,4,5} *Universitas Mercu Buana, Jakarta, Indonesia*

**dudi.permana@mercubuana.ac.id*

ABSTRACT

Micro, Small and Medium Enterprises (MSMEs) in Malaysia play an important role in the economy, but often face challenges in implementing environmentally friendly practices. MSMEs are not yet fully aware of the importance of environmentally friendly living practices and sustainable consumption. The aim of this Community Service activity is to increase public awareness about the importance of environmentally friendly living, sustainable consumption and effective waste management, encourage MSMEs and the community to develop local innovations that support environmentally friendly practices, increase community involvement in environmental conservation efforts and improve the economic welfare of MSMEs through the development of environmentally friendly products and sustainable consumption practices that can increase operational efficiency and competitiveness.

Keywords: Eco-Friendly Living; Sustainable Consumption; Waste Management; MSME

1. INTRODUCTION

1.1. The analysis of the partner's situation

Micro, Small and Medium Enterprises (MSMEs) in Malaysia play an important role in the economy, but often face challenges in implementing environmentally friendly practices. Data from SME Corporation Malaysia also shows that MSMEs have a major contribution to the country's economic growth and continue to strive to improve operational efficiency and competitiveness through pro-environmental practices. MSMEs in Malaysia have taken pro-environmental steps in various aspects (SME Corporation Malaysia, 2023), such as:

1. Use of Renewable Energy: MSMEs in Malaysia are starting to use renewable energy such as solar and mini hydro to reduce dependence on fossil fuels.
2. Waste Reduction: MSMEs in Malaysia are increasingly paying attention to waste management by adopting recycling and waste reduction practices.
3. Eco-Friendly Products: There is an increase in the production of environmentally friendly products, such as organic products and environmentally friendly building materials.
4. Partnerships and Empowerment Programs: The Malaysian government has introduced various MSME empowerment programs which also include sustainability and environmental aspects.

Eco-Friendly Living is a concept that aims to promote sustainable consumption and effective waste management to reduce environmental impact. Pro-environmental behavior is action aimed at reducing negative impacts on the environment and providing solutions related to environmental problems (Young, 2000)

Environmental concern is a factor that influences pro-environmental behavior, where this attitude reflects individual awareness and concern for the importance of protecting and preserving the environment (Praminingsih et al, 2021). An environmentally caring attitude aims to prevent damage to the natural environment and carry out restoration efforts for damage that has occurred (Zuchdi, 2011)

The main principles of Eco-Friendly Living include:

1. Sustainable Consumption: Use natural resources wisely to meet daily needs without harming the ability of future generations to meet their needs. For example, by saving energy, using environmentally friendly products, and reducing carbon footprints
2. Good Waste Management: Reduce the amount of waste produced by avoiding single-use products, recycling materials, and composting food waste. Effective waste management helps maintain a clean and healthy environment

3. **Energy Efficiency:** Energy efficiency generally includes actions to reduce the amount of energy consumption by end users (eia.gov. For example, using energy wisely by utilizing renewable energy sources, using efficient electrical equipment, and reducing unnecessary energy use.
4. **Reducing Plastic Use:** Avoid single-use plastics and replace them with more environmentally friendly alternatives such as cloth bags and reusable water bottles.
5. **Conservation and Efficiency of Natural Resources:** Use natural resources efficiently and wisely to minimize waste and reduce pressure on ecosystems. This includes energy-saving practices, use of renewable raw materials, and reduced water use.

Partners in Community Service activities are PERMAI. PERMAI partners consist of various government agencies, financial institutions, and related organizations, playing an important role in the development of MSMEs in Malaysia through several ways including:

1. providing micro-financing schemes with low or no interest to help MSMEs overcome liquidity problems
2. offering training programs to help MSMEs switch to digital platforms, improve skills in e-commerce, digital marketing, and the use of information technology
3. providing business assistance to improve the managerial and operational capacity of MSMEs and help market products online, expand market reach and increase sales such as coordinating exhibitions and bazaars to promote MSME products

Characteristics of MSMEs in Penang Island, Malaysia

1. MSMEs in the micro and small categories with traditional or family businesses
2. MSMEs focus on the local market and significant penetration into the global market
3. MSMEs have begun to adopt digital technology for marketing and operations through e-commerce platforms.
4. Penang Island has MSMEs engaged in electronics, textiles, and processed food products. In addition, several MSMEs are engaged in the hospitality, culinary, handicrafts, and other tourism service sectors. In the trade sector, MSMEs in Penang Island include retail stores, traditional markets, and wholesale businesses that support the needs of the local community and tourists.
5. The Penang local government through various agencies such as Invest Penang and Penang Development Corporation provides various programs and initiatives to support the growth of MSMEs, including the Training and Development Program to improve management, marketing, and digitalization skills for MSME owners..

