E ISSN : (2776-7345)
P ISSN : (2776-7353)

Bina Bangsa International Journal of Business and Management (BBIJBM)
Vol. 5 No. 1, page 192-221, April 2025

# SOCIAL MOVEMENTS IN PROMOTING ENVIRONMENTAL AWARENESS: ZERO WASTE CAMPAIGN STUDY

**Masri Ramadilla Sandy[1], Fatimah[2]**
[1,2] Universitas Bina Bangsa

**Article History**
Received: February 22, 2025 Revised: March 30, 2025 Accepted: April 30, 2025

**Abstract**

The aim of this research is to describe social movements in encouraging environmental awareness: a study of zero waste campaigns using a literature approach. The method used is a descriptive method with a literature approach, by analyzing 50 international and national journals that have been published online. Before the paper is published, it must first be discussed with peers and colleagues to get meaningful input. After the paper has been revised according to colleagues' input, the paper is published to increase the scope of scientific development. Increasingly complex environmental problems, especially those related to increasing waste volumes, require an approach that is not only technical, but also social. Social movements are an effective strategy in forming society's collective awareness of environmental issues. This research aims to examine the role of social movements, particularly through zero waste campaigns, in encouraging awareness and changing people's behavior towards a sustainable lifestyle. The method used is a literature study with analysis of various journals and activity reports related to zero waste campaigns in various regions. The results of the study show that the zero waste campaign is able to increase public understanding of waste management, encourage changes in consumption and production patterns, and open up opportunities for innovation based on a circular economy. However, implementation in the field still faces challenges such as limited facilities, uneven education, and lack of policy support. Therefore, synergy between actors, from society, community, to government, is the key to strengthening this movement in a sustainable manner.

Keywords: social movement, zero waste, environmental awareness, campaign.

**DOI:**
10.46306/bbijbm.v5i1.122

**Homepage:**
*http://bbijbm.lppmbinabangsa.ac.id/index.php/home*

## I. Introduction

The problem of waste, especially in Indonesia, is increasingly urgent to be addressed. Various solutions have been implemented, such as providing rubbish bins, warnings about throwing rubbish in the right place and campaigns regarding the bad effects of throwing rubbish indiscriminately, which have been widely implemented but have not shown commensurate results. This is influenced by several factors, namely the increase in population which causes an increase in community waste, the large consumption and use of single-use items, the lack of firmness regarding rules and sanctions from law enforcement, the waste processing system which is not yet optimal and most importantly, the lack of public awareness regarding waste.

Waste is one of the big problems facing the environmental sector. Even though its negative impact on environmental degradation is increasing, the general public still pays little attention to it. Waste is part of the results of human actions. Trash will always be there as long as daily activities continue. Due to society's increasing materialism, the amount of waste will definitely increase every year. In Indonesia, 3.22 million tonnes of plastic waste is not managed properly. 0.48-1: It is estimated that the Earth will be stained with 29 million tons of plastic waste. The United Nations found that up to 83% of beach and ocean litter is made of plastic. The World Economic Forum estimates that the amount of plastic waste worldwide has reached 150 million tons (Wahyudi, Lutfauziah, 2023)

According to data collected by the Ministry of Environment and Forestry in 2022, the amount of waste in Indonesia is 68.7 million tons per year, with organic waste, especially food waste, reaching 41.27%, and only 38.28% of the total waste comes from households. Based on Jakstranas (National Policy and Strategy) the amount of national waste stockpiled in 2023 will be 69.9 million. From this data it is known that waste management in Indonesia is still very poor. The increase in the amount of waste also shows that there is no public awareness of protecting the environment. Nowadays, many public figures educate the public about this

through short videos on social media. There are even groups that are directly involved in providing real action to clean up the rubbish that has piled up in various places in Indonesia. However, it is a shame that this action is not enough to make people aware of waste. On the contrary, the community actually thinks that this group has become a solution for reducing waste in Indonesia.

Many people are unaware of the long-term consequences of littering, as well as their inability to sort and manage household waste in the correct way. Due to the lack of a communicative and contextual approach, environmental campaigns that have been carried out often fail to reach the wider community. The success of the waste-free program depends on public awareness of the importance of effective waste management. According to Asteria and Heruman (2016) in (Nurjamiludin et al. 2024), active participation in waste management can reduce the volume of waste at the household level by up to 70%. Changing thought patterns and habits that have been ingrained for years is one of the main challenges in increasing public interest and awareness of waste-free programs. According to the theory of behavior change proposed by Prochaska and DiClemente, behavior change is a complex process and requires time, through stages such as pre-contemplation, contemplation, preparation, action and maintenance (Nurjamiludin et al. 2024)

In response to the growing waste crisis, various environmental campaigns have been initiated in Indonesia to reduce plastic waste and increase public awareness about environmental problems. New media that are in line with current societal norms can be used effectively for environmental communication. Research has shown that new media greatly influences social interactions and societal perceptions. Social media has developed into one of the most effective tools for disseminating information and raising awareness of environmental issues among recent platforms (Zahara & Nurrahmi, 2024)

According to research conducted by Rahmaddin et al. (2020) in (Nurjamiludin et al., n.d.), in North Sumatra, cultural values and social habits have a significant

impact on how someone manages waste in the household. Therefore, the local socio-cultural context must be considered when increasing public interest and awareness of waste-free programs. This should be incorporated into the communication and education approaches used.

Considering that the waste problem has reached an alarming level, zero waste has become a new solution in waste management. In a zero waste lifestyle, people adopt a simple and moderate attitude when buying and consuming everything they need and avoid plastic, especially single-use plastic (Rustan, Agustang, & Idrus, 2023 in (Qonita et al., 2024). Zero waste includes more than just recycling waste; it also includes reducing and preventing waste (Davidson G, 2011). In general, the zero waste principle is known as the 3R principle, which means reducing, changing, and returning, and the processing principle. waste must be applied as close as possible to the waste source to reduce transportation burdens. The philosophy known as "zero waste" encourages the use of closed cycles to make resources re-purposed, allowing all items to be reused. Zero waste is a waste planning and management approach that focuses on preventing the accumulation of waste (Snow W, Dickinson J, 2001). and rot. The zero-waste philosophy focuses on eliminating waste through lifestyle changes that reduce waste production and view waste as a valuable resource (Zaman & Lehmann, 2013 in Nurahmi 2024).

When it comes to collective action, social movements are essential. Known as collective action, a group of people work together to increase their influence and power on the basis of a common interest. So, social movements are systematic efforts to encourage or hinder social change. According to Locher (2002), when groups with power control how things are done, it means they support the formation of social movements to achieve social change (Rahayu et al., 2021).

According to Hasegawa Kōichi in (Felicia & Dam, 2020) one of the functions of the environmental movement is to openly reveal environmental problems as social problems by showing the characteristics, location and source of the

problem for the public to know. They determine the relationship between the perpetrator and the victim, as well as the cause-and-effect relationship and the responsible party, and determine how important the action taken is. Thus, the environmental movement creates environmental problems socially, making them real and enabling the general public to act (author). By viewing something as a societal problem, these movements place responsible parties, such as governments and companies, under pressure to respond, which in turn results in the resolution of the problem and the prevention and reduction of future risks. The increasingly complex environmental crisis, especially due to increasing volumes of waste and unsustainable consumption patterns, demands real changes in people's awareness and behavior. In this context, social movements play an important role as agents of change who are able to encourage public participation in preserving the environment. Campaign *zero waste* has become a form of social movement that is relevant and urgent to be implemented widely, considering its effectiveness in forming collective awareness and encouraging a more environmentally responsible lifestyle. Therefore, this research is important to examine the strategic role of social movements in building environmental awareness through campaign case studies *zero waste*.

