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ISLAMIC COMMUNITY PARTICIPATION IN ENVIRONMENTAL CONSERVATION: A STUDY OF THE GERAKAN PEDULI LINGKUNGAN (GPL) IN PLASTIC WASTE CONTROL IN COASTAL WEST ACEH, INDONESIA

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Abstract

This study examines the role of community participation in environmental conservation through the Gerakan Peduli Lingkungan (GPL), a youth-based community movement engaged in plastic waste control in the coastal area of Meureubo Subdistrict, West Aceh Regency, Indonesia. Situated within the framework of Islamic community development, the study analyzes GPL's contributions to coastal environmental management, the level and patterns of community participation, and the barriers encountered in program implementation. A descriptive qualitative approach was employed, with fieldwork conducted in February 2026. Data were collected through in-depth interviews with 11 informants — including GPL administrators, village officials, and local residents — and complemented by direct field observations. The findings reveal that GPL contributes through beach clean-up activities, environmental education and awareness campaigns, social media outreach, and community economic empowerment via the productive utilization of plastic waste. Community participation was found to be relatively strong, though unevenly distributed across different social groups, with the main barriers including limited public awareness, inadequate facilities and infrastructure, and insufficient financial support. The novelty of this study lies in its analysis of a community-based environmental movement in a coastal Muslim-majority setting as an integrated model of social welfare and sustainable development, combining social, educational, communicative, and economic approaches rooted in collective community action. The findings offer practical implications for local governments and community organizations in strengthening participatory waste

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governance, while enriching theoretical discussions on Islamic community development and grassroots environmental stewardship.

Keywords: Islamic Community Development; Community Participation; Environmental Conservation; Social Welfare; Plastic Waste Management; Coastal Community.

Abstrak

Penelitian ini mengkaji peran partisipasi masyarakat dalam pelestarian lingkungan melalui Gerakan Peduli Lingkungan (GPL), sebuah gerakan komunitas berbasis pemuda yang bergerak dalam pengendalian sampah plastik di kawasan pesisir Kecamatan Meureubo, Kabupaten Aceh Barat, Indonesia. Dalam kerangka pengembangan masyarakat Islam, penelitian ini menganalisis kontribusi GPL terhadap pengelolaan lingkungan pesisir, tingkat dan pola partisipasi masyarakat, serta faktor-faktor yang menghambat pelaksanaan program. Penelitian menggunakan pendekatan kualitatif deskriptif yang dilaksanakan pada Februari 2026. Data dikumpulkan melalui wawancara mendalam terhadap 11 informan yang terdiri atas pengurus GPL, aparat desa, dan masyarakat, serta diperkuat dengan observasi lapangan. Hasil penelitian menunjukkan bahwa GPL berkontribusi melalui aksi bersih pantai, edukasi dan sosialisasi lingkungan, kampanye media sosial, serta pemberdayaan ekonomi masyarakat melalui pemanfaatan sampah plastik bernilai ekonomis. Partisipasi masyarakat tergolong cukup baik meskipun belum merata, sementara hambatan utama meliputi rendahnya kesadaran sebagian warga, keterbatasan sarana dan prasarana, serta dukungan anggaran yang belum optimal. Kebaruan penelitian ini terletak pada analisis gerakan lingkungan berbasis komunitas Muslim di wilayah pesisir sebagai model kesejahteraan sosial dan pembangunan berkelanjutan yang mengintegrasikan aspek sosial, edukatif, komunikatif, dan ekonomi yang berakar pada aksi kolektif komunitas. Hasil penelitian memberikan implikasi praktis bagi pemerintah daerah dan komunitas dalam memperkuat tata kelola sampah partisipatif, sekaligus memperkaya kajian teoritis mengenai pengembangan masyarakat Islam dan pengelolaan lingkungan berbasis komunitas akar rumput.

Kata Kunci: Pengembangan Masyarakat Islam; Partisipasi Masyarakat; Pelestarian Lingkungan; Kesejahteraan Sosial; Pengelolaan Sampah Plastik; Komunitas Pesisir.

