

Community Resilience and Implications for Waste Management on the Coast of West Aceh: The Existence of Beach Cleaning Volunteers

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Abstrak

Penelitian ini menganalisis masalah sampah terus menerus merusak ekosistem dan estetika pesisir Pantai Aceh barat. Meskipun relawan melakukan Upaya pembersihan secara rutin, namun sampah Kembali berserakan setelah dibersihkan. Hal ini mencerminkan rendahnya kesadaran dan partisipasi Masyarakat yang berujung pada siklus pencemaran yang terus berulang. Penelitian ini mengeksplorasi bagaimana pemahaman dan perilaku masyarakat terhadap sampah dan lingkungan pesisir merupakan hasil dari penelitian ini mengeksplorasi bagaimana pemahaman dan perilaku masyarakat terhadap sampah dan lingkungan merupakan hasil dari konstruksi sosial. Jika masyarakat secara kolektif menganggap pembuangan sampah sembarangan sebagai hal yang biasa dan sistem pengelolaan sampah tidak membentuk norma positif, maka realitas "pantai kotor" akan terus berlanjut. Oleh karena itu, penelitian ini bertujuan untuk memahami keberadaan dan dinamika gerakan relawan, serta menyelidiki pandangan masyarakat terhadap aksi-aksi tersebut—apakah mereka mendukung atau bahkan berpartisipasi aktif dalam upaya kebersihan pantai.

Kata Kunci: *Ketahanan Komunitas, Pengelolaan Sampah, Relawan.*

Abstract

This study analyzes the problem of waste that continues to damage ecosystem the aesthetics of the West Aceh coastline. Although volunteers carry out routine cleaning efforts, the waste is scattered again after being cleaned. This reflects the low level of public awareness and participation that leads to a recurring cycle of pollution. This study uses a qualitative method with a descriptive approach. This study explores how public understanding and behavior towards waste and the environment are the result of social construction. If society collectively considers littering as normal and the waste management system does not form positive norms, then the reality of "dirty beaches" will continue. Therefore, this study aims to understand the existence and dynamics of the volunteer movement, as well as investigate public views on these actions.

Keyword: *Community Resilience, Waste Management, Volunteer*

INTRODUCTION

Coastal waste has become a global problem and a widely discussed issue. This is because coastal waste impacts the environment, the economy, and human well-being. Irresponsible human activities can have various impacts on the environment, one of which is causing it to become polluted and damaged. Environmental pollution is a condition that has undergone a change from its original form to a newer condition. Palar H, 2004 in (Djongihi et al., 2022), Munadjat Danusaputro also stated that environmental pollution is a condition in which a substance or energy is introduced into the environment by human activities. As a result, the environment becomes polluted and does not function properly, especially in terms of the safety of living things.

According to Tuhumury and Kaliky 2019 in (Yolanda & Septianda, 2023) coastal waste is a global issue that arises due to human actions or behavior, which subsequently impacts the

development of life in aquatic areas and on humans as users of resources produced by the coastal environment. Waste found in coastal areas generally comes from human activities, such as household waste, tourist visitors, and luggage from rivers. (Patuwo et al., 2020). It was recorded that 10% of waste on land is dumped into the sea and is dominated by plastic waste where this waste takes a long time to decompose (Risa & Mapparimeng, 2023).

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Several previous studies emphasize that coastal pollution is one of the most urgent forms of environmental degradation that must be addressed. Hendar, Rezasyah, and Sari (2022) identified that Indonesia is among the world's largest contributors to plastic waste, ranking second after China. This problem is exacerbated by the low level of public awareness regarding the importance of proper waste management. Mardhatillah (2025) highlight the lack of environmental education and the limited direct involvement of local communities in protecting coastal ecosystems. Meanwhile, Fatoni, Alimsyah, Alim, Raswadi, and Butsiarah (2025) demonstrate that community-based beach cleanup programs can increase public participation and foster sustainable environmentally friendly behavior. Therefore, collaborative approaches—particularly those involving youth and educational institutions—are considered key strategies for addressing coastal pollution in a systematic and sustainable manner.

Waste management is crucial in reducing the amount of waste and increasing public awareness of environmental cleanliness, particularly in coastal waste management. Coastal waste management is achieved by implementing the 3R (Reduce, Reuse, Recycle) technique. Reduce means reducing the amount of plastic used, Reuse means renewing items that are suitable for use to minimize waste volume and Recycle means recycling inorganic waste into new products to create business opportunities for coastal communities (Jayantri Adinda Syawal, 2021). This is in accordance with the Implementation of West Aceh Regency Regional Regulation (Qanun) No. 4 of 2017 concerning waste management, which is a guideline for the West Aceh Regency government to achieve more optimal goals for solid waste management. Waste management should be carried out with P4, namely sorting, processing, utilizing, and disposing of residues (Siregar, 2021).