## II. Theoretical Review

### Social Concept

Social movements have an important role in encouraging the implementation of the zero waste concept in society. Through collective action, this movement aims to build collective awareness and encourage changes in behavior towards waste management. In the context of urbanization and increasing population, plastic waste has become one of the most dominant types of inorganic waste. Therefore, active involvement from the government is needed, especially in terms of integrated waste management and sustainable environmental protection efforts. (Serangan et al., n.d.)

As an effort to overcome the global environmental crisis, the Zero Waste movement is presented as a practical and applicable solution. Continuously increasing global consumption also poses a challenge in waste management. For example, in 2022, Muslims around the world will spend around USD 2.29 trillion on various needs such as food, pharmaceuticals, cosmetics, clothing, travel and media. This figure is projected to continue to increase until it reaches USD 2.8 trillion in 2025 (Natalia, 2023). This surge in consumption shows the urgency of implementing a more sustainable lifestyle through zero waste principles (Sukron et al., 2024).

Zero Waste is a new approach to waste management that emerged as a response to crisis conditions due to increasing waste volumes. One of the main issues in the spotlight is plastic waste, which continues to increase significantly. Based on data from *Our World in Data*, global plastic production reached 381 million tons in 2015, showing an alarming trend in terms of its impact on the environment (Ritchie & Roser, 2018 in (Wardi & Putri, 2024). One of the main problems in the environmental sector is the issue of waste, the impact of which on environmental degradation is becoming more significant over time. However, this issue still has not received serious attention from society at large (Agus Wahyudi et al., 2023)

Zero Waste consists of five principles known as the 5R principles in waste management (Johnson, 2013). (1) Refuce, which means rejecting or not using what is not needed. In this case, the principle of waste is to reduce the amount of goods consumed. (2) Reduce, namely efforts to minimize the amount of waste from the start by reducing unnecessary consumption. This step also has a direct impact on saving resources such as water and energy. (3) Reuse, namely reusing items that are still suitable for use for other functions, so that they are not immediately categorized as waste. (4) recycling, namely the process of recycling waste or used goods into useful new products. This principle is implemented after reduce and reuse efforts are no longer possible. (5) Rot, namely the management of organic waste such as food waste and vegetables through the composting process. With the help of organisms such as worms, bacteria and

fungi, organic waste can be broken down into compost which is useful for fertilizing the soil (Qonita et al., 2024)

Zero Waste is a concept and approach that aims to reduce, even eliminate, waste generation through changes in lifestyle, consumption patterns and more sustainable production practices (Widiatmoko et al., 2024). The main goal is to minimize waste that ends up in landfills. In this case, the government has an important role in formulating effective policies and solutions to overcome environmental problems. However, these efforts will not run optimally without collaboration between various parties, including society, academic circles and the government. Cross-sector collaboration is very necessary to achieve common goals in sustainable waste management (Dewi Rahayu, 2021 in (Serangan et al., n.d.)

Several sources state that the application of the zero waste concept aims to eliminate all forms of waste that have the potential to endanger the environment, human health and the life of living things on land, water and air. However, the complete implementation of zero waste, both in theory and practice, is often considered not completely possible, considering that every production and consumption process almost always produces residue. Therefore, the main focus of this principle is to minimize waste generation more efficiently and effectively (Widiatmoko et al., 2024)

One of the important principles in the Zero Waste concept is increasing producer responsibility. Manufacturers are expected to play a role in the entire life cycle of their products, from the production stage to the final disposal stage. This responsibility includes managing used goods as well as contributing to the financing of an efficient waste management system. By shifting some responsibility from consumers to producers, this principle encourages the implementation of more sustainable and environmentally friendly production practices (Widiatmoko et al., 2024)

In essence, strategy is a form of planning and management designed to achieve certain goals (Rogers, 2002 in Eka 2021). Strategies to reduce the use of single-use plastic bags take various forms, depending on their scope and scale. This policy of limiting the use of plastic bags generally aims to increase public awareness and concern for environmental issues. This step is a concrete manifestation of preserving the environment while reducing the problem of waste accumulation (Supomo et al., 2024)

By adopting a zero waste approach, policy *Extended Producer Responsibility* (EPR) encourages producers to reduce potential pollution and minimize the use of natural resources and energy. This can be done through product design and the application of more environmentally friendly process technology. Apart from that, this policy also allows producers to take responsibility for collecting back waste or damaged products through their distribution channels (Verawati, 2022). According to (Sutisna, 2024) one strategy in achieving the goal of zero waste is a campaign. Zero Waste management campaigns can be implemented in the community so that awareness arises not to create waste.

Research conducted by (Romadhan & Pradana, 2024) shows that the results of the campaign program *Zero Waste* in Keputih, Surabaya provided a significant increase in participants' understanding scores from 154 (pre-test) to 369 (post-test). This shows that campaigns can be an effective strategy in increasing public awareness of the dangers of using plastic bags.

The application of zero waste principles contributes to reducing negative impacts on the environment and ecosystem. This lifestyle can reduce waste production, reduce exploitation of natural resources, and reduce pollution. In addition, by choosing environmentally friendly products and supporting a circular economy, individuals are also encouraging the creation of a more sustainable production and consumption system (Permata et al., 2024)

Based on Zero Waste Indonesia activities through the program *Ecofurnies*, it can be concluded that plastic waste and mineral water bottles which previously had

no economic value can now be processed into more valuable goods. Apart from that, this activity also provides new knowledge to the public regarding the use of plastic waste that is no longer used. On the other hand, this program also supports the socialization of government policies in managing waste that is difficult to decompose, thereby strengthening sustainable environmental conservation efforts (Supomo et al., 2024)

The conclusion from the implementation of service activities in Pasar Lama Village shows that the application of the 5R principles (Reduce, Reuse, Recycle, Replace, Replant) is starting to have a positive impact on public awareness of the importance of environmentally friendly waste management. Outreach activities succeeded in increasing residents' understanding, especially in reducing the use of plastic and reusing used goods. However, even though the Reduce and Reuse principle has worked quite well, the application of the Recycle, Replace and Replant principle still needs to be improved. Therefore, it is recommended that this program be expanded by providing supporting facilities such as waste sorting stations and an effective recycling system. Further education regarding the benefits of planting plants is also important to encourage the implementation of the Replant principle (Widiatmoko et al., 2024)

Draft *zero waste* implemented in Cibunut Village is directly related to changes in community consumption and production patterns in a more responsible direction. Residents are starting to get used to sorting waste, reducing single-use items, and using waste to recycle or make valuable products. This practice not only reduces the amount of waste, but also encourages the creation of a more efficient and environmentally friendly production system (Iqbal & Suheri, 2019)

In the world of fashion according to research (Gitapradana & Julia, 2020) Application of techniques *zero waste* in Zero Waste Daniel (ZWD) products is a design approach that aims to reduce the negative impact of the fashion industry on the environment. Through technique *upcycling*, waste from scraps of fabric is reused into new products, thereby helping to slow down the accumulation of

textile waste that ends up in landfills. ZWD's unique product designs require skills and production processes that prioritize the principle of ethical workforce empowerment. The diversity of quilt waste used means that each ZWD product has a different design from one another, creating its own unique value. With this approach, ZWD becomes a real example of practice *slow fashion* sustainable.