INTRODUCTION

The problem of plastic waste has become a global issue, significantly impacting marine ecosystems and coastal areas. According to recent data, Indonesia produces approximately 3.2 million tons of unmanaged plastic waste annually, of which approximately 1.29 million tons ends up in the ocean. Plastic waste accumulation in coastal areas poses a serious environmental challenge, compounded by limited waste management systems and the high volume of poorly managed domestic waste. Beyond its ecological consequences — including ocean pollution, destruction of biota habitats, and disruption of coastal ecosystem balance — this problem also adversely affects the social and economic conditions of coastal communities, particularly those dependent on fisheries and marine tourism.[1]

This situation demonstrates that the plastic waste problem is not solely an environmental concern, but is also shaped by community behavior and the degree of public involvement in waste management. Low public awareness, inadequate access to waste management systems, and minimal community participation are among the key factors that exacerbate this challenge. Consequently, addressing the plastic waste problem requires an approach that goes beyond technical measures and actively engages the community in the management process. In this regard, a community-based approach represents a relevant and promising strategy for tackling plastic waste in coastal areas.[2]

Community-based waste management underscores the importance of citizen participation at every stage of the program, from planning through implementation to evaluation. Such participation encompasses not only physical involvement but also awareness, social responsibility, and collective commitment. From a social ecology perspective, the relationship between humans and the environment is inherently reciprocal; environmental degradation therefore cannot be divorced from social structures and community behavioral patterns. Accordingly, fostering pro-environmental behavioral change is a critical element in effective plastic waste control.[3]

nvironmental communication strategies also play a significant role in building public awareness. The use of social media in environmental campaigns has proven effective in broadening message reach and shaping public opinion on environmental issues. Transparent information sharing and public engagement in environmental matters contribute to strengthening the legitimacy of community-based movements. Additional factors — including social norms, levels of education, and economic incentives — further influence the intensity of community involvement in environmental programs.[4]

A number of studies demonstrate that successful waste management is strongly influenced by the active involvement of local communities as primary actors. Research by Mutaqin (2023) on community-based plastic waste management in Tasikmalaya found that participatory planning, the use of simple technologies, and the development of ecobrick products can enhance the economic value of waste while simultaneously strengthening community governance.[5] Similarly, Ismiraj et al. (2023) found that community-based waste

[1]Ministry of Environment and Forestry of the Republic of Indonesia, National Plastic Waste Reduction Strategic Actions for Indonesia (KLHK RI, 2020).

[2]Ministry of Environment and Forestry. (2024). National Waste Management Information System (SIPSN). Accessed from: https://sipsn.menlhk.go.id

[3]Andiyasa Mahardika Satya, et. al., Effectiveness of Community Participation in Waste Management Through the Waste Bank Program in Surabaya. Journal of Social Sciences Research (2025): vol. 2. No. 9

[4]Iriana Bakti, The Role of Social Media in Raising Awareness of Environmental Issues. Indonesian Research Journal on Education (2024), vol. 4 no. 4

[5]Mutaqin, H. Planning Management Rubbish Plastic Community Based with Google Sheet Reporting in Cinusa Village Downstream Tasikmalaya. Environmental Engineering Scientific Media (MITL), 8(1), 1–8 (2023). https://doi.org/10.33084/mitl.v8i1.4347

bank operations in Pangandaran can increase community participation and improve waste management effectiveness when supported by social trust, local leadership, and multi-stakeholder collaboration.[6]

Despite the growing body of literature on community-based waste management, the majority of existing studies focus on the implementation of waste banks, government programs, or interventions in urban settings. Research examining independent, community-initiated movements in coastal areas — particularly those that integrate environmental action, public education, digital communication, and economic empowerment through the utilization of plastic waste — remains relatively limited. At the international level, community-based coastal management models have demonstrated that local public participation and the development of eco-entrepreneurship can enhance the effectiveness of environmental management while strengthening socio-economic sustainability. However, empirical evidence on how such models are developed within the context of coastal communities in Indonesia remains scarce.[7]

Meureubo District, West Aceh Regency, is one of the coastal areas confronting this challenge. Limited public awareness among some residents, combined with inadequate waste management infrastructure, has worsened the local environmental situation. In response, a community initiative emerged in the form of the Gerakan Peduli Lingkungan (GPL — Environmental Care Movement), established as a collective response to the plastic waste problem. The GPL exemplifies community-based social participation in local environmental management, reflecting the principle that sustainable development requires the active involvement of communities as key actors in protecting their environment.[8]

The GPL Meulaboh is a youth-based organization focused on environmental issues in West Aceh Regency, with a particular emphasis on environmental conservation and sustainable waste management. Having operated for approximately seven years, the organization integrates environmental education with concrete conservation actions, including mangrove planting and sea turtle protection programs in coastal areas, particularly at Aroen Meubanja Beach. In the area of waste management, GPL Meulaboh operates a Waste Bank — a household waste collection and sorting center — the output of which is further developed into creative economic products through its GPL Store business unit.

