

Plastic Waste Reduction Campaign at the Traditional Market of Nyanggelan Village, Panjer, Denpasar

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Abstract

This article raises the theme of the plastic waste reduction campaign in the traditional market of Nyanggelan Village, Panjer, Denpasar. The increasing problem of plastic waste is a severe environmental challenge, especially in areas with high trading activity such as traditional markets. Through a participatory approach, this campaign aims to increase public and trader awareness of the negative impacts of plastic waste and the importance of good waste management. Activities include socialization, counseling, and training on using environmentally friendly materials as an alternative to plastic. In addition, this campaign also involves collaboration with the government and local organizations to create sustainable solutions. The results of this activity show an increase in public understanding of the importance of reducing plastic use and changes in behavior in choosing more environmentally friendly packaging. Through this effort, Nyanggelan Village can be an example for other areas in reducing the negative impacts of plastic waste and encouraging further action in maintaining cleanliness and environmental sustainability.

Keywords:

Environmental Awareness, Plastic Waste, Waste Management, Community Service

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INTRODUCTION

Plastic waste has become one of the most pressing environmental issues worldwide, including in Indonesia. Plastic waste has also increased significantly with the increasing production and consumption of plastic, negatively impacting ecosystems, human health, and natural landscapes. As centers of local economic activity, traditional markets play a significant role in using single-use plastics, from shopping bags to food packaging (Morshedi Dehaghi et al., 2024).

Plastic waste has become one of the most pressing environmental issues worldwide, including in Indonesia. With the increasing production and consumption of plastic, plastic waste has also increased significantly, negatively impacting ecosystems, human health, and natural landscapes (Boretti & Rosa, 2019). According to data from the Ministry of Environment and Forestry, Indonesia is one of the most significant contributors of plastic waste to the ocean, which threatens marine life and damages aquatic ecosystems (Fohler et al., 2024).

As the center of local economic activity, traditional markets play a significant role in using single-use plastics, from shopping bags to food packaging. Nyanggelan Village in Panjer, Denpasar, is one of the areas facing this challenge. With many traders and visitors, the volume of plastic waste produced is very high, but awareness of the importance of reducing plastic waste among the community and business actors still needs to be improved (Ardini & Fahlevi, 2024; Zhang et al., 2024).

From a holistic perspective, plastic waste reduction campaigns focus on reducing plastic use and include behavioral change, education, and cross-sector collaboration. This approach involves various elements of society, including local governments, non-governmental organizations, and communities, to create collective awareness of the importance of protecting the environment (Schindler & Demaria, 2020). In this context, education is the primary key to increasing public understanding of the negative impacts of plastic waste and introducing more environmentally friendly alternatives (Khan et al., 2021).

This campaign aims to build strong partnerships between traders, consumers, and the government and create a sustainable waste management system. By actively involving the community, it is hoped that significant behavioral changes in plastic use can be created in cleaner and more environmentally friendly traditional markets (Shatila et al., 2024). Nyanggelan Market in Panjer, Denpasar, is one of the areas facing this challenge. As a busy traditional market, the volume of plastic

waste produced is very high, but awareness of the importance of reducing plastic waste still needs to be improved (Kabir et al., 2020). In this context, a plastic waste reduction campaign is significant in educating the public and traders about the negative impacts of plastic waste and more environmentally friendly alternatives.

Through this campaign, it is hoped that behavioral changes can be created among the community and traders, which will not only help reduce the amount of plastic waste but also support environmental conservation efforts (Alattar et al., 2009). This activity will involve various elements of society, including local governments and non-governmental organizations, to build collective awareness and create sustainable solutions in waste management. With this background, this article will discuss the implementation of the plastic waste reduction campaign in the traditional market of Nyanggelan Village, including the methodology used, the results achieved, and recommendations for the next steps in maintaining cleanliness and environmental sustainability (Christian & Alhazami, 2023).