Even though they are still faced with challenges such as limited infrastructure and low public awareness, various strategies have been implemented to increase the effectiveness of waste banks. These efforts include environmental education, providing economic incentives, and using technology in waste management. With the support of stronger regulations and wider community participation, waste banks have the potential to become a model for sustainable waste management, while providing social and economic impacts (Paramita Eka Putri, I Wayan Suadnya, Dian Lestari Miharja, 2021)

Policy implementation *Zero Waste* Baubau City presents various opportunities as well as challenges that need to be addressed seriously. Public awareness is the main basis, so intensive efforts are needed to increase understanding of this concept. The availability of adequate infrastructure is also an important factor that requires support through investment in waste management facilities. The success of this policy relies heavily on collaboration between government, the private sector, NGOs and active community participation. With a shared commitment and integrated approach, Baubau City has the potential to become an example of sustainable and environmentally friendly waste management practices (Achmad, 2024)

Program Implementation *Zero Waste* at SMAN 1 Batukliang consists of two main stages: preparation and implementation. The preparation stage includes outreach to all students, provision of supporting facilities and infrastructure, as well as efforts to collaborate with related parties. Meanwhile, the implementation phase involves a system for buying and selling recycled goods, holding competitions and bazaars, as well as increasing environmental awareness among students and

school staff. However, this program also faces several challenges, including lack of awareness and education, limited infrastructure, logistical constraints, and social and cultural challenges (FITRIANI et al., 2024)

Based on the analysis that has been carried out, the application of the zero waste principle in Mataram City, West Nusa Tenggara Province, has shown significant results. Implementation of this approach has succeeded in reducing the volume of waste disposed of in landfills and increasing public awareness regarding the importance of environmentally friendly and sustainable waste management. However, there are still challenges, such as people's incomplete understanding of the zero waste principle and infrastructure that needs to be improved. Therefore, further efforts are needed in educating the public as well as increasing investment in developing waste management infrastructure in order to achieve the goal of zero waste as a whole (Nusamuda Pratama & Sukirman, 2023)

Innovations in woven craft products from plastic waste face obstacles in terms of marketing in society. The government's role and support, especially through village funds, cannot yet be allocated to assist Community Self-Help Groups (KSM) in ensuring the continuity of this plastic waste craft business (Paramita Eka Putri, I Wayan Suadnya, Dian Lestari Miharja, 2021)

## III. Methodology

This research uses a descriptive method with a literature study approach to examine social movements in encouraging environmental awareness, especially in the study of zero waste campaigns. The choice of descriptive method is intended to present information systematically, objectively and accurately regarding the issues discussed. Through this approach, researchers can collect, analyze and interpret various scientific sources to gain a more comprehensive understanding of the family's contribution to social resilience.

Using a literature approach, this research analyzes 50 national and international journals that have been published online in the period 2010 to 2024. These journals were selected selectively based on their level of relevance to the research focus, namely social movements in encouraging environmental awareness, namely zero waste campaign studies and considering the credibility of the academic sources used. All references are obtained from various leading scientific databases, such as Scopus, Web of Science, Google Scholar, and Sprott, whose validity is generally recognized in the academic world. The literature analysis process was carried out systematically by grouping articles into several main themes, including the concept of zero waste and the role of social movements, zero waste campaign strategies in increasing public awareness, the impact of the zero waste movement on consumption and production patterns as well as challenges and obstacles in implementing zero waste in society. Apart from thematic classification, content analysis methods are also applied to explore emerging patterns, identify current research trends, and examine gaps or shortcomings in previous studies that can serve as a basis for further research. With this approach, it is hoped that a deep and comprehensive understanding of the strategic position of social movements in encouraging environmental awareness can be obtained.

Through a systematic and in-depth literature review process, this research aims to compile a comprehensive synthesis that is not only theoretical, but also applicable, so that it can be used as a reference by academics, practitioners in the social sector, as well as policy makers in formulating effective strategies to strengthen social movements in encouraging environmental awareness in zero waste campaign studies. Apart from that, the findings of this research also aim to offer recommendations based on empirical evidence that can be used as a basis for formulating social policies and educational programs, which are oriented towards strengthening the functions of social movements.

## IV. Results

### 1. Zero Waste Concept and the Role of Social Movements

One of the biggest environmental problems today is waste. The increase in the volume of waste, especially plastic waste that is difficult to decompose, is caused by population growth and people's consumption patterns which tend to be excessive. To achieve zero waste, not only governments or individuals are responsible, but also social movements play an important role. Social movements can change society's views, influence legislation, and create a more environmentally friendly culture.

The presence of zero-waste stores around the world seems inspiring, although there is no official network or movement organizing the zero-waste phenomenon. They combine minimalist style, zero-waste behavior and shopping, zero-waste grocery stores, and zero-waste product suppliers into the same network. Each part of the network depends on the others: trash could not exist without grocery stores, and trash could not exist without the influence of trash. Zero waste groups, which consist of a wide variety of people and activities that support the goal of zero waste, are related to each other. The waste bank system not only benefits the environment and local economy, but also fosters a culture of cleanliness and politeness by cleaning up non-organic waste (Yudiatmaja et al., 2021).

Trash shows that we are doing something wrong. Landfills only bury the evidence, and incinerators only burn the evidence. We have to face the real problem: the fight against overconsumption, which is its most visible manifestation, and the ethics of throwing away waste. We've been trying to force society to recycle everything since the industrial revolution, but we haven't succeeded. We turn raw materials into waste in four steps. Extraction begins, production, distribution, consumption, and waste. As a result, many campaigns for zero waste have emerged in recent years. At least, this movement increases public awareness to eliminate plastic from the earth. Since there are many

challenges to reducing plastic use, going "zero waste living" is not easy. In her article entitled The Rising Trend of Zero Waste (2019), Leyla Acaroglu defines "zero waste living" as "a person who actively reduces their waste consumption, designing their life to avoid things that will end up as waste, especially single-use and non-recyclable products and packaging."

Reuse, repair, recycling, or composting should be incorporated into product design to avoid waste; the concept of zero waste raised the issue of waste management initially (Connett 2006). One form of lifestyle movement known as the "zero waste movement" is when people make lifestyle changes that are more environmentally friendly by sacrificing certain habits and making changes to their existing lifestyle (Haenfler et al., 2012). Social media plays an important role in engagement with this movement as people share photos of their daily lives to show that they are participating in efforts to make change and inspire each other. "Systematically designing and managing products and processes to avoid and eliminate waste and materials [generated by society], and to conserve and recover all resources from the waste stream" is the best way to achieve zero waste on a societal scale (Lehmann & Zaman, 2011, p. 177). The precautionary principle framework is an additional tool to assess the implementation of zero waste practices at the municipal level. In this case, the precautionary principle "ensures that…an activity that poses a [potential] threat to the environment is prevented from having an adverse impact on the environment" (Cameron & Abouchar, 1991, p. 2). Therefore, cities that implement zero waste practices structurally follow the precautionary principle by eliminating waste sources, which are sources of harm to the environment.