As such, the GPL represents a community initiative that combines beach clean-up activities, environmental education, social media campaigns, waste bank management, and the development of recycling-based products. These characteristics distinguish the GPL from conventional waste management programs, which generally rely on government intervention or focus narrowly on the technical aspects of waste collection.

uilding on the research gaps identified above, this study aims to analyze the GPL's contribution to plastic waste control in the coastal area of Meureubo District, examine the level of community participation, and identify factors influencing the sustainability of the movement. The novelty of this study lies in its in-depth analysis of a youth-based community movement as a primary actor in plastic waste control, through an integrated approach encompassing social, educational, communicative, and economic dimensions in a coastal setting. The findings are expected to enrich the literature on community-based

[6]Ismiraj, M.R., Wulansari, A., Setiadi, Y., Pratama, A., & Mayasari, N. Perceptions of Community-Based Waste Bank Operators and Customers on Its Establishment and Operationalization: Cases in Pangandaran, Indonesia. Sustainability, 15(14), 11052. (2023). https://doi.org/10.3390/su151411052

[7]Herdiansyah, H., Saiya, H. G., Afkarina, K. I. I., & Indra, T. L.. Coastal Community Perspective, Waste Density, and Spatial Area toward Sustainable Waste Management (Case Study: Ambon Bay, Indonesia). Sustainability, 13(19), (2021). DOI: https://doi.org/10.3390/su131910947

[8]Sadul Bahri, https://aceh.tribunnews.com/2021/11/03/pelestarian-ekosistem-gpl-tanam-500-pohon-mangrove-di-meulaboh. Diakses pada 5 Maret 2026

environmental management and serve as a practical reference for the development of participatory and sustainable plastic waste control policies and programs in Indonesia.

LITERATURE REVIEW

A. Community-Based Plastic Waste Management

Plastic waste management is no longer viewed solely as a responsibility of the government, but has evolved toward a community-based approach (*community-based waste management*) that positions the public as the primary actor in the planning, implementation, and evaluation of programs. A growing body of international studies demonstrates that successful waste management is strongly influenced by the capacity of local organizations, multi-stakeholder collaboration, and public involvement in developing solutions that are appropriate to local contexts. This approach is considered more adaptive in addressing the plastic waste problem, particularly in developing countries with limited waste management infrastructure.[9]

In addition to the community-based approach, the concept of eco-entrepreneurship has been increasingly applied in plastic waste management. This approach integrates environmental conservation with economic empowerment through the transformation of waste into products with added value. The establishment of recycling-based business units not only reduces waste accumulation but also creates new economic opportunities and enhances the long-term sustainability of environmental programs by providing financial incentives for community participation.[10]

B. Social Capital and Community Participation

From a social science perspective, the success of an environmental movement is determined not only by technical factors but also by the social capital available within the community. Social capital encompasses trust, shared norms, social networks, and the collective capacity to work together toward common goals. Strong social capital has been shown to enhance the effectiveness of environmental governance, strengthen local collaboration, and encourage public participation in the sustainable management of natural resources.[11]

The Acehnese community possesses distinct social characteristics rooted in values of mutual cooperation (*gotong royong*), community solidarity, and customary institutions that support collective action. These values can serve as an important foundation for the development of community-based environmental movements, including plastic waste control in coastal areas. Accordingly, any analysis of the contribution of the Gerakan Peduli Lingkungan (GPL) must take into account the interaction between ecological factors and local social capital, as this interaction significantly shapes the success of the movement.

C. Environmental Communication and Multi-Party Collaboration

Environmental communication serves as a strategic instrument in building ecological awareness and encouraging behavioral change within communities. Public education, environmental campaigns, and the use of social media have proven effective in improving public literacy regarding the impacts of plastic waste and in expanding community

[9]Grassin, J. B., & Dijkstra, H. Plastic Venture Builder (PVB): An empirically derived assessment tool to support plastic waste management ventures in low- and middle-income countries. Waste Management & Research, 42(3), 232–243. (2024).. https://doi.org/10.1177/0734242X231180648

[10]Johannes, H. P., Kojima, M., Iwasaki, F., & Edita, E. P. Applying the extended producer responsibility towards plastic waste in Asian developing countries for reducing marine plastic debris. Waste Management & Research, 39(5), 690–702. (2021). https://doi.org/10.1177/0734242x211013412

[11]Purba, N. P., et al. Coastal clean-up in Southeast Asia: Lessons learned, challenges, and future strategies. Frontiers in Marine Science, 10. (2023). doi: 10.3389/fmars.2023.1250736

participation in environmental conservation activities. Furthermore, collaboration among communities, government agencies, the private sector, and civil society organizations is a critical factor in establishing effective and sustainable waste management systems.[12]