West Aceh is one of the regencies in Aceh Province, Indonesia. The West Aceh coast is a coastal area in the western part of Aceh Province, which includes land, sea, and coastline. West Aceh Regency has a land area of 2,927.95, km^2 sea area of 957.38 km^2 , and a coastline of 54.84. km^2 . Waste management on the West Aceh coast remains a challenge, there are still many aspects that need to be considered to improve its effectiveness. Such as increasing public awareness, support from the government and various parties, and the active role of beach cleaning volunteers. The West Aceh coast is famous for its beautiful beaches, not only attracting many tourists who visit, but can be a source of income for the community around the coast. However, on the other hand, the West Aceh coastline has lost its beauty due to piles of garbage around the shoreline, this can come from garbage that is washed away by river currents or can come from human activities around the coast. This is in line with what was said by previous researchers, namely (Ika Kusumawati & Mita Setyowati 2018).

A volunteer is someone who sincerely, because of a calling of his conscience, gives what he has (thoughts, energy, time, wealth, and others) to the community as a manifestation of his social responsibility without expecting anything in return, whether in the form of compensation (wages), position, power, or interests or career (Dianari, 2018). The active role of beach cleaning volunteers is an important pillar in maintaining the sustainability of the West Aceh coast. Beach cleaning volunteers themselves include the community, students, and beach cleaning volunteer communities such as GPL (environmental care movement). Many volunteers take part in cleaning up trash on the beach because of their concern for the negative impact of trash that can harm the environment, especially marine ecosystems, thus damaging the beauty of the beach. This activity also helps prevent microplastic pollution and protect marine ecosystems, as well as increase public awareness and knowledge about

beach waste, so that it can provide psychological benefits through a sense of connection with nature and happiness after acting together. A current phenomenon in West Aceh is that, after the beach cleanup process is carried out, the trash is scattered again shortly after. If public awareness is not increased, the beach will continue to experience a recurring cycle of pollution. This condition can be analyzed more deeply through the perspective of Social Construction Theory proposed by Peter L. Berger and Thomas Luckmann. This theory argues that the reality we experience in everyday life is not something objective and absolute, but rather the result of construction through individual interactions and interpretations (Muta'afi & Handoyo, 2015). In the context of the waste problem on the coast of West Aceh, people's understanding and behavior towards the environment and waste are not inherent or static realities, but rather are products of social construction. If society collectively considers littering to be normal, and if the existing waste management system does not establish positive norms, then the reality of "dirty beaches" will continue to be maintained.

Therefore, this study aims to understand the existence of volunteers as a movement or initiative, how they formed and collaborate. It also examines community perceptions of the volunteers' actions in waste management, including whether they support or even participate in helping the volunteers clean up trash along the West Aceh coast.

RESEARCH METHODS

In writing this article, the researcher applied qualitative descriptive analysis techniques. The qualitative descriptive research method is an approach used to explore knowledge or theories from previous research through books, national, and international journals. During the review process, the researcher seeks similarities, identifies differences, provides perspectives, summarizes, and integrates information into a new idea (Waruwu, 2024).

This study employed data collection methods consisting of interviews and observations. Interviews are a data collection technique involving direct interaction between researchers and respondents, where researchers ask questions to obtain more in-depth information on the topic being studied (Huberman & Miles, 1992 in Questionnaire, n.d.). The interviews used were semi-structured interviews. Semi-structured interviews are a type of interview conducted by researchers with pre-prepared questions, but the implementation does not follow a predetermined sequence of questions but is adjusted to the direction of the ongoing conversation. Observation techniques can also be used in data collection when research relates to human behavior, work processes, natural phenomena, and when the number of respondents observed is not too large (Sugiyono, 2019 in Putri & Setiawan, 2024).

RESULTS AND DISCUSSION

West Aceh Regency is a regency located in the western part of Aceh Province, with its capital city being Meulaboh. The regency has a land area of 2,927.95 km², a 12-mile stretch of ocean covering an area of 957.38 km², and a coastline of 54.84 km. Astronomically, West Aceh Regency is located north of the equator, between 04°06' - 04°47' North Latitude and 95°52' - 96°30' East Longitude (Saharjo & Nasution, 2021). In addition to its vast land and sea area, West Aceh Regency is also renowned for its attractive coastal tourist destinations. The beaches in West Aceh serve not only as recreational spots for residents but also attract visitors from various regions. Some of the famous beaches are Ujung Karang Beach, Batu Putih Beach, and others. The presence of visitors from outside the area also has a positive impact on the local economy, with the increasing development of the tourism sector and local businesses.