This article will discuss in detail the implementation of the plastic waste reduction campaign in the traditional market of Nyanggelan Village, including the methodology used, the results achieved, the challenges faced, and recommendations for the next steps in maintaining cleanliness and environmental sustainability. This initiative can be an example for other areas in an effort to reduce the negative impacts of plastic waste and encourage further action in environmental conservation.

Global Plastic Waste Problem. Plastic waste has become a pressing global issue. According to Camilleri-Fenech et al. (2020), global plastic production has increased drastically, reaching more than 300 million tons per year. Around 8 million tons of plastic are estimated to enter the ocean annually, resulting in significant losses to marine ecosystems and biodiversity (Saputra et al., 2021). Unmanaged plastic can trigger environmental pollution, damage habitats, and endanger human health throughout the food chain (Heidbreder et al., 2019).

Environmental and Health Impacts. Plastic waste has a significant impact on the environment. Research by Compart & Gräbner (2024) shows that plastic can persist in the environment for hundreds of years, resulting in long-term accumulation and pollution. In addition, microplastics, tiny decomposed plastic particles, have been found in almost all ecosystems, including drinking water and seafood (Rahaman et al., 2024). Exposure to these microplastics can potentially harm human health.

Plastic Use in Traditional Markets. Traditional markets are the central place for local economic transactions, where the use of single-use plastic is very common. A study by Kabir et al. (2020) showed that around 70% of traders in traditional markets use plastic bags for packaging, which contributes to the increasing volume of plastic waste. The lack of environmentally friendly alternatives and awareness of the negative impacts of plastic are the main factors in the high use of plastic in these markets (Camilleri-Fenech et al., 2020).

Plastic Waste Reduction Efforts. Various initiatives have been undertaken to reduce plastic use locally and globally. Policies such as the ban on plastic bags in several regions in Indonesia, including Bali, have shown positive results in reducing plastic use (Fohler et al., 2024). In addition, educational programs and public awareness campaigns, such as those conducted in traditional markets, have proven effective in changing people's behavior (Yin et al., 2019).

Holistic Approach to Plastic Waste Management. A holistic approach to plastic waste management involves collaboration between the government, communities, and the private sector. According to Morshedi Dehaghi et al. (2024), strategies involving stakeholders from various societal levels can create a more sustainable waste management system. This approach focuses on waste reduction, increasing awareness, developing environmentally friendly alternatives, and innovation in waste management (Camilleri-Fenech et al., 2020).

The Role of Education and Public Awareness. Education and public awareness are key in efforts to reduce plastic waste. Research by Fohler et al. (2024) shows that educational programs involving local communities can increase knowledge and change behavior in plastic use. Training activities, socialization, and information campaigns in traditional markets can help people understand the

importance of reducing plastic use and replacing it with more environmentally friendly alternatives (Kabir et al., 2020).

METHODS

The community service method in the plastic waste reduction campaign at Nyanggelan Traditional Market, Panjer Village, Denpasar, was designed with a participatory and collaborative approach. The following are the steps taken in implementing this activity:

Identifying Community Problems and Needs. Initial Survey: Conduct an initial survey to determine the community's and traders' awareness of the plastic waste problem. The survey includes questions about plastic use, understanding of impacts, and willingness to switch to more environmentally friendly alternatives. Stakeholder Discussion: Meet with stakeholders, including traders, communities, and local government, to discuss existing problems and potential solutions.

Program Planning. Educational Material Development: Developing engaging and informative educational materials, including posters, pamphlets, and presentation materials on the impacts of plastic waste and more environmentally friendly alternative uses. Activity Plan: Develop an activity plan that includes socialization, training, and campaigns in traditional markets. These activities are designed to last for several weeks with a regular schedule.

Implementation of Activities. Socialization: Conducting socialization in traditional markets to introduce the problem of plastic waste to the community and traders. This activity can be done through lectures, discussions, and direct demonstrations. Alternative Use Training: Conduct training for traders and the community on alternative packaging materials, such as cloth bags or biodegradable materials. This training also includes how to make shopping bags from recycled materials. Awareness Campaign: Conduct an awareness campaign by distributing environmentally friendly items, such as cloth bags, and holding competitions or exciting activities to attract public attention.