Studies on the development of plastic waste management initiatives in various developing countries also reveal that the success of community movements is influenced by the quality of leadership, cross-sector partnerships, organizational capacity, and the ability to develop sustainable business models. These factors enable community organizations not only to sustain their operations but also to expand the scale of their environmental and social impact.[13]

D. Literature Synthesis and Research Gaps

Based on the review of existing studies, it can be concluded that effective plastic waste management requires the integration of community participation, social capital, environmental communication, and community-based economic innovation. However, the majority of existing studies remain focused on the implementation of government policies, extended producer responsibility frameworks, or the development of waste banks and recycling enterprises in urban areas. Studies that specifically examine independent community movements in coastal regions — particularly those that combine environmental education, collective action, social campaigns, and economic empowerment — remain relatively limited.

In response to these gaps, this study adopts a conceptual framework that integrates community-based environmental management, social capital theory, and public participation to analyze the contribution of the GPL in plastic waste control along the coast of West Aceh. The novelty of this study lies in its analysis of a local community movement that leverages social capital and community participation as primary strengths in supporting the sustainable control of plastic waste in a coastal setting.

METHOD

This study employs a qualitative approach with a descriptive design to explore the contribution of the Gerakan Peduli Lingkungan (GPL) in controlling plastic waste in the coastal area of Meureubo District, West Aceh Regency, Aceh Province, Indonesia. The study was conducted from January to March 2026 across several coastal villages that serve as the primary locations of GPL activities. A qualitative approach was selected because it enables researchers to develop an in-depth understanding of the experiences, perceptions, and forms of community participation in community-based environmental movements.

Participants were selected through purposive sampling, whereby informants were chosen on the basis of their knowledge, experience, and direct involvement in GPL activities. The inclusion criteria were as follows: (1) being at least 18 years of age; (2) residing in Meureubo District; (3) having been directly involved in or aware of GPL activities for a minimum of one year; and (4) being willing to participate in the study by providing voluntary informed consent. Informants who were unwilling to complete the full interview or were unable to provide relevant information were excluded from the study. A total of 11 informants were interviewed, comprising three GPL administrators, three village officials, and five community members who had participated in GPL activities.

[12]Prabawati, A., Frimawaty, E., & Haryanto, J. T. Strengthening Stakeholder Partnership in Plastics Waste Management Based on Circular Economy Paradigm. Sustainability, 15(5), 4278. (2023).. https://doi.org/10.3390/su15054278

[13]Asmal, Idawarni & Walenna, Muhammad & Nas, Wadzibah & Ridwan, Ridwan. Application of local wisdom in handling waste in coastal settlements as an effort to minimize waste production. Environmental and Sustainability Indicators. 19. (2023). 100283. 10.1016/j.indic.2023.100283.

Data were collected through field observations and semi-structured interviews. Observations were conducted directly at GPL activity sites to document coastal environmental conditions, waste management practices, and forms of community involvement. Interviews were guided by an interview protocol developed in accordance with the research objectives and lasted between 30 and 60 minutes per informant. All interviews were audio-recorded with the consent of each informant and subsequently transcribed verbatim for further analysis. Field notes were also taken throughout the data collection process to supplement and contextualize the interview data. Data analysis was carried out using manual thematic analysis, following three key stages: re-reading all transcripts to achieve data immersion, generating key themes from the data, and interpreting the relationships among themes in relation to the research objectives.

To enhance the credibility and validity of the findings, the study employed several validation strategies. Source triangulation was conducted by comparing information obtained from GPL administrators, village officials, and community members. Method triangulation was applied by cross-checking the results of interviews with field observation data. Member checking was carried out by reconfirming preliminary findings with selected informants to ensure that the researcher's interpretations accurately reflected their perspectives. Peer debriefing was also undertaken, involving discussions of coding decisions and data interpretations with fellow researchers to minimize researcher subjectivity. The entire research process was systematically documented as part of an audit trail to ensure transparency and the traceability of the analytical process.

