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ISSN - 2829-0771 (ONLINE)
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# PLASTIC WASTE REDUCTION CAMPAIGN AT THE TRADITIONAL MARKET IN NYANGGELAN VILLAGE, PANJER, DENPASAR

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***Article Info:***
Received: 2023-08-31
Revised: 2024-09-30
Accepted: 2024-10-15
Volume: 3
Numbers: 3
Pages: 184 - 189
***Keywords:***
Environmental Awareness, Plastic Waste, Waste Management, Community Service.

**Abstract:**
This article raises the theme of a campaign to reduce plastic waste at the traditional market in 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 about the negative impacts of plastic waste and the importance of good waste management. Activities include outreach, counseling and training on using environmentally friendly materials as an alternative to plastic. 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 regarding the importance of reducing plastic use and changing behavior in choosing more environmentally friendly packaging. Through this effort, Nyanggelan Village can become an example for other regions in reducing the negative impact of plastic waste and encouraging further action in maintaining environmental cleanliness and sustainability.

## INTRODUCTION

Plastic waste has become one of the most pressing environmental problems worldwide, including in Indonesia. With the increase in plastic production and consumption, the resulting plastic waste has also experienced a significant increase, negatively impacting ecosystems, human health and the natural landscape. 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 problems worldwide, including in Indonesia. With the increase in plastic production and consumption, the resulting plastic waste has also experienced a significant increase, negatively impacting ecosystems, human health and natural landscapes (Boretti & Rosa, 2019). According to the Ministry of Environment and Forestry data, Indonesia contributes the most significant plastic waste to the oceans, threatening marine life and damaging aquatic ecosystems (Fohler et al., 2024).

As centers 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 so many traders and visitors, the volume of plastic waste produced is very high. However, awareness of the importance of reducing plastic waste among the public and business actors still needs to be increased (Ardini & Fahlevi, 2024; Zhang et al., 2024).

From a holistic perspective, the plastic waste reduction campaign focuses on reducing plastic use and includes behavior change, education, and cross-sector collaboration. This approach involves various elements of society, including local government, non-governmental organizations, and

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communities, to create collective awareness about 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 the use of plastic can be created, as well as creating 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 traditional market that is frequently visited, the volume of plastic waste produced is very high. However, awareness of the importance of reducing plastic waste still needs to be increased (Kabir et al., 2020). In this context, plastic waste reduction campaigns are 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 changes in behavior can be created among the public 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 Nyanggelan Village traditional market, including the methodology used, the results achieved, as well as recommendations for next steps in maintaining environmental cleanliness and sustainability (Christian & Alhazami, 2023).

This article will discuss in detail the implementation of the plastic waste reduction campaign in the Nyanggelan Village traditional market, including the methodology used, the results achieved, the challenges faced, and recommendations for the next steps in maintaining environmental cleanliness and sustainability. It is hoped that this initiative can become an example for other regions in efforts to reduce the negative impact of plastic waste and encourage further action in environmental conservation.

**Global Plastic Waste Problem.** Plastic waste has become an urgent global issue. According to Camilleri-Fenech et al. (2020), global plastic production has increased drastically, reaching more than 300 million tons annually. Around 8 million tonnes of plastic is estimated to enter the ocean annually, resulting in significant losses to marine ecosystems and biodiversity (Saputra et al., 2021). Not appropriately managed plastics 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 and Gräbner (2024) shows that plastic can persist in the environment for hundreds of years, resulting in long-term accumulation and pollution. Additionally, microplastics, tiny plastic particles that decompose, 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.

**Use of Plastic in Traditional Markets.** Traditional markets are central for local economic transactions, where single-use plastics are ubiquitous. A study by Kabir et al. (2020) shows that around 70% of traders in traditional markets use plastic bags for packaging, which contributes to an increase in the volume of plastic waste. The lack of environmentally friendly alternatives and

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awareness of the negative impacts of plastic are the main factors in the high use of plastic in this market (Camilleri-Fenech et al., 2020).