1.2. Partner Problem

Based on the description above, the problems faced regarding Environmentally Friendly Living, Sustainable Consumption and Waste Management in Malaysian MSMEs are:

1. MSMEs are not yet fully aware of the importance of environmentally friendly living practices and sustainable consumption. This low awareness is often caused by a lack of education and available information.
2. Limited resources and funds to implement environmentally friendly practices. Investing in green technology or an effective waste management program can be a significant financial burden.
3. Not all MSMEs have access to technology that supports environmentally friendly practices. Green technology is often expensive and requires special training to use.
4. Regulations and policies that support environmentally friendly practices are not always easy for MSMEs to comply with. Limited knowledge and regulatory complexity can be obstacles to its implementation. MSMEs face difficulties in changing existing habits and operational practices. Adopting new practices takes time and consistent effort.
5. The lack of incentives from the government or related institutions for MSMEs that implement environmentally.

1.3. The purpose activity

1. Increase public awareness about the importance of environmentally friendly living, sustainable consumption and effective waste management by providing education and training to MSMEs and local communities about environmentally friendly practices and ways to manage waste well. through implementing effective waste management practices and wiser consumption
2. Encourage MSMEs and communities to develop local innovations that support environmentally friendly practices and sustainable consumption through the development of environmentally friendly products and efficient waste management technology.
3. Increase community involvement in environmental conservation efforts through collective activities such as mutual cooperation, environmental cleanliness programs and environmental awareness campaigns.
4. Improving the economic welfare of MSMEs through the development of environmentally friendly products and sustainable consumption practices that can increase operational efficiency and competitiveness

2. METHOD

To implement solutions aimed at solving problems faced by MSMEs (Micro, Small, and Medium Enterprises) a systematic approach is needed. The following is a detailed and structured description of the implementation process, evaluation methods, and the role of the team to ensure the successful implementation of the proposed solution.

a. Stage 1. Coordination and Needs Analysis Activities

In the early stages, a Training Needs Analysis (TNA) needs to be conducted considering its relevance to identify problems faced by partners and identify their causes (Cotes,2019). At this stage, a joint commitment is made between the PKM Implementer and Partner (PERMAI) in the form of what needs are needed by the Partner so that this PKM activity provides benefits to participants. Another thing that must also be prepared by the PKM implementer is the material to be delivered, while the Partner (PERMAI) prepares participants and equipment for the presentation. In addition, it also prepares training materials that will be delivered to partners and coordinates with the PKM implementation team to ensure the number of participants, determine the right technical aspects to be implemented during the activity.

b. Stage 2. Pre-Test

This test is given before conducting the training. The form of the test given is an oral test and a written test. At this stage, a process activity model is created. When presenting the material, one or several participants are asked to come forward to ask questions and answers and various things related to the topic being discussed.

c. Stage 3. Implementation of Activities

Methods: Blended Learning, Coaching & Mentoring, Direct Training

Effective program implementation requires active participation from all partners

MSME Participation:

1. Training: Training is a series of individual activities to improve skills and knowledge systematically so that they have professional performance in their field (Widodo,2015). Business actors and MSME workers are expected to actively participate in training sessions to have knowledge related to Sustainable Consumption and Waste Management.
2. Feedback : Creating a business mechanism for MSMEs by providing feedback on implemented solutions, which allows for continuous improvement and adaptation of the program.

d. Stage 4. Evaluation

Evaluation of the activity is carried out through a question and answer session between the material provider and participants regarding the material presented. If there are still obstacles found, participants are welcome to submit obstacles via email, telephone, or WhatsApp.

Evaluation Methods:

1. Quantitative Evaluation: Tracking measurable outcomes such as financial growth, waste reduction, and increased sales through data collection and feedback surveys.
2. Qualitative Evaluation: Conducting interviews and focus groups with MSME owners, and other stakeholders to assess the effectiveness of training, support, and overall program satisfaction.
3. Sustainability Measures: Sustainability measurement is a set of frameworks or indicators used to measure how sustainable something is, includes processes, products, services and businesses (Hardyment,2024). Assessing whether circular economy practices are maintained beyond the duration of the program, such as continued waste reduction, increased revenue generation, and continued community support.

3. RESULTS AND DISCUSSION

The activity was held on Sunday, April 27, 2025 in Pinang, Malaysia. The resource person for this Community Service activity was the Master of Management Lecturer Team, Faculty of Economics and Business, Mercu Buana University. In general, the activity went well and smoothly, attended by Indonesian citizens who work on Penang Island, Malaysia with various backgrounds. Based on gender, participants were dominated by women with a total of 13 participants. Based on age, it was dominated by participants aged 40-50 years as many as 9 people, participants aged 30-39 years as many as 3 people and those over 50 years old only 1 person. Based on occupation, most of them were housewives as many as 8 people, working as cleaning services as many as 3 people and working in the culinary field as many as 2 people.



