

# Ecolution as a community development initiative to enhance environmental awareness and foster a sustainable green city in Bekasi

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## Abstract

In 2022, Bekasi City ranked among the top waste-producing cities in Indonesia, underscoring an urgent need to address its environmental challenges. This study investigates the “Ecolution” program, a community development initiative launched by the LSPR Institute in Bekasi, aiming to enhance environmental awareness and foster sustainable practices. Specifically, the research evaluates student participation in raising community awareness and contributing to sustainable waste management. Using qualitative methods, including interviews, observations, and document analysis, the study reveals how “Ecolution” promotes collaborative, education-driven behavioral change aligned with Sustainable Development Goals (SDGs) 11 and 13. Key findings highlight the program’s role in fostering environmental knowledge, attitudes, and practices among students and the broader community, ultimately contributing to Bekasi’s transformation into a sustainable green city. This research underscores the importance of integrating community-based education and student engagement as catalysts for addressing urban waste challenges.

## Keywords

Waste, Community Development, Ecolution, Behavioural Change, Sustainable Development

## Introduction

In 2022, Bekasi City emerged as one of the largest contributors to waste in West Java, ranking among the top ten waste-producing cities in Indonesia [1]. This alarming statistic underscores the urgent need for effective waste management strategies and heightened environmental awareness within the community. Rapid urbanization and population growth have exacerbated the waste crisis in Bekasi, necessitating immediate action to mitigate its environmental impact. The growing volume of waste not only poses a threat to public health but also challenges the sustainability of urban living in this densely populated area [2].

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The waste problem in Bekasi has reached a critical stage, as the Sumur Batu Landfill has become overloaded, impacting the final waste processing site [3], [4]. This crisis has captured the attention of the local city government, which has been actively advocating for waste reduction and recycling initiatives within the community. The government has emphasized the urgent need for a sustainable waste management solution, asserting that the success of such effort hinges on active community participation [5].

As Indonesia grapples with an escalating waste crisis producing approximately 70 million tons of waste annually the need for effective community initiatives is more critical than ever. The majority of this waste is organic, with food waste comprising over 40% of total waste generation [6]. Therefore, enhancing public knowledge and participation through educational programs is essential for fostering a culture of sustainability and responsible waste management practices in Bekasi and similar urban areas across Indonesia.

Previous research related to this waste problem in Bekasi have been done. Ferdinan, Utomo, Soesilo, & Herdiansyah [7] emphasize the importance of changing community behaviour in household waste management. Their quantitative study, based on questionnaires, reveals that community perception, participation, and acceptability are closely linked to the quality of household waste management. Enhancing these factors can foster positive behavioural changes in managing household waste.

Salsabila, Linda, & A'yunin [8] investigated community knowledge and attitudes regarding participation in waste bank management in Bekasi using a quantitative method with a cross-sectional design through questionnaires. The research revealed that while respondents demonstrated good knowledge, positive attitudes, and high educational levels, their participation in waste bank management remained low. The study concluded that raising awareness about the importance of waste management and encouraging the involvement of community leaders are crucial to motivating greater community participation.

Safitri, Myrna, & Ismanto [9] conducted a qualitative study on community participation in waste bank management in Bekasi utilizing methods such as observation, interviews, and evaluation. The findings indicate that community involvement is limited across various stages of development, specifically in decision making, implementation, benefit-taking, and evaluation. While stakeholders or specific community groups primarily handle decision-making and evaluation, the broader community mainly engages during the implementation and benefit-taking phases. The study concludes that the level of participation is characterized by indirect involvement and motivation driven by rewards.

Those previous studies proved to indicate that the community participation is crucial for addressing waste issues in Bekasi. As integral members of the community, student involvement in tackling environmental challenges is essential [10]. This study aims to assess student participation in raising awareness within the community, specifically in Bekasi City.