**Plastic Waste Reduction Efforts.** Various initiatives have been carried out to reduce plastic use, both at the local and global levels. Policies such as banning the use of 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 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 government, society 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 not only focuses on reducing waste but also on increasing awareness, developing environmentally friendly alternatives, and innovating waste management (Camilleri-Fenech et al., 2020).

**The Role of Education and Public Awareness.** Public education and awareness are critical 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, outreach and information campaigns in traditional markets can help the public 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 campaign to reduce plastic waste at the Nyanggelan Traditional Market, Panjer Village, Denpasar, was designed with a participatory and collaborative approach. The following are the steps taken in implementing this activity:

**Identify Community Problems and Needs.** Initial Survey: Conduct an initial survey to identify the public's and traders' level of awareness of the plastic waste problem. The survey includes questions about plastic use, understanding of impacts, and desire to switch to more environmentally friendly alternatives. Discussions with Stakeholders: Meet with stakeholders, including traders, communities and local government, to discuss existing problems and potential solutions.

**Program Planning.** Development of Educational Materials: Develop exciting and informative educational materials, including posters, pamphlets and presentation materials about the impact of plastic waste and alternative uses that are more environmentally friendly. Activity Plan: Develop an activity plan that includes outreach, training and campaigns in traditional markets. This activity is designed to take place over several weeks on a regular schedule.

**Implementation of Activities.** Outreach: Hold outreach in traditional markets to introduce the problem of plastic waste to the public and traders. This activity can be carried out through lectures, discussions and live demonstrations. Alternative Use Training: Train traders and the public on alternative packaging materials, such as cloth bags or biodegradable materials. This training also includes how to make shopping bags from recycled materials. Awareness Campaigns: Conduct

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awareness campaigns by distributing environmentally friendly items, such as cloth bags, and holding competitions or exciting activities to attract public attention.

**Monitoring and Evaluation.** Data Collection: Before and after the campaign, collect data through questionnaires or interviews to assess changes in people's plastic use behavior. Activity Evaluation: Conduct periodic evaluations regarding the effectiveness of implemented activities. Discussions with participants were also held to obtain input and suggestions for future improvements.

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

**Collaboration with Related Parties.** Partnerships with Local Organizations: Work with non-governmental organizations, educational institutions, and local governments to support activities and expand the campaign's reach. Sustainable Outreach: Conduct regular outreach to ensure that knowledge and good practices in reducing plastic waste are maintained and developed.

## RESULTS AND DISCUSSION

Plastic waste reduction campaign activities at the Nyanggelan Village Traditional Market, Panjer, Denpasar, were carried out for three months and involved various elements of society, including traders, visitors and the local government. From the initial survey conducted before the campaign, only 40% of respondents were aware of the negative impacts of using plastic. After the campaign, this figure increased to 85%. This shows that outreach 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 took part in training on the use of alternative packaging. Participants responded to the training positively, 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 public, is one of the essential results 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 people involved in the campaign behaved more responsibly towards the waste 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 about 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, the use of exciting and interactive materials in outreach has proven effective in attracting public attention. The significant decline 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 state that behavior change can be achieved through a better understanding of environmental impacts.

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Collaboration between government, local organizations, and communities is crucial to creating an environment that supports the reduction of plastic waste. By involving various parties, this campaign was not only successful at the individual level but also had an impact on local policies. Forming an environmentally caring community is one of the most significant results. This community not only functions as a forum for sharing information but also as a driving force for sustainable activities in reducing plastic waste. This supports the findings of Yin et al. (2019), which emphasize the importance of community involvement in waste management. To ensure program sustainability, there needs to be a clear follow-up plan. The community that has been formed must be empowered to continue education and monitoring of plastic use in the market. This plan may 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, showed encouraging results in increasing public awareness and changing plastic use behavior. With a holistic approach involving education, collaboration, and community strengthening, this initiative can continue to impact the environment and society in the future positively. This activity is an example for other regions and opens up opportunities for developing more sustainable waste management programs.

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