To create a clean, cool, beautiful and healthy environment, the zero waste concept must be applied and carried out in everyday life. To implement the zero waste principle in everyday life is a difficult task to change people's mentality (Putra et al., 2022), but this must start at an early age because children imitate

adults (Fathoni et al., 2021). . In this way, the government can take a role in overcoming problems and formulating decisions and is expected to be able to provide solutions for the common good. The community, students, government cannot move independently without collaboration with one another and for the same goal (Dewi Rahayu, 2021). In contrast, the Zero Waste movement is growing in Muslim-majority countries. The combination of environmental awareness and Islamic consumption moderation principles shows that this movement is still relevant and can be strengthened. more widely among Muslim communities throughout the world (Food and Beverage, 2023). We can build a system that is inclusive and fair for all parties involved by encouraging active community participation in planning, implementing and evaluating the Zero Waste program (Nur Azizah Affandy et al. 2015).

## 2. Zero Waste Campaign Strategy in Increasing Public Awareness

Zero waste lifestyle campaigns have become increasingly popular in recent years as people have to reduce their use of single-use plastics and change their lifestyles to be more environmentally friendly. On the other hand, in recent years, several countries, including Indonesia, have implemented the "zero waste" concept. Global warming is caused by the disposal of waste that cannot be decomposed by nature, such as plastic, which can damage nature. Plastic bags, according to Siburuan (2022), are short-chain hydrocarbons from fossil fuels which are made from similar monomers which are heated to a certain temperature, then molded into bag-shaped sheets. Plastic waste is still one of the main problems causing environmental problems. Apart from that, according to Northcoot (2020), Indonesia is the second largest country producing plastic waste in the world after China. For this reason, an appropriate strategy is needed to introduce a campaign to minimize the use of plastic bags in society. In communication, this strategy can be expressed by looking at the determination of the communicator, the message production process and targeting the

communicant (Romadhan, 2019). Recycling, reuse and repair of file items is still a trend in developing countries. This is because waste is considered useless by society and some industries, so it is not handled seriously. However, some types of waste can still make money and damage the environment. Biodiversity loss, climate change, air, water, and land pollution, deforestation, and degradation of resources and materials are all consequences of excessive consumption of unsustainable production processes. Therefore, strategies to reduce waste as well as the concept of "eliminating waste from processes and products" are needed (Zero WasteSA Strategy, 2010).

Due to factors such as a lack of knowledge about self-generated waste, a culture of cleanliness, and a lack of proper waste collection sites (TPS), the community is less able to manage waste. As a result, plastic use is not the only problem; People's behavior and habits are also a problem. According to Gnanou, 2022. Recycling is the only thing that is considered harmless by the general public. In fact, zero waste starts with throwing away, reducing and rejuvenating. Rejecting, reducing and reusing are the most important efforts. After that, only recycle, rot, or recycling and rotting can be done if it is not possible to do these three priority things. (Umy Fatkhah, Volume 8, Number 1, 2020). Additionally, recent research finds that Zero Waste uses a variety of strategies to eliminate waste and challenges the conventional approach of viewing waste as a valuable resource rather than a problem that needs to be addressed (Curran and Williams, 2012).

One effort that can be made to have a positive impact on the environment is to change society to a zero waste lifestyle. It is hoped that people's perspectives, behavior and lifestyle regarding waste management will be influenced by a visual branding campaign that produces educational content about a waste-free lifestyle. So far, young people have implemented a good zero waste lifestyle. However, campaigns about the importance of a zero waste lifestyle must be carried out through various visual communication media to promote and inform the public about it. To make messages from PR campaign programs more acceptable and easier to understand, message management is adjusted to

predetermined themes and in accordance with the target audience. (Rekatama Media Symbiosis, Bandung, 2002). The goal of zero waste is to encourage a "take, make and throw away" approach to production and consumption, encouraging a more circular use of resources. At the most basic level, this means that the goal of zero waste is to drive the economy to achieve its target of zero waste disposal in landfills, incinerators and oceans.

started a zero waste management campaign to increase public awareness, especially students, employees and business owners, about the use of single-use plastics in food and beverage packaging. A landmark initiative by the Indonesian Retail Entrepreneurs Association (Aprindo) in 2019 aimed to reduce the use of plastic bags by charging fees at modern retail outlets. The campaign aims to encourage environmentally friendly practices by encouraging waste reduction, reuse and recycling. Zero Waste policies have many economic, environmental and social benefits. This policy encourages more efficient and effective use of natural resources. Reducing the volume of waste will save energy and water, reduce consumption of natural resources, and reduce the carbon footprint. Reuse and recycling reduce demand for raw materials, energy costs and the risk of environmental pollution. (Evans, 2021; Gül & Yaman, 2021; Saleh, 2020; Zaman, 2022).

3. The Impact of the Zero Waste Movement on Consumption and Production Patterns

Nowadays, using disposable items has become an important part of people's lives. Examples are plastic toothbrushes, plastic tablespoons from boxed rice, plastic shopping bags, and other items that are often used every day. In the end, these plastic items will become waste that does not decompose and accumulate, threatening the environment. The main principle of a zero waste lifestyle is to avoid waste, which means avoiding the production of as much waste as possible. This can be achieved by being aware of our consumption patterns and

taking action to reduce the use of single-use materials, such as plastic, paper and non-biodegradable packaging. By reducing consumption of unnecessary items, we can reduce the addition of waste to the environment and reduce pressure on the ecosystem. (Andini, S. Saryono, S, Fazriah, A, N, Hasan, H 2022). According to Istirokhatun Titik (2019), plastic waste is the main source of accumulation of trash bottles in Indonesia, because the decomposition time for plastic is approximately a thousand years, so that it accumulates and causes significant environmental damage. Indonesia's waste management performance in 2023 will reach 18,081,278.88 tonnes of waste per year, with 5,981,606.75 tonnes of unmanaged waste, or 33.08% of the total landfill (Ministry of the Environment and Forestry, 2024)

. Evaluation of community service for implementing a zero waste lifestyle is very important to find out how much community understanding and ability can be applied in everyday life, as well as how well the program has succeeded in reducing the volume of waste and increasing community awareness. According to Rahayu et al. (2021). Continuous evaluation can increase public awareness about the importance of zero waste. The Zero Waste principle can be applied as a whole by involving collaboration between government, business and society to create a more efficient and sustainable waste management system. Widespread public education is also needed to increase public awareness about the importance of waste management (Putra et al., 2022). The rate of population growth will give rise to various needs, which means that more and more waste will be produced from consumption activities and processes (Abidin, 2022). This shows a positive relationship between the amount of waste needed and the waste produced. The concept of "mindless trash" is a smart idea to deal with the trash problem. This concept includes environmentally friendly production and consumption methods, responsible processing of resources, and optimization of recycling. Campaigns are an effort to encourage change through cognitive (knowledge), affective (feelings) and behavioral influences. Therefore, even though this is only a small action, efforts to minimize waste production will have

a considerable environmental impact in the long term. (Karnadi, K. N., & Esfandari, D. A. 2020).