Figure 1. Implementation of Community Service Activities

The development of IPTEKS (Science, Technology, and Arts) for MSMEs (Micro, Small, and Medium Enterprises) that focuses on Promoting Sustainable Consumption and Waste Management among MSMEs in Malaysia.

IPTEKS that can be implemented are:

- Green Technologies: The adoption of green technologies, such as renewable energy sources (solar, wind, mini hydro), helps UMKM reduce their carbon footprint and reliance on fossil fuels. This shift towards cleaner energy sources is essential for sustainable operations.
- Waste Management Innovations: Advances in waste management technologies, including recycling and waste-to-energy systems, enable UMKM to manage waste more effectively. These innovations help reduce landfill waste and promote a circular economy.
- Sustainable Production Practices: provide UMKM with tools and methods to adopt sustainable production practices. This includes the use of eco-friendly materials, efficient resource utilization, and minimizing waste during production processes

- **Research and Development:** Continuous R&D efforts in the field of sustainability help UMKM stay updated with the latest technologies and practices. Collaborations with research institutions and universities further enhance their capabilities in sustainable practices.
- **Government Support and Policies:** The Malaysian government has implemented various policies and programs to support UMKM in adopting sustainable practices. These include financial incentives, training programs, and access to green technologies.
- **Awareness and Education:** Play a role in raising awareness and educating UMKM about the importance of sustainable consumption and waste management. Workshops, seminars, and online resources help disseminate knowledge and best practices.

The questionnaire distributed to participants included participants' expectations and satisfaction with the material presented, the methods used, supporting facilities and infrastructure for the activity, the cohesiveness of the Implementation Team, the competence of the speakers in providing material, how to package the program, the enthusiasm of the community in participating in the activity, the benefits of the Program Training for the community, how much interest the community has in the activity, community satisfaction, whether the service program is in accordance with community expectations and the time of implementation of the activity.

From the results of the questionnaire on satisfaction, participants were satisfied with the material presented by the resource person which was in accordance with the problems in the community, for the method presented, participants stated that they were quite satisfied, as well as with the supporting facilities and infrastructure.

This Community Service Activity has been published through the mass media and published in the *kompasiana* with a link

<https://www.kompasiana.com/agusarijanto8566/683f49c534777c7bec657452/mengukir-bisnis-berkelanjutan-untuk-pekerja-migran-kolaborasi-universitas-mercu-buana-pkm-group-3-dengan-permai-malaysia-penang>



Figure 3. Mass media publications

4. CONCLUSION

- Community service activities carried out on Sunday, April 27, 2025 went well and smoothly, attended by Indonesian citizens working on Penang Island, Malaysia with various backgrounds. Based on gender, participants were dominated by women. Based on age, some participants were 40-50 years old and based on occupation, most were housewives.

- b. Development of IPTEKS (Science, Technology, and Arts) for MSMEs (Micro, Small, and Medium Enterprises) which focuses on Promoting Sustainable Consumption and Waste Management among MSMEs in Malaysia.
- c. From the results of the questionnaire distributed, participants were satisfied with the material presented by the resource person because the material presented was in accordance with the problems in society. The method presented was quite good, as were the supporting facilities and infrastructure. Participants were very satisfied with the cohesiveness of the Implementation Team, because they had competencies that were in accordance with the material provided and how to package the activity program so that it was attractive and useful. From the entire activity program implemented, the community was satisfied and the community service program was in accordance with the participants' expectations.
- d. Suggestions for this Community Service activity are the need for ongoing training activities by continuing to establish cooperation between UMB and partners and MSME actors.

5. REFERENCES

- Cotes, J., & Ugarte, S. M. (2019). A Systemic and strategic approach for training needs analysis for the International Bank. *Journal of Business Research*.
- De Young, R. (2000). Expanding and Evaluating Motives for Environmentally Responsible Behavior. *Journal of Social Issues*, 56, 509-526. <http://dx.doi.org/10.1111/0022-4537.00181>
- Hardyment, Richard (2024). *Measuring Good Business*. London: Routledge. doi:10.4324/9781003457732. ISBN 978-1-003-45773-2.
- Praminingsih, I., Putrawan, I., & Suryanda, A. (2021). Pengaruh kepedulian lingkungan (environmental concern) dan paradigma lingkungan baru (new environmental paradigm) terhadap intensi perilaku lingkungan (behavioral intention) siswa. *IJEEM: Indonesian Journal of Environmental Education and Management*, 6 (1), 1-15. <https://doi.org/10.21009/IJEEM.061.01>.
- SME Corporation Malaysia 2023. <https://smecorp.gov.my/index.php/en/policies/2020-02-11-08-01-24/sme-statistics?form=MG0AV3>.
- Widodo, S.E. (2015). *Manajemen Pengembangan Sumber Daya Manusia*. Yogyakarta: Pusaka Pelajar
- Zuchdi, D. (2011). *Pendidikan karakter dalam perspektif teori dan praktik*. UNY Press.