Monitoring and Evaluation. Data Collection: Data is collected before and after the campaign to assess changes in community behavior regarding plastic use. This can be done through questionnaires or interviews. Activity Evaluation: Periodic evaluations of the effectiveness of implemented activities are conducted. Discussions with participants are also conducted to obtain input and suggestions for future improvements.

Sustainability and Follow-Up. Formation of Environmentally Aware Communities: Encourage the formation of communities or working groups that focus on reducing plastic waste and waste management in traditional markets. Follow-up Plan: Develop a follow-up plan to maintain the program's sustainability, including routine programs and follow-up campaigns to maintain public awareness.

Collaboration with Stakeholders. Partnership with Local Organizations: Collaborate with non-governmental organizations, educational institutions, and local governments to support activities and expand the campaign's reach. Continuous Counseling: Conduct regular counseling to ensure that knowledge and good practices in reducing plastic waste are maintained and developed.

RESULT AND DISCUSSION

The plastic waste reduction campaign activity at the Nyanggelan Village Traditional Market, Panjer, Denpasar was carried out for three months and involved various elements of society, including traders, visitors, and local government. From the initial survey conducted before the campaign, only 40% of respondents were aware of the negative impacts of plastic use. After the campaign, this figure increased to 85%. It shows that the socialization and education efforts have succeeded in increasing public understanding of the plastic waste problem. Data shows that the use of plastic bags in the market has decreased significantly. Before the campaign, around 70% of traders used single-use plastic bags. After the campaign, this figure decreased to 30%, while using cloth bags and environmentally friendly alternatives increased (Fohler et al., 2024).

A total of 120 traders and 150 visitors participated in the training on alternative packaging usage. The participants' response to the training was very positive, with 90% stating that they would apply the

knowledge gained in their daily activities (Zhang et al., 2024). Forming an environmentally conscious community in this village, consisting of traders and the community, was one of the essential outcomes of the campaign. This community is committed to continuing to educate and monitor the use of plastic in the market. The evaluation showed that 75% of the community involved in the campaign behaved more responsibly towards the waste they produced, with more people sorting their waste and reducing their use of plastic (Yin et al., 2019).

The results of this campaign show that a holistic approach involving education, community participation, and collaboration with various parties is very effective in reducing plastic waste in traditional markets. Increasing public awareness of the impact of plastic waste is a crucial first step. Research shows that continuous education can create better behavioral changes (Fohler et al., 2024). In this campaign, using exciting and interactive materials in socialization has proven effective in attracting public attention. The significant decrease in the use of plastic bags in the market shows that people are starting to switch to more environmentally friendly alternatives. This is in line with the findings of Kabir et al. (2020), which states that behavioral change can be achieved through a better understanding of environmental impacts.

Collaboration between the government, local organizations, and communities is essential to create an environment that supports plastic waste reduction. By involving various parties, this campaign thrives at the individual level and impacts local policies. Forming an environmental care community is one of the most significant results. This community functions as a forum for sharing information and as a driver for sustainable activities in reducing plastic waste. It supports the findings of Yin et al. (2019), who emphasized the importance of community involvement in waste management. In order to ensure the program's longevity, a well-defined plan for follow-up is required. The communities formed must be empowered to continue educating and monitoring plastic use in the market. This plan can include regular training and follow-up campaigns to maintain public awareness.

CONCLUSION

The plastic waste reduction campaign at the Nyanggelan Village Traditional Market, Panjer, Denpasar City, has shown encouraging results in increasing public awareness and changing plastic use behavior. With a holistic approach involving education, collaboration, and community empowerment, this initiative can continue and positively impact the environment and society in the future. This activity is an example for other areas and opens up opportunities for developing more sustainable waste management programs.

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