In response to this pressing issue, the London School of Public Relations (LSPR) Institute of Communication & Business launched a community development program called “Ecolution”. Originally, this program was a student-led community project, which was designed to raise awareness about plastic waste. Its broader objective is to foster public awareness regarding climate change and promote sustainable practices essential for developing a green city. Ecolution aligns with the United Nations Sustainable Development Goals (SDGs), particularly focusing on Goal 11 (Sustainable Cities and Communities) and Goal 13 (Climate Action) [11]. Given the pressing waste management challenges in Bekasi City, effective community participation particularly from younger generations is crucial. As integral members of the community, students have the potential to drive awareness campaigns and implement sustainable practices. However, previous studies highlight a gap in the active involvement of this demographic. This research focuses on assessing student participation within the “Ecolution” program to address these gaps and contribute to fostering a culture of environmental responsibility in Bekasi City.”

The Ecolution Programme employs innovative educational methods designed to enhance community participation in responsible waste management. Through qualitative research methods such as interviews, observations, and document analysis, this study evaluates Ecolution’s impact on environmental awareness and sustainable development in Bekasi. The Activity of Ecolution consists of three, they are :

#### *Pre event Skincare Waste Bank (Green Glow)*

The Green Glow Skincare Waste Bank, a transformative initiative aimed at fostering sustainable consumption, took place from July 9th to 12th, 2024, at the LSPR Transpark Bekasi Lobby. This vibrant four-day event attracted over 500 participants, encouraging them to exchange used skincare containers for eco-friendly rewards such as exclusive goody bags. The event, supported by class funds and several skincare brand sponsors, was designed not just as a recycling drive but as a platform to engage the community in discussions about the importance of reducing plastic waste. On July 9th, 2024, a thought-provoking talk show was held in collaboration with *Cleanee Jakarta*, a local partner community, highlighting the critical need for sustainability and clean environments. According to feedback from attendees, many expressed their commitment to reducing plastic waste and emphasized their growing concern for environmental cleanliness. Despite the common perception that environmental issues may not be of interest to younger generations, particularly Gen Z, the success of this event proved otherwise. Through this innovative and festive activity, LSPR set a remarkable example of how to engage youth in environmental causes, demonstrating that sustainability can be both fun and impactful. The event, while hosted on campus, resonated deeply with the participants, leaving a lasting impression of responsibility and care for the planet.

### *Main Event: Fun with Plogging: A Step Towards a Healthier and Cleaner Environment*

On 21st July 2024, 105 enthusiastic participants and volunteers, dressed in black shirts bearing the ECOLUTION logo, took part in an inspiring activity combining jogging with litter collection—known as plogging—at the Car-Free Day event in Bekasi (Figure 1). This unique initiative encouraged both physical fitness and environmental responsibility. The event kicked off with speeches from representatives of LSPR Institute, the event's committee chairperson, and the head of Bekasi Timur Police. Attendees included representatives from the Bekasi City Government, specifically from the Environmental Agency and Bekasi Timur Subdistrict, as well as military personnel from Kodim 0507 Bekasi City. The atmosphere was vibrant and orderly as participants jogged alongside the public, collecting trash from the Car-Free Day area and filling the volunteer-provided trash bags. The initiative was met with a warm response from the community, with many joggers joining in the effort to help clean up their surroundings. The Bekasi City Government, local police, and the Indonesian National Military all praised the event. They expressed their commitment to promoting the importance of reducing plastic waste, avoiding single-use plastic bottles, and increasing environmental awareness for a healthier and cleaner lifestyle. They also vowed to incorporate Sustainable Development Goals (SDGs) into their daily operations, aiming to raise awareness and encourage better environmental practices among citizens. Through this collaborative effort, the event not only enhanced physical well-being but also fostered a stronger sense of responsibility toward our planet, demonstrating that small actions can lead to big changes.



Figure 1. The Main event of Ecolution

### *Post-Event Report: Eco-Eye Photoshoot Competition*

A Creative Platform for Raising Awareness through Photography. The Eco-Eye Photoshoot Competition, held from 22 to 26 July 2024, was an exciting event aimed at raising awareness about environmental issues through the art of photography. This competition, hosted on Instagram, attracted 306 participants, surpassing our original goal of 100. Participants were invited to post photos on their Instagram accounts,

tagging Ecolution's official account. The enthusiasm exceeded expectations, as more individuals became inspired to take part and showcase their creativity, using photography to highlight their environmental concerns, particularly around waste management. The judges, who are professional photographers from the LSPR photography club, selected the winners based on creativity, artistic expression, and the environmental message conveyed through the photos. Overall, the competition proved to be a huge success, both in terms of participation and the powerful environmental message shared through the lens of talented photographers. We are grateful to all the participants who helped make this event a vibrant platform for spreading environmental awareness.