Long before modern times, the current waste management system was designed. Over time, methods such as composting, recycling, landfill, and advanced processing have been implemented. ZW is an integrated innovation that has been created during the twenty-first century to achieve a truly sustainable waste management system (Zaman and Lehmann, 2011a). However, few studies have examined the performance of these packaging-free distribution models. Two notable examples include Nessi, Dolci, Rigamonti, and Grosso (2016), where the authors examine models for rice, pasta, and breakfast cereals, with varying results but mostly supporting unpackaged distribution; and Cleary (2013), who examined refillable wine bottles with centralized solutions, finding that transport distances to facilities. Field tests show the extent to which industry barriers hinder significant and responsible innovation. Deep reflection has led to questioning the relationships and hierarchies that exist between fabric and clothing during the design process. This question emerged as a result of an iterative experimental process. In this process, I was able to combine my previous knowledge of digital jacquard weaving techniques with my existing (Polayni 1966) and previous explicit knowledge of the field of zero-waste clothing design. This has provided a basic explanation of basic pattern cutting theory, as well as new techniques for the emerging field of composite garment weaving. It also includes findings on how technology is impacting the fashion industry.

The fashion industry produces waste before and after consumption, leaving negative impacts on the environment (Hawley, 2006; Gam and Banning, 2011; Wang et al., 2015; Parisi et al., 2015; Oztuk et al., 2016; Yan et al., 2016). Approximately 15% of fabric is discarded as solid waste when producing clothing (Cooklin, 1997; MacQuillan, 2011, Rissanen, 2011, Rosebloom, 2010; Townsend & Mills, 2013). The traditional pattern cutting process regards clothing pattern pieces as irregular shapes, which cannot be placed side by side like a puzzle game. This process draws each garment component on paper or in a

digital environment to make it easier to cut the fabric. Many academics have criticized lifestyle change projects as a primary response to environmental and social challenges because of their tendency to individualize systemic problems (Kenis and Lievens 2014; Maniates 2001, 2019).

4. Challenges and Obstacles in Implementing Zero Waste in Society

Waste management in Indonesia still faces many problems, especially in urban areas that have an increasing population and cities that have been urbanized. If waste is not managed properly, it can cause flooding due to blocked waterways, more greenhouse gas emissions due to decomposition of organic waste, and the emergence of various diseases because disease vectors breed in dirty environments. However, the implementation of Zero Waste in Indonesia still faces various obstacles, such as limited adequate waste management infrastructure, low public awareness and participation, and a lack of effective policy support in integrating Zero Waste principles into the national waste management system. In addition, consumption patterns that are still based on a linear economy, where products are mostly used for single use without planning for recycling, are a challenge in implementing this concept in various sectors, both household and industrial (Widiatmoko et al., 2024). Due to the widespread use of single-use items, people's consumptive behavior is one of the main factors in increasing the volume of waste. Overcoming the waste problem is difficult because people are less aware of the accumulation of waste, especially inorganic waste. In addition, inorganic waste takes years to decompose, causing significant damage to the environment (Putri & Permana, 2021). Achmad (2024) said that several obstacles in implementing a zero waste policy are limited infrastructure. Apart from that, Muntasyarah (2021) said that the lack of facilities or facilities caused the zero waste program to not run well.

challenges in implementing zero waste, such as the lack of public knowledge about the concept of zero waste and the need for better supporting infrastructure.

Zero waste theory has been known and promoted in many places, but there are often problems and obstacles when implementing it in the field. Therefore, it is necessary to carry out an analysis of how effective existing zero waste waste management practices are (Arif et al., 2019). Until now, every region in Indonesia still faces big problems in waste management and processing. Developing and building a plastic waste collection system will solve society's problems and difficulties. This will involve traders, in particular, in collecting plastic waste at each house with the help of the village government and using the facilities provided by the village. If governments want to address waste management challenges, they must leverage the investment capacity and technical knowledge of private sectors such as producers and recyclers. The CE paradigm refers to "an economy in which resources are used as long as possible, their maximum value is extracted as they are used, and materials are recovered at the end of their cycle" (Luttenberger, 2020). Suggested strategic methods for achieving a zero-waste society are offered (Zaman AU. Recycling, 2017). This article examines the current problem of plastic waste and the prospects for realizing a zero plastic waste (ZPW) society, which will ultimately eliminate waste in an era following the phase-out of fossil fuels. The concept of "zero waste" is considered a smart way to move away from current unsustainable waste management practices (AU Age, Routledge; 2019).

Zero waste means designing and managing products and processes to systematically prevent or eliminate toxic volumes of waste and materials. Thus, in the last few decades, the concept of zero waste has been presented as an alternative solution to this waste problem. (Chelsea Green Publishing, Vermont, 2013). Implications of waste disposal through waste incineration: Although waste incineration has many advantages over landfilling, the use of waste incineration still presents many problems and difficulties. Organized by the national network NK2, a special "Chemical Recycling Workshop" in 2020 brought together NGOs and stakeholders from the chemical, energy, waste management and recycling

industries for the first time to talk critically about the status of development of chemical recycling technologies, their role in the waste hierarchy and the challenges hindering their implementation in Germany (Fraunhofer IMWS. 30 April 2020, date last accessed). Effective waste management can help maintain the CE model. In addition, finding key challenges is critical to improving waste management methods. Many researchers and practitioners have recently discovered several challenges that may prevent successful waste management solutions in the future. Velova et al. (2017).

## DISCUSSION

Social movements have an important role in forming collective awareness of environmental issues, especially in the context of the zero waste campaign. Through a participatory approach and strategic public communication, this campaign is able to change people's perspective and behavior towards waste. As a form of collective action, the zero waste movement not only educates, but also invites the public to play an active role in reducing waste through the principles of Refuce, Reduce, Reuse, Recycle and Rot.

The results of research by (Permata et al., 2024) show that a zero waste lifestyle is an effective strategy in reducing plastic use and increasing people's awareness of the environment. In its implementation, the zero waste campaign not only emphasizes reducing single-use plastic, but also public education through the 5R principle (Refuse, Reduce, Reuse, Recycle, Rot) which is able to change people's consumption behavior. The research also highlights the importance of the active role of the community and policy support as the key to successful implementation of this concept.

These findings strengthen the relevance of environmental campaign-based social movements as a communication strategy capable of building collective awareness. A massive and structured zero waste campaign has been proven to be able to create behavioral changes, from waste separation, reducing consumption of single-use goods, to participation in the circular economy. Therefore,

campaigns of this kind can be considered a form of modern social movement that contributes directly to environmental conservation.

Research (Supomo et al., 2024)) strengthens the idea that social movements in the form of zero waste campaigns can have a real impact on changing people's behavior in waste management. Through manufacturing training programs *Ecofurnies* environmentally friendly furniture from recycled materials. The community is not only taught to sort and utilize plastic waste, but is also empowered economically. This approach has succeeded in instilling awareness that plastic waste which was previously considered worthless can be processed into products with marketable value. This activity also actively involves the community in the production to marketing process, which shows that a participatory approach in environmental campaigns is very effective in forming new sustainable habits.

The results of several community service studies show that zero waste campaigns can directly increase public knowledge and awareness of the impact of plastic waste, as well as encourage behavioral changes in a more sustainable direction. For example, an increase in pre-test and post-test scores in a village-based education program shows a change in perception and awareness after the campaign was implemented. This strengthens Rogers' (2002) opinion that effective social communication strategies can accelerate the adoption of new behavior in society.

Research by Iqbal and (Iqbal & Suheri, 2019) in Cibunut Village, Bandung City, shows that the application of the zero waste concept through the "Kang Pisman" movement (*Reduce, Separate and Leverage*) able to build collective awareness of citizens in waste management. This program not only emphasizes education, but also involves the community directly through activities such as training in waste sorting, composting, recycling and the development of urban farming. The people of Cibunut Village even produce various crafts from plastic waste, as a real form of citizen participation in an environmentally based circular economy.