FINDINGS AND DISCUSSION

A. Forms of Contribution of the Gerakan Peduli Lingkungan (GPL)

Interview results indicate that the establishment of the GPL was driven by growing concern over the deteriorating condition of the coastal environment. One of the GPL administrators, Fajar (22 years old), stated:

> *"GPL was formed because of the large amount of plastic waste that kept piling up on the beach and no one had really focused on addressing it."*[14]

Another administrator, Yuliana (22 years old), added:

> *"Initially, there were only a few young people who were troubled by the sight of Ujung Karang Beach being so dirty, and we agreed to start a movement."*[15]

These statements demonstrate that the GPL emerged from a spontaneous and collectively shared ecological awareness. Theoretically, this type of movement can be categorized as a community-based environmental movement that develops through a bottom-up mechanism. Participation rooted in internal awareness tends to be more resilient, as it is grounded in a sense of social ownership rather than external obligation.

In this context, the GPL functions not only as an implementer of clean-up activities but also as an agent of social change at the local level. Its existence reflects what may be described as a pro-environmental cultural transformation — a shift in community values toward the environment from mere utilization to active stewardship and preservation.

In practice, the GPL's contributions are multidimensional. According to Amna (22 years old), a GPL administrator:

[14]Interview with GPL Administrator Fajar at the GPL Secretariat in Meurebo, February 11, 2026.
[15]Interview with GPL Administrator Yuliana at the GPL Secretariat in Meurebo, February 11, 2026.

"We regularly clean the beach, but we also conduct outreach and provide training on plastic waste management."[16]

Yuliana (22 years old) further noted:

"We have also made handicrafts from plastic waste to show people that waste has value."[17]

These findings indicate that the GPL does not limit itself to symbolic gestures such as one-off beach clean-ups, but has developed a more systematic approach integrating educational and economic strategies. The educational dimension is realized through direct community outreach, awareness-raising on the impacts of plastic waste on coastal ecosystems, and training in waste sorting and processing. Thus, the GPL not only seeks to mitigate the symptoms of the problem but also addresses its root causes — namely, low public awareness and ingrained behavioral patterns around waste disposal. This model aligns with the concept of community-based waste management that upholds the principles of reduce, reuse, and recycle (3R) in a participatory manner, positioning communities not merely as objects of policy but as active subjects in the management process.

These findings demonstrate that the GPL adopts a bottom-up approach through community education, beach clean-up actions, and recycling-based economic empowerment. This is consistent with the findings of Purba et al. (2023), who argue that community-based initiatives can enhance waste management effectiveness by strengthening a sense of social ownership and local participation. However, several studies on global environmental governance also emphasize that long-term success cannot rely solely on community movements, but requires strong institutional support, regulatory frameworks, and government financing. The GPL thus demonstrates success at the level of social mobilization, while still facing challenges related to institutional capacity and program scalability.

From the perspective of sustainable environmental management, this participatory approach has the advantage of fostering collective responsibility. When communities are involved in waste sorting and processing, social control mechanisms emerge that reinforce hygiene norms. This process also encourages social learning — a condition in which individuals learn through shared experiences and collective practices.[18] In this sense, the GPL functions as a social educational space that enables communities to internalize ecological values into their everyday lives.

Furthermore, the GPL's economic approach illustrates the integration of environmental and community well-being considerations. Through training in plastic waste handicrafts and the transformation of waste into marketable products, the GPL is actively shifting community perspectives on waste — repositioning it not as useless refuse but as a resource with economic potential. This shift in perspective is particularly significant for coastal communities characterized by high socio-economic dependence on daily income. When communities recognize that waste management can yield tangible economic benefits, the motivation for participation extends beyond moral obligation to become rational and practical.[19] In terms of communication, the GPL employs a combination of direct outreach and social media engagement. One administrator, Faiz (22 years old), stated:

[16]Interview with GPL Administrator Amna at the GPL Secretariat in Meurebo, February 11, 2026.

[17]Interview with GPL Administrator Yuliana at the GPL Secretariat in Meurebo, February 11, 2026.

[18] Simamora, et al., *Implementation of Waste Management in Marketing Management.* (Purbalingga: Eurika Media Aksara, 2025).

[19]Aris, "7 Reasons Why Society Always Experiences Socio-Cultural Change," Gramedia, 2021. Accessed at https://www.gramedia.com/literasi/perubahan-sosial-budaya-dalam-masyarakat/

> *"We engage directly with residents, but we also use social media to encourage young people to care about the environment."*[20]

This strategy reflects an adaptive response to developments in digital communication. From an environmental communication perspective, campaign effectiveness is heavily influenced by message consistency and the exemplary conduct of those leading the campaign. Taken together, the GPL's contributions can be categorized across four dimensions: operational, educational, communicative, and economic.