## Method

### *Theoretical Framework*

The theoretical framework underpinning this study is centered on the concept of environmental awareness and its critical relationship with sustainable development. Environmental awareness is defined as an individual's understanding of environmental processes, concern for environmental quality, and commitment to environmentally friendly behaviour [12]. This construct comprises three essential dimensions:

1. Environmental Attitudes: These reflect individuals' values and beliefs regarding environmental issues.
2. Environmental Knowledge: This pertains to an individual's understanding of ecological issues and sustainable practices.
3. Environmental behaviour: This dimension encompasses actions that demonstrate a commitment to environmental preservation.

The integration of these dimensions is vital for fostering sustainable development. It underscores the connection between public awareness, environmental knowledge, and the effectiveness of environmental policies [13]. These studies highlight how enhanced environmental awareness can lead to more informed decision-making and stronger community engagement in sustainability initiatives.

In summary, this research utilizes qualitative methodologies to explore the multifaceted impacts of Ecolution while grounding its theoretical framework in established concepts of environmental awareness. By examining attitudes, knowledge, and behaviours related to the environment, the study aims to contribute valuable insights into how educational initiatives can promote sustainable practices within communities.

### *Conceptual Framework*

The framework for this research is displayed in [Figure 2](#).





Figure 2. Conceptual Framework

The conceptual framework outlined in the research provides a structured approach to understanding how environmental awareness influences sustainable practices in waste management, ultimately contributing to the development of a sustainable green city. Let's break down the framework:

1. **Environmental Awareness** This is the foundational element in the conceptual framework. The research begins with the premise that environmental awareness is key to addressing the waste crisis and fostering sustainable city development. Environmental awareness refers to an individual's understanding of environmental processes, concern for environmental quality, and commitment to environmentally friendly behaviour [12]. It is influenced by three key dimensions:
  - a. **Environmental Attitudes:** The values, beliefs, and emotional connections individuals have toward environmental issues. It reflects how much a person cares about the environment.
  - b. **Environmental Knowledge:** Understanding environmental issues, such as waste management practices, climate change, or pollution. It enables individuals to make informed decisions about their behaviours and choices.
  - c. **Environmental Behaviour:** This refers to the actions individuals take that are environmentally responsible, such as reducing waste, recycling, or supporting sustainable policies.
2. **Attitudes + Knowledge + Behaviour** The next step in the framework connects environmental attitudes, knowledge, and behaviour as an integrated system. The interaction between these three elements forms the basis for individuals' overall environmental awareness. When attitudes are positive, knowledge is sufficient, and behaviour aligns with sustainable actions, people are more likely to engage in practices that help reduce waste and improve environmental quality. The Ecolution program aims to target all three components by educating participants on the importance of sustainable waste management practices and encouraging behavioural change.
3. **Sustainable Practices in Waste Management** The combination of positive attitudes, adequate knowledge, and responsible behaviour leads to sustainable practices in waste management. In the context of Bekasi City, these practices are essential to address the increasing waste generation, especially food waste, and reduce

environmental harm. Sustainable practices include waste segregation, composting, reducing waste generation, and promoting recycling, all critical actions needed to manage the city's waste more effectively.

4. **Sustainable Green City Development** The ultimate goal is sustainable green city development, which is achieved through the successful implementation of sustainable waste management practices. This phase represents the desired outcome of the Ecolution program, creating a more sustainable, environmentally friendly urban environment. Green city development aims for long-term environmental health, reduced pollution, and improved quality of life for residents. By fostering a culture of sustainability, especially in waste management, Bekasi can transition into a city that aligns with the United Nations Sustainable Development Goals (SDGs), particularly SDG 11 (Sustainable Cities and Communities) and SDG 13 (Climate Action).