This proves that community-based social movements can be an effective strategy in instilling sustainability values. Even though it hasn't fully formed a stream yet *circular economy*, especially in the aspect of the economic value of the compost produced, this program has succeeded in changing people's mindset that waste is not just waste, but a resource that can be utilized. Thus, an educational, participatory and locally based approach is key in encouraging environmental awareness through zero waste campaigns.

Research (Iqbal & Suheri, 2019) shows that the application of the zero waste principle has also been developed in the fashion industry through a *sustainable design*. A study of the Zero Waste Daniel (ZWD) brand illustrates how fashion design can be an effective environmental campaign medium. By utilizing waste fabric (patchwork) as the main material, ZWD has succeeded in creating fashion products that are not only aesthetic and economical, but also full of ecological messages. This innovation is a real form of social movement that encourages changes in consumers' mindsets to be more selective and responsible for the environmental impact of the products they consume.

More than just a product, the ZWD concept creates a new ecological awareness among urban communities, especially through education, community collaboration and the use of digital media. This confirms that the zero waste campaign can be realized through a creative approach that touches on cultural, economic and social behavioral aspects of society. So, combining the principles of sustainability, creativity and participation is key in expanding the impact of the zero waste movement in various sectors.

On the other hand, the involvement of various parties, especially local communities, students and environmental activists, is also key to the success of this campaign. Without synergy between society and change actors, it will be difficult for campaign messages to reach wide targets. Therefore, it is important to position the zero waste campaign not only as an informative movement, but

also as a collaborative strategy in encouraging social transformation towards environmental sustainability.

## V. CONCLUSION

Social movements through campaigns *zero waste* proven to be an effective strategy in increasing public environmental awareness. Various studies show that educational, participatory and collaborative approaches are able to encourage behavioral changes in waste management, both at the household and industrial levels. Community-based campaigns, waste utilization training, and creative designs such as *zero waste fashion* contribute directly to instilling sustainable values and changing people's consumption patterns.

Draft *zero waste* is a holistic approach to waste management that emphasizes reducing waste from the source. This principle not only aims to avoid disposal in landfills, but also invites people to be wiser in consuming and producing things. Social movements play a central role in mainstreaming these sustainability values, because they are able to build collective awareness through voluntary and community-based public participation.

Campaign strategy *zero waste* proven effective in increasing public awareness of environmental issues, especially in terms of reducing the use of single-use plastics and increasing recycling practices. Various forms of campaigns, ranging from direct education, training, to promoting sustainable lifestyles, have shown positive results in shaping people's behavior that is more caring and responsible for the environment.

The impact of movement *zero waste* This can be seen clearly in changes in consumption and production patterns in society. Consumers are becoming more selective in choosing products, tend to prioritize sustainability, and are starting to leave consumer culture behind. Meanwhile, manufacturers are also encouraged to adopt the principles *extended producer responsibility* and developing products with designs that are more environmentally friendly and minimize waste.

Despite campaigns and movements *zero waste* has shown many positive impacts, its implementation still faces a number of challenges. These obstacles include limited supporting facilities, low awareness of some communities, and uneven policy support from the government. Therefore, strong synergy between stakeholders is needed to create a system that supports implementation *zero waste* comprehensively and sustainably.

**REFERENSI**

ADDIN Mendeley Bibliography CSL_BIBLIOGRAPHY Achmad, F. Y. N. A. (2024). Tantangan Dan Peluang Implementasi Kebijakan Zero Waste Di Kota Baubau. *Journal Publicuho*, *7*(1), 212–223. https://doi.org/10.35817/publicuho.v7i1.348

Agus Wahyudi, Asmaul Luthfauziah, & Yuanita Syaiful. (2023). Inisiasi Pembentukan 'Bank Santri' Berbasis 'Zero Waste' Sebagai Peningkatan Perekonomian Desa Kabupaten Jombang. *Prosiding Seminar Nasional Pengabdian Kepada Masyarakat*, *3*(1), 514–523. https://doi.org/10.33086/snpm.v3i1.1285

FITRIANI, N., MUSTARI, M., SAWALUDIN, S., & SUMARDI, L. (2024). Problematika Program Zero Waste Di Sman 1 Batukliang. *LEARNING : Jurnal Inovasi Penelitian Pendidikan Dan Pembelajaran*, *4*(3), 513–522. https://doi.org/10.51878/learning.v4i3.2998

Felicia, H. & Dam, R., 2020, '"Grasping at Plastic Straws and Working with Frames"'.

Githapradana, W., & Julia, F. R. (2020). Kajian Desain Zero Waste Daniel Sebagai Produk Sustainable Fashion. *Dewa Made Weda Githapradana, Fika Rahmi Julia, B.A., M.A.*, 41–50.

Iqbal, M., & Suheri, T. (2019). Identifikasi Penerapan Konsep Zero Waste dan Circular Economy dalam Pengelolaan Sampah di Kampung Kota Kampung Cibunut, Kelurahan Kebon Pisang, Kota Bandung. *Jurnal Wilayah Dan Kota*, *06*(02), 12–20.

Nusamuda Pratama, I., & Sukirman. (2023). Analisis Efektivitas Praktek Pengelolaan Sampah Zero Waste di Kota Mataram Provinsi Nusa Tenggara Barat. *Journal of Environmental Policy and Technology*, *1*(2), 74–78. https://journal.ummat.ac.id/index.php/jeptec/index

Paramita Eka Putri, I Wayan Suadnya, Dian Lestari Miharja, H. N. K. (2021). Strategi Komunikasi Dalam Program Zero Waste Menuju Ntb Lestari Oleh Dinas Lingkungan Hidup Dan Kehutanan Provinsi NTB. *Saintek*, *3*(November 2020), 9–10.

Permata, A. D., Malaya, A. P., & Kamal, U. (2024). Strategi Pengurangan Penggunaan Plastik Melalui Implementasi Zero Waste Menuju Gaya Hidup Ramah Lingkungan. *Jurnal Multidisiplin Ilmu Akademik*, *1*(3), 371–383.

Qonita, A., Amalia, H. Z., & Febryanto, M. R. (2024). *Pembelajaran Project Based Learning dengan Media Poster dalam Meningkatkan Zero Waste Lifestyle di SMAN 6 Jakarta Pembelajaran Project Based Learning dengan Media Poster dalam Meningkatkan Zero Waste Lifestyle di SMAN 6 Jakarta*. *September*.

Rahayu, D., Riyansah, A., Astuti, D. S., & Faidurrizal, F. (2021). Gerakan Zero Waste Sebagai Bentuk Peduli Pada Lingkungan Hidup di Kota Tangerang Selatan. *Ijd-*

*Demos*, *3*(2). https://doi.org/10.37950/ijd.v3i2.98

Romadhan, M. I., & Pradana, B. C. S. A. (2024). Program Kampanye Public Relations "Zero Waste" sebagai Upaya Menuju Kampung Bebas Plastik Di Keputih Surabaya. *Journal of Indonesian Society Empowerment*, *2*(1), 26–36. https://doi.org/10.61105/jise.v2i1.85

Serangan, A. T., Pasukan, U., Rinaldy, A., Sultan, I., & Gorontalo, A. (n.d.). *Review of International Relations ( Jurnal Kajian Ilmu Hubungan Internasional )*. *5*, 176–189.