B. Level of Community Participation

The findings indicate that the GPL has attained a degree of social legitimacy within the community. One resident, Johan (45 years old), remarked:

> *"GPL is a movement that frequently cleans the beach and encourages people to care about the environment."*[21]

Another resident, Samsuar (40 years old), said:

> *"Now, whenever there are activities, I often join in and invite my neighbors as well."*[22]

These findings are consistent with social capital theory, which holds that social trust and community networks can drive collective action in environmental stewardship. However, the study also reveals that heightened environmental awareness does not always translate directly into active participation. Some community members are unable to attend activities due to economic constraints and the demands of their livelihoods as fishermen. This indicates that structural factors and local occupational realities can serve as barriers to participation, even when social norms and environmental concern are already present.

Social legitimacy is an important indicator in community participation theory, as it reflects the level of public acceptance and trust in a program or movement. Within the framework of participatory development, social legitimacy constitutes the foundational prerequisite for active community involvement. The initial stage of participation is characterized by community awareness, recognition, and understanding of a program's objectives and benefits. Without social recognition, a program tends to struggle to develop, as community members lack an emotional connection or direct sense of stake in the activity.[23]

Based on the research findings, the GPL has achieved broad recognition among the coastal communities of Meureubo. One respondent, Zubaidah (38 years old), stated:

> *"GPL is a movement that frequently cleans beaches and cares about the environment. We know the GPL because we have often seen their activities directly on the beach. I think what they do is very good, and I am impressed by the initiative of the GPL members."*[24]

This demonstrates that the movement has achieved both social recognition and acceptance. Such recognition operates not only at a cognitive level — that is, awareness of the movement's existence — but also at an affective level, encompassing positive evaluation

[20]Interview with GPL Administrator Faiz at the GPL Secretariat in Meurebo, February 11, 2026.

[21]Interview with Mr. Johan, a resident of Peunaga Pasi, February 13, 2026.

[22]Interview with Mr. Samsuar, a resident of Peunaga Pasi, February 13, 2026.

[23]Mary Ismowati, et. al., "Community Participation in Realizing Disaster Resilient Villages in Banyukuning Village, Bandungan District, Semarang Regency, Central Java". Abdi: Journal of Community Service and Empowerment, (2024), 6(1), 43-50.

[24]Interview with a Peunaga Pasi resident, Mrs. Zubaidah in Peunaga Pasi. February 13, 2026.

and active support. This suggests that the GPL has moved beyond the awareness stage and entered the engagement stage of community participation.

From a social participation perspective, legitimacy is also linked to the formation of social trust between program implementers and the broader community. When communities consistently observe the movement's activities and witness their tangible impacts — such as visibly cleaner beaches — trust in the movement deepens. Soetomo emphasized that social legitimacy is built through intensive interaction, two-way communication, and results that are directly felt by the community. This trust, in turn, accumulates as social capital that strengthens the movement's long-term sustainability.[25]

Behavioral change was also evident among community members. The Village Head of Peunaga Pasi, Mr. Anwar Diwa (47 years old), noted:

> *"Since there has been so much education and real action around waste management, residents now seem to be more careful about how they dispose of waste and are no longer doing so carelessly. This is certainly a positive impact of the activities led by the younger GPL members."*[26]

The Village Secretary of Peunaga Pasi, Mr. Muhammad Nasir (37 years old), also observed:

> *"These activities motivated me – I started sorting my waste and reducing my use of single-use plastic. I believe many other residents feel the same way."*[27]

This behavioral shift reflects a profound process of internalizing pro-environmental values. According to the theory of pro-environmental behavior, behavioral change does not occur instantaneously but rather through habituation and the sustained reinforcement of social norms. As communities repeatedly engage in environmental activities, new collective norms emerge, gradually shifting the prevailing paradigm from apathy to proactivity. This process is further reinforced by positive social pressure (*peer pressure*) and a growing sense of shared ownership over clean public spaces. Over time, environmental stewardship ceases to be perceived as an external obligation or burden and instead becomes an intrinsic need and a marker of group identity. This internalization underpins the movement's sustainability, as community members continue to maintain pro-environmental behaviors even as direct oversight from program organizers diminishes.[28]

Nevertheless, participation remains uneven. One resident, Ismail (55 years old), acknowledged:

> *"I know there are clean-up activities, but sometimes I cannot join because I am busy working at sea."*[29]

This illustrates that economic circumstances are a key determinant of participation among coastal communities. Involvement in environmental activities is not simply a reflection of environmental concern — it is also heavily conditioned by daily economic realities. Coastal residents frequently must prioritize income-generating activities over

[25]Soetomo. *Community Development: Weaving Together Ideas to Accelerate Development*. (Jakarta: Pustaka Pelajar, 2014).