### *Conceptual Flow*

The framework illustrates that environmental awareness (attitudes, knowledge, and behaviour) flows directly into sustainable practices in waste management, which is the immediate result of increased awareness. These sustainable practices then contribute to sustainable green city development, reflecting the broader environmental, social, and economic benefits of waste management reforms. This emphasizes the importance of an integrated approach to environmental education, where understanding and action go hand in hand. By promoting attitudes, knowledge, and behaviour in the community, the Ecolution program can significantly contribute to the sustainable transformation of Bekasi City, leading to improved waste management and a greener urban environment. This framework is directly linked to the research, as the study assesses how Ecolution enhances environmental awareness and, through that, fosters the behaviours that lead to sustainable practices. By focusing on the three key dimensions (attitudes, knowledge, and behaviour), the program works towards the ultimate goal of sustainable city development.

### *Research Design*

This study employs a qualitative research design to assess the impact of the Ecolution program on fostering environmental awareness and promoting sustainable practices within the Bekasi community. The research methodology was designed to provide in-depth insights into community participation, attitudes, knowledge, and behaviour regarding waste management.

### *Data Collection*

The data collection process involved three primary methods: interviews, observations, and document analysis, aligning with the qualitative nature of the study. Each method was selected to ensure comprehensive data triangulation and to capture diverse perspectives.

1. **Interviews.** Semi-structured interviews were conducted with stakeholders, including:

- a. Student participants of the Ecolution program.
- b. Local community members involved in waste management initiatives.
- c. Representatives from the Bekasi City Government and Environmental Agency.
- d. Sponsors and partners, such as skincare brands and local organizations.

The interviews aimed to explore participants' experiences, perceptions of environmental issues, and the influence of the Ecolution program on their behaviours. A total of 20 interviews were conducted, each lasting 30 to 45 minutes. Interview questions focused on environmental awareness, waste management practices, and the perceived outcomes of the program.

2. Observations. Field observations were carried out during the three main events of the Ecolution program:
  - a. Pre-Event: Green Glow Skincare Waste Bank Observations focused on participant engagement, the process of exchanging skincare containers for rewards, and the overall event atmosphere. Specific attention was given to how discussions and activities influenced participants' awareness of plastic waste.
  - b. Main Event: Fun with Plogging Observers recorded the interaction between participants and the community during the plogging activity, the volume of waste collected, and the public's reactions to the initiative.
  - c. Post-Event: Eco-Eye Photoshoot Competition Observation concentrated on the creativity and environmental messages conveyed through the photographs and participant engagement on social media platforms.
3. Document Analysis. Relevant documents, such as event reports, participant feedback forms, and promotional materials, were analysed to provide additional context and support the findings. This method also included reviewing social media posts related to the Eco-Eye Photoshoot Competition to evaluate public response and engagement.

### *Materials and Tools*

1. Recording Equipment: Audio recorders were used to capture interviews for transcription and analysis.
2. Observation Checklists: Structured checklists ensured consistency in recording observations across events.
3. Analytical Software: NVivo was used for coding and thematic analysis of qualitative data.
4. Social Media Analytics Tools: Engagement metrics for the Eco-Eye Photoshoot Competition were analysed using Instagram insights.

### *Data Analysis*

Data collected from interviews, observations, and document analysis were subjected to thematic analysis. The process involved:

1. Transcription: All interviews were transcribed verbatim.



2. Coding: Data were systematically coded to identify recurring themes and patterns.
3. Theme Development: Key themes related to environmental attitudes, knowledge, and behaviour were developed to align with the study's theoretical framework.
4. Triangulation: Findings from different data sources were cross-verified to enhance reliability and validity.

### *Ethical Considerations*

1. Informed Consent: Participants were informed about the study's purpose, methods, and their rights before data collection.
2. Confidentiality: Participant identities were anonymized in all reports and publications.
3. Voluntary Participation: Participation in the study was entirely voluntary, with no penalties for withdrawal.

### *Methodological Alignment with Results*

The methods described above were implemented in a sequence consistent with the presentation of results, ensuring logical coherence and traceability. The findings in the results section reflect the data collection order, from initial participant engagement during the Green Glow event to the community impact observed through plogging and the creative awareness raised by the photography competition.