Sukron, M., No, J. A. Y., & Utara, K. P. (2024). *Kontribusi Hadis terhadap Gerakan Zero Waste di Kalangan Muslim*. *25*(40), 307–320. https://doi.org/10.24090/jpa.v25i2.2024.pp307-320

Supomo, F. Y., Setiyaningsih, S. I., & A, I. A. A. (2024). *Zero Waste Indonesia Sebagai Solusi Konservasi Lingkungan Dengan Ecofurnies*. *4*(November), 372–380.

Sutisna, M. A. R. (2024). Strategi pengelolaan sampah kota terintegrasi menuju zero waste. *Waste Handling and Environmental Monitoring*, *1*(1), 41–50. https://doi.org/10.61511/whem.v1i1.2024.631

Verawati, P. (2022). Kebijakan Extended Producer Responsibility Dalam Penanganan Masalah Sampah Di Indonesia Menuju Masyarakat Zero Waste. *JUSTITIA: Jurnal Ilmu Hukum Dan Humaniora*, *9*(1), 189–197.

Wardi, J., & Putri, G. E. (2024). Pengenalan Konsep Zero Waste Dengan Prinsip 3R ( Reduce , Reuse Dan Recycle ) Sejak Dini. *Diklat Review: Jurnal Manajemen Pendidikan Dan Pelatihan*, *8*(1), 88–94.

Widiatmoko, S. A., Zahra, A. T., & Permana, K. N. (2024). *Penerapan Konsep Zero Waste Dalam Perspektif Hukum Lingkungan: Tantangan dan Prospek Masa Depan di Indonesia*. *1*(3), 307–320. https://doi.org/10.62383/humif.v1i3.390

Achmad, F. Y. N. A. (2024). Tantangan Dan Peluang Implementasi Kebijakan Zero Waste Di Kota Baubau. *Journal Publicuho*, *7*(1), 212–223. https://doi.org/10.35817/publicuho.v7i1.348

Agus Wahyudi, Asmaul Luthfauziah, & Yuanita Syaiful. (2023). Inisiasi Pembentukan 'Bank Santri' Berbasis 'Zero Waste' Sebagai Peningkatan Perekonomian Desa Kabupaten Jombang. *Prosiding Seminar Nasional Pengabdian Kepada Masyarakat*, *3*(1), 514–523. https://doi.org/10.33086/snpm.v3i1.1285

Felicia, H., & Dam, R. (2020). '*Grasping at Plastic Straws and Working with Frames*'.

FITRIANI, N., MUSTARI, M., SAWALUDIN, S., & SUMARDI, L. (2024). Problematika Program Zero Waste Di Sman 1 Batukliang. *LEARNING : Jurnal Inovasi Penelitian Pendidikan Dan Pembelajaran*, *4*(3), 513–522. https://doi.org/10.51878/learning.v4i3.2998

Githapradana, W., & Julia, F. R. (2020). Kajian Desain Zero Waste Daniel Sebagai Produk Sustainable Fashion. *Dewa Made Weda Githapradana, Fika Rahmi Julia, B.A., M.A.*, 41–50.

Iqbal, M., & Suheri, T. (2019). Identifikasi Penerapan Konsep Zero Waste dan Circular Economy dalam Pengelolaan Sampah di Kampung Kota Kampung Cibunut, Kelurahan Kebon Pisang, Kota Bandung. *Jurnal Wilayah Dan Kota*, *06*(02), 12–20.

Nurjamiludin, I., Tanjiah, A., Mukti, S., Rohmah, A. S., Hidayat, I. T., Ubaidillah, D. S., Tinggi, S., Tarbiyah, I., Ulama, N., & Pangandaran, A. F. (n.d.). *Society: Community Engagement and Sustainable Development Vol 1 No 2 DOI (ISSN : XXXX-XXXX and E-*

*ISSN XXXX-XXXX ) Zero Waste Life Style Guna Mencapai Kesadaran Masyarakat Terhadap Program Karangbenda Bebas Sampah*.

Nusamuda Pratama, I., & Sukirman. (2023). Analisis Efektivitas Praktek Pengelolaan Sampah Zero Waste di Kota Mataram Provinsi Nusa Tenggara Barat. *Journal of Environmental Policy and Technology*, *1*(2), 74–78.

Paramita Eka Putri, I Wayan Suadnya, Dian Lestari Miharja, H. N. K. (2021). Strategi Komunikasi Dalam Program Zero Waste Menuju Ntb Lestari Oleh Dinas Lingkungan Hidup Dan Kehutanan Provinsi NTB. *Saintek*, *3*(November 2020), 9–10.

Permata, A. D., Malaya, A. P., & Kamal, U. (2024). Strategi Pengurangan Penggunaan Plastik Melalui Implementasi Zero Waste Menuju Gaya Hidup Ramah Lingkungan. *Jurnal Multidisiplin Ilmu Akademik*, *1*(3), 371–383.

Qonita, A., Amalia, H. Z., & Febryanto, M. R. (2024). *Pembelajaran Project Based Learning dengan Media Poster dalam Meningkatkan Zero Waste Lifestyle di SMAN 6 Jakarta Pembelajaran Project Based Learning dengan Media Poster dalam Meningkatkan Zero Waste Lifestyle di SMAN 6 Jakarta*. *September*.

Rahayu, D., Riyansah, A., Astuti, D. S., & Faidurrizal, F. (2021). Gerakan Zero Waste Sebagai Bentuk Peduli Pada Lingkungan Hidup di Kota Tangerang Selatan. *Ijd-Demos*, *3*(2). https://doi.org/10.37950/ijd.v3i2.98

Romadhan, M. I., & Pradana, B. C. S. A. (2024). Program Kampanye Public Relations 'Zero Waste' sebagai Upaya Menuju Kampung Bebas Plastik Di Keputih Surabaya. *Journal of Indonesian Society Empowerment*, *2*(1), 26–36. https://doi.org/10.61105/jise.v2i1.85

Serangan, A. T., Pasukan, U., Rinaldy, A., Sultan, I., & Gorontalo, A. (n.d.). *Review of International Relations ( Jurnal Kajian Ilmu Hubungan Internasional )*. *5*, 176–189.

Sukron, M., No, J. A. Y., & Utara, K. P. (2024). *Kontribusi Hadis terhadap Gerakan Zero Waste di Kalangan Muslim*. *25*(40), 307–320. https://doi.org/10.24090/jpa.v25i2.2024.pp307-320

Supomo, F. Y., Setiyaningsih, S. I., & A, I. A. A. (2024). *Zero Waste Indonesia Sebagai Solusi Konservasi Lingkungan Dengan Ecofurnies*. *4*(November), 372–380.

Sutisna, M. A. R. (2024). Strategi pengelolaan sampah kota terintegrasi menuju zero waste. *Waste Handling and Environmental Monitoring*, *1*(1), 41–50. https://doi.org/10.61511/whem.v1i1.2024.631

Verawati, P. (2022). Kebijakan Extended Producer Responsibility Dalam Penanganan Masalah Sampah Di Indonesia Menuju Masyarakat Zero Waste. *JUSTITIA: Jurnal Ilmu Hukum Dan Humaniora*, *9*(1), 189–197.