[26]Interview with Geuchik Peunaga Pasi, Mr. Anwar Diwa, in Peunaga Pasi. February 13, 2026.

[27]Interview with the Village Secretary of Peunaga Pasi, Mr. Muhammad Nasir, in Peunaga Pasi, February 13, 2026.

[28]Steg, Linda, and Judith IM de Groot. Environmental Psychology: An Introduction. (Oxford: Wiley-Blackwell, 2019).

[29]Interview with Mr. Ismail, a resident of Peunaga Pasi, February 13, 2026.

social engagement. Time spent on environmental programs represents foregone earnings for their families. For the program to remain inclusive, activity schedules must therefore be organized so as not to conflict with residents' working hours. Additionally, tangible and directly experienced benefits or incentives must be in place. In the absence of a meaningful balance between economic improvement and environmental protection, community participation is unlikely to be sustained over the long term.

The primary obstacles identified are social and structural in nature. The Village Head (*Geuchik*) of Peunaga Pasi, Mr. Anwar Diwa (47 years old), stated:

> *"The educational activities and concrete actions that have been implemented in this village around waste management have genuinely been very good. However, in practice, awareness among some residents is still lacking, and equipment for cleaning, waste disposal sites, and budgets remain limited."*[30]

C. These structural barriers indicate that the GPL's community movement has not yet been fully integrated into the village's **Inhibiting Factors**

formal waste management system. The effectiveness of community-based waste management depends significantly on supporting infrastructure and policy frameworks. Without structural backing, community movements risk stagnation, regardless of the strength of their participatory spirit.

Based on interview and observational data, an evaluation of the GPL's internal and external conditions can be summarized through the following SWOT analysis, which identifies the strengths, weaknesses, opportunities, and threats influencing program sustainability.

Table 1. SWOT Analysis of the GPL Program.

Strengths	- Active community engagement and a committed pool of young volunteers - Growing public support - Established environmental education and campaign programs
Weaknesses	- Limited operational budget - Minimal waste management facilities and infrastructure - Uneven geographic coverage of activities
Opportunities	- Potential for CSR funding and government support - Collaboration with schools and universities - Development of a circular economy model
Threats	- Continuously increasing plastic waste production - Fluctuating community participation due to economic pressures - Organizational dependence on volunteers and donors

Based on this SWOT analysis, the GPL's primary weakness lies in its limited financial resources and infrastructure, despite possessing strong social capital and broad community support. These findings are consistent with sustainable environmental management theory, which holds that the success of community-based initiatives requires a combination of community participation, institutional support, and adequate economic resources. Accordingly, the GPL's budget constraints are not merely internal organizational issues but also reflect the need to strengthen partnerships with government agencies, the private sector, and donor institutions to enable sustainable program growth.

[30]Interview with Geuchik Peunaga Pasi, Mr. Anwar Diwa, in Peunaga Pasi. February 13, 2026

Field observations further revealed the presence of waste accumulation points in areas beyond the reach of GPL's current activities, indicating that waste management coverage remains uneven. This underscores the need for multi-stakeholder synergy — among communities, village governments, and relevant institutions — to ensure that the program operates systematically and reaches all affected areas.

Overall, the research findings confirm that the GPL plays a strategic role in plastic waste control in the coastal area of Meureubo District. This role is evident not only in the physical improvement of the coastal environment but also in the shift in community awareness and behavior toward pro-environmental tendencies. Several respondents explicitly stated that, following their engagement with the GPL, they became more conscientious about waste disposal and began sorting household waste. A statement by one resident, Mrs. Nurlaili (50 years old) — *"Now I no longer throw garbage carelessly; I have become more aware that plastic harms the sea"*[31]— illustrates that the movement has touched both the cognitive and affective dimensions of community consciousness.

However, the long-term sustainability of the movement depends heavily on the integration of social awareness, structural support, and adequate material resources. Without village-level policy backing, appropriate infrastructure, and functional waste transportation and processing systems, the behavioral changes that have emerged risk stagnating. Within the framework of participatory development, Mardikanto emphasized that the success of a community movement is determined not only by citizen participation but also by a support system that ensures institutional sustainability. Although the GPL has succeeded in catalyzing shifts in social norms, it has not yet been fully supported by a comprehensive and integrated waste management system.

From the perspective of pro-environmental behavior theory, the changes observed in Meureubo reflect a process of internalizing ecological values into everyday community life. Pro-environmental behavior is formed through the interplay of individual awareness, social influence, and supportive environmental structures.[32] In this study, the GPL acts as a catalyst that fosters collective awareness through concrete action and persuasive communication. However, when supporting structures — such as facilities and regulatory frameworks — remain suboptimal, the consistency of community behavior becomes vulnerable to erosion.