## **Result and Discussion**

The findings of this study, based on interviews, observations, and document analysis, highlight the significant impact of the Ecolution program on environmental awareness and behavioural change within the Bekasi community. Below are the result:

### *Student Engagement in Ecolution Initiatives*

1. Quantitative Metrics:
  - a. Green Glow Skincare Waste Bank Event: Engaged over 500 participants in recycling activities.
  - b. Plogging Activity: Attracted 105 participants who combined physical activity with environmental responsibility.
  - c. Eco-Eye Photoshoot Competition: Received 306 Instagram entries, exceeding the 100-entry target by over 200%.
2. Qualitative Insights:
  - a. Participants reported feeling inspired and empowered to influence their social circles, adopting waste reduction practices at home.
  - b. Interviews highlighted that the interactive and creative nature of events helped engage students effectively.

### *Role of Education in Raising Awareness*

1. Green Glow Skincare Waste Bank: Combined education and incentives, making the idea of plastic waste reduction more accessible and appealing. Participants reported better understanding of plastic's environmental impact after attending.
2. Eco-Eye Photoshoot Competition: Encouraged youth to creatively express environmental concerns, illustrating how art can be a powerful tool for advocacy.

### *Collaborative Impact*

1. Strong partnerships with local governments, private sponsors, and community organizations amplified the reach of Ecolution.
2. Multi-stakeholder involvement (e.g., local authorities, military personnel, sponsors) ensured the program's sustainability and boosted community trust.
3. Feedback from participants emphasized the importance of collaboration to comprehensively tackle environmental challenges.

These results demonstrate that the Ecolution program successfully achieved its objectives by engaging students, integrating education with practical activities, and fostering collaboration to address environmental concerns. Let me know if you'd like to refine or expand on specific

### *Impact of the Ecolution Program*

1. Behavioural Change

Interviews with program participants revealed significant behavioural shifts, with many expressing their intention to implement waste reduction practices in their households and share their knowledge with family and friends. The program's engaging and innovative approach proved effective in fostering long-term commitment to sustainability.

2. Increased Environmental Awareness

The program successfully enhanced participants' understanding of waste management and environmental issues. By addressing the three dimensions of environmental awareness—attitudes, knowledge, and behaviour—Ecolution fostered a holistic change in participants' perspectives and actions.

3. Community and Stakeholder Collaboration

The involvement of various stakeholders, including local government, community members, and private sponsors, created a robust framework for addressing waste management challenges. This collaborative approach ensured the program's sustainability and amplified its impact.

### *Thematic Analysis*

Thematic analysis of the data identified the following key themes:

1. Empowerment through Education: Educational activities, such as workshops and interactive events, were instrumental in fostering environmental awareness and responsibility.
2. Motivation through Rewards: The incentive-based structure of activities, such as the Green Glow event, motivated participants to adopt sustainable behaviours.
3. Social Media as an Advocacy Tool: The Eco-Eye Photoshoot Competition demonstrated the power of digital platforms in spreading environmental messages and engaging wider audiences.

These results demonstrate that the Ecolution program successfully achieved its objectives by engaging students, integrating education with practical activities, and fostering collaboration to address environmental concerns.

## Conclusion

This study demonstrates that the Ecolution program has effectively enhanced environmental awareness and sustainable practices within the Bekasi community, correlating with the research objectives outlined in the introduction. The findings underscore the critical role of community-based education in addressing waste management challenges. Key takeaways include:

1. Behavioural Change: Ecolution has instigated positive behavioural shifts among participants, fostering a culture of waste reduction and recycling.
2. Increased Collaboration: The program successfully engaged diverse stakeholders, including government entities, local communities, and private sponsors, creating a robust framework for sustainable practices.
3. Innovative Awareness Strategies: Events such as the Green Glow Skincare Waste Bank, plogging activities, and the Eco-Eye Photoshoot Competition effectively utilized interactive and creative approaches to raise awareness.

These insights contribute to the broader understanding of sustainable development practices, aligning with the Sustainable Development Goals (SDG 11 and SDG 13). The research highlights the transformative potential of education and collaborative initiatives in achieving sustainable green city development.

Future research should explore scaling similar programs to other urban areas, integrating advanced technologies for waste tracking, and evaluating long-term community impacts.

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