Wardi, J., & Putri, G. E. (2024). Pengenalan Konsep Zero Waste Dengan Prinsip 3R ( Reduce , Reuse Dan Recycle ) Sejak Dini. *Diklat Review: Jurnal Manajemen Pendidikan Dan Pelatihan*, *8*(1), 88–94.

Widiatmoko, S. A., Zahra, A. T., & Permana, K. N. (2024). *Penerapan Konsep Zero Waste Dalam Perspektif Hukum Lingkungan: Tantangan dan Prospek Masa Depan di Indonesia*. *1*(3), 307–320.

Zahara, W., & Nurrahmi, F. (2024). FROM SCROLLING TO AWARENESS: HOW @ZEROWASTE.ID_OFFICIAL'S INSTA CAMPAIGN SHAPES GEN Z ECO-CONSCIOUSNESS. In *Jurnal Komunikasi Global* (Vol. 13, Issue 2). Online.

Achmad, F. Y. N. A. (2024). Tantangan Dan Peluang Implementasi Kebijakan Zero Waste Di Kota Baubau. *Journal Publicuho*, *7*(1), 212–223. https://doi.org/10.35817/publicuho.v7i1.348

Agus Wahyudi, Asmaul Luthfauziah, & Yuanita Syaiful. (2023). Inisiasi Pembentukan 'Bank Santri' Berbasis 'Zero Waste' Sebagai Peningkatan Perekonomian Desa Kabupaten Jombang. *Prosiding Seminar Nasional Pengabdian Kepada Masyarakat*, *3*(1), 514–523. https://doi.org/10.33086/snpm.v3i1.1285

Felicia, H., & Dam, R. (2020). *'Grasping at Plastic Straws and Working with Frames'*.

FITRIANI, N., MUSTARI, M., SAWALUDIN, S., & SUMARDI, L. (2024). Problematika Program Zero Waste Di Sman 1 Batukliang. *LEARNING : Jurnal Inovasi Penelitian Pendidikan Dan Pembelajaran*, *4*(3), 513–522. https://doi.org/10.51878/learning.v4i3.2998

Githapradana, W., & Julia, F. R. (2020). Kajian Desain Zero Waste Daniel Sebagai Produk Sustainable Fashion. *Dewa Made Weda Githapradana, Fika Rahmi Julia, B.A., M.A.*, 41–50.

Iqbal, M., & Suheri, T. (2019). Identifikasi Penerapan Konsep Zero Waste dan Circular Economy dalam Pengelolaan Sampah di Kampung Kota Kampung Cibunut, Kelurahan Kebon Pisang, Kota Bandung. *Jurnal Wilayah Dan Kota*, *06*(02), 12–20.

Nurjamiludin, I., Tanjiah, A., Mukti, S., Rohmah, A. S., Hidayat, I. T., Ubaidillah, D. S., Tinggi, S., Tarbiyah, I., Ulama, N., & Pangandaran, A. F. (n.d.). *Society: Community Engagement and Sustainable Development Vol 1 No 2 DOI (ISSN : XXXX-XXXX and E-ISSN XXXX-XXXX ) Zero Waste Life Style Guna Mencapai Kesadaran Masyarakat Terhadap Program Karangbenda Bebas Sampah*.

Nusamuda Pratama, I., & Sukirman. (2023). Analisis Efektivitas Praktek Pengelolaan Sampah Zero Waste di Kota Mataram Provinsi Nusa Tenggara Barat. *Journal of Environmental Policy and Technology*, *1*(2), 74–78.

Paramita Eka Putri, I Wayan Suadnya, Dian Lestari Miharja, H. N. K. (2021). Strategi Komunikasi Dalam Program Zero Waste Menuju Ntb Lestari Oleh Dinas Lingkungan Hidup Dan Kehutanan Provinsi NTB. *Saintek*, *3*(November 2020), 9–10.

Permata, A. D., Malaya, A. P., & Kamal, U. (2024). Strategi Pengurangan Penggunaan Plastik Melalui Implementasi Zero Waste Menuju Gaya Hidup Ramah Lingkungan. *Jurnal Multidisiplin Ilmu Akademik*, *1*(3), 371–383.

Qonita, A., Amalia, H. Z., & Febryanto, M. R. (2024). *Pembelajaran Project Based Learning dengan Media Poster dalam Meningkatkan Zero Waste Lifestyle di SMAN 6 Jakarta Pembelajaran Project Based Learning dengan Media Poster dalam Meningkatkan Zero Waste Lifestyle di SMAN 6 Jakarta*. *September*.

Rahayu, D., Riyansah, A., Astuti, D. S., & Faidurrizal, F. (2021). Gerakan Zero Waste Sebagai Bentuk Peduli Pada Lingkungan Hidup di Kota Tangerang Selatan. *Ijd-Demos*, *3*(2). https://doi.org/10.37950/ijd.v3i2.98

Romadhan, M. I., & Pradana, B. C. S. A. (2024). Program Kampanye Public Relations 'Zero Waste' sebagai Upaya Menuju Kampung Bebas Plastik Di Keputih Surabaya. *Journal of Indonesian Society Empowerment*, *2*(1), 26–36. https://doi.org/10.61105/jise.v2i1.85

Serangan, A. T., Pasukan, U., Rinaldy, A., Sultan, I., & Gorontalo, A. (n.d.). *Review of International Relations ( Jurnal Kajian Ilmu Hubungan Internasional )*. *5*, 176–189.

Sukron, M., No, J. A. Y., & Utara, K. P. (2024). *Kontribusi Hadis terhadap Gerakan Zero Waste di Kalangan Muslim*. *25*(40), 307–320. https://doi.org/10.24090/jpa.v25i2.2024.pp307-320

Supomo, F. Y., Setiyaningsih, S. I., & A, I. A. A. (2024). *Zero Waste Indonesia Sebagai Solusi Konservasi Lingkungan Dengan Ecofurnies*. *4*(November), 372–380.

Sutisna, M. A. R. (2024). Strategi pengelolaan sampah kota terintegrasi menuju zero waste. *Waste Handling and Environmental Monitoring*, *1*(1), 41–50. https://doi.org/10.61511/whem.v1i1.2024.631

Verawati, P. (2022). Kebijakan Extended Producer Responsibility Dalam Penanganan Masalah Sampah Di Indonesia Menuju Masyarakat Zero Waste. *JUSTITIA: Jurnal Ilmu Hukum Dan Humaniora*, *9*(1), 189–197.

Wardi, J., & Putri, G. E. (2024). Pengenalan Konsep Zero Waste Dengan Prinsip 3R ( Reduce , Reuse Dan Recycle ) Sejak Dini. *Diklat Review: Jurnal Manajemen Pendidikan Dan Pelatihan*, *8*(1), 88–94.

Widiatmoko, S. A., Zahra, A. T., & Permana, K. N. (2024). *Penerapan Konsep Zero Waste Dalam Perspektif Hukum Lingkungan: Tantangan dan Prospek Masa Depan di Indonesia*. *1*(3), 307–320.

Zahara, W., & Nurrahmi, F. (2024). FROM SCROLLING TO AWARENESS: HOW @ZEROWASTE.ID_OFFICIAL'S INSTA CAMPAIGN SHAPES GEN Z ECO-CONSCIOUSNESS. In *Jurnal Komunikasi Global* (Vol. 13, Issue 2). Online.