The GPL movement can also be understood within the framework of social ecology, which emphasizes the reciprocal relationship between humans and the environment in the context of social justice and collective responsibility.[33] In this regard, the GPL transcends the act of removing trash from beaches; it also builds awareness that protecting the coastal environment is a shared responsibility belonging to the entire coastal community. This awareness cultivates social solidarity that reinforces collective identity as an environmentally conscious society.

At the same time, this study reveals a tension between the movement's idealism and the socio-economic realities facing community members. Some residents indicated that their limited time — due to fishing or trading commitments — prevents regular participation. This demonstrates that environmental participation is deeply intertwined with the local economic structure. As research on social participation in sustainable development consistently shows, community well-being is a critical precondition for sustained environmental engagement. Accordingly, efforts to control plastic waste must

[31]Interview with Peunaga Pasi resident Mrs. Nurlaili in Peunaga Pasi. February 13, 2026.

[32]Si W, Jiang C, Meng L. "The Relationship between Environmental Awareness, Habitat Quality, and Community Residents' Pro-Environmental Behavior-Mediated Effects Model Analysis Based on Social Capital." *International Journal Environ Res Public Health.* (2022) ;19(20):13253

[33]Fatma Sarie et. al, *Understanding Social Ecology,* (Bandung: Yayasan Cendikia Mulia Mandiri, 2024).

integrate environmental and economic considerations so as not to impose additional burdens on already vulnerable communities.[34]

In sum, the GPL represents not merely a technical response to the plastic waste problem but a form of social transformation toward a culture of environmental stewardship. The movement has successfully established a foundation of ecological awareness and initiated a process of social norm change. However, to achieve long-term sustainability, stronger synergy between the community and the village government is essential, along with adequate policy support and physical infrastructure. The social transformation initiated by the GPL must be reinforced through a systemic approach so that the changes achieved are not temporary but become an enduring collective culture within the coastal community of Meureubo.

CONCLUSION

This study demonstrates that the Gerakan Peduli Lingkungan (GPL) plays a strategic role in plastic waste control in the coastal area of Meureubo District through an integrated approach encompassing beach clean-up actions, environmental education, public communication, and community economic empowerment. The findings indicate that this community-based initiative contributes not only to the physical improvement of the coastal environment but also to meaningful shifts in public awareness and behavior toward more responsible plastic waste management. The growing level of community participation, the emerging practice of waste sorting, and the reduction in single-use plastic consumption collectively demonstrate that the GPL has succeeded in building social legitimacy and facilitating the internalization of pro-environmental values at the local level.

Theoretically, this study enriches the scholarship on community-based environmental management by demonstrating that the effectiveness of an environmental movement is determined not solely by its operational activities but also by the synergy among social capital, environmental communication, and community empowerment. The findings provide empirical evidence that local community movements can serve as effective agents of social change in advancing plastic waste control in coastal areas, particularly when supported by active community participation and a shared sense of environmental ownership.

From a practical standpoint, the findings underscore the importance of strengthening collaboration among communities, village governments, regional authorities, the private sector, and civil society organizations to ensure the long-term sustainability of such programs. Support in the form of adequate waste management facilities and infrastructure, budget allocation, local policy strengthening, and the development of partnerships and recycling-based economic empowerment programs needs to be enhanced so that initiatives such as the GPL can be expanded and replicated across other coastal areas.

This study is subject to several limitations. The number of informants was relatively small, and the research was conducted within a single community in Meureubo District; consequently, the findings cannot be generalized to all coastal areas in Indonesia. Furthermore, the qualitative approach employed was more focused on exploring the experiences and perceptions of informants and did not quantitatively measure the broader impact of the program — for example, in terms of reductions in plastic waste volume or improvements in specific environmental indicators.

Future research is therefore recommended to involve wider geographic coverage, employ a mixed-methods or longitudinal design, and evaluate program effectiveness

[34]Anang Ma'ruf, et, al., "Community Participation in Household Waste Management in Sumbertangkil Village, Malang" *Social Dynamics: Journal of Social Science Education.* (2025) Vol. 4, No. 1.

through more measurable indicators — such as changes in plastic waste volume, community participation rates over time, and cost-benefit analysis. Comparative institutional effectiveness research across coastal communities in different regions is also needed to identify the enabling factors for the successful replication of community-based waste management models in Indonesia.

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