From the perspective of the theory the Social Construction Theory proposed by Peter L. Berger and Thomas Luckmann (2015), the process of social construction occurs through dialectical social interaction involving three forms of reality that serve as entry concepts: subjective reality, symbolic reality, and objective reality. This process also unfolds through three simultaneous moments: externalization, objectivation, and internalization.

Objective reality refers to the complex set of definitions of reality—including ideologies and beliefs—as well as established routines of actions and behaviors that have become institutionalized patterns. These are generally perceived and experienced by individuals as factual and taken-for-granted aspects of social life. Beach cleanup volunteers emerged in response to the need to maintain

clean beaches and reduce the impact of waste on the environment. Volunteers are a crucial component of these beach cleanup initiatives. They come from diverse backgrounds, including schoolchildren, university students, environmental communities, and tourists. Volunteers not only play a role in cleaning up trash but also contribute to spreading awareness about the importance of maintaining clean beaches to the local community (Tirtayani et al., 2024).

Based on observations, a worrying perception was found among the community and beach visitors that the presence of cleaning volunteers reduces the sense of individual responsibility in waste management. This phenomenon arises because beach visitors tend to assume that cleaning up trash is not their job, but entirely the responsibility of the volunteers. As a result, instead of participating in maintaining cleanliness, some people feel they no longer need to care about the waste they produce, because someone else will handle it. This behavior is very contrary to pro-environmental behavior. Where pro-environmental behavior refers to individual efforts to reduce the negative impacts caused by environmental damage through environmental improvement and preservation actions (Palupi & Sawitri, 2017). However, the behavior of volunteers reflects an attitude of support for the environment because they actively contribute to maintaining and minimizing waste, especially around the beach.



Picture 1 and 2 Volunteer participation in the waste collection process

Subjective reality refers to the individual's constructed definition of reality, which is formed through the process of internalization. Everyone's subjective reality becomes the basis for engaging in externalization, or social interaction with others within a social structure. Through the process of externalization, individuals collectively have the potential to produce objectivation, leading to the emergence of a new construction of objective reality. According to interviews conducted on May 24, 2025, with several beach visitors, the absence or limited availability of waste management facilities, such as adequate public trash cans around the beach area, is a major driving factor for visitors' littering behavior. Several visitors explicitly stated that the lack of these facilities was the reason for their actions in disposing of waste in the wrong place. Furthermore, the phenomenon of garbage piling up again after being cleaned by cleaning volunteers is greatly influenced by this condition. The absence or limited availability of waste management facilities, such as adequate Temporary Shelters (TPS), directly encourages people to litter, which indicates that inadequate waste management infrastructure directly contributes to the problem of littering on the coast of West Aceh (Sari et al., 2023).

This is because assessing the level of community resilience is an important step in building community resilience itself (Surjono et al., 2021). Community resilience refers to the ability of a community to withstand, absorb, adapt to, and recover quickly and efficiently from the impacts of hazards or disturbances. This process also involves efforts to preserve and restore essential structures and basic functions that support community life. Strengthening community resilience is therefore crucial to enable communities to cope with potential challenges and disaster crises that may arise in the future (Toseroni et al., 2016).

A waste bank is a facility designed to manage waste based on the 3R principles—*reduce, reuse, and recycle*. It functions as a means of education and behavioral change in waste management, as well

as a mechanism for implementing the circular economy. Waste banks are established and managed by communities, business entities, and/or local governments (Ministry of Environment and Forestry Regulation, 2021). The primary objective of waste banks is to support and improve waste management practices in Indonesia. In addition, they aim to raise public awareness about the importance of maintaining a healthy, orderly, and clean environment. Waste banks are also developed to transform waste into more useful products for society, such as handicrafts and organic fertilizer, which can provide economic value (Suryani, 2014).

Symbolic reality encompasses all symbolic expressions of what is perceived as objective reality. This includes media products such as texts, news in print or electronic media, and representations found in films and other forms of mass communication. According to village officials, they frequently provide trash cans along the coast, but these are always missing. As of May 2025, trash cans had been provided three times, but they always disappeared for unknown reasons. Furthermore, the village has attempted to address the scattered trash by reminding beach vendors to provide trash cans and helping maintain cleanliness. However, regarding the littering of beach visitors, the village admits it is difficult to control. They believe this depends entirely on individual awareness and behavior. In fact, West Aceh Qanun No. 4 of 2017 concerning Waste Management, Article 55, stipulates that anyone who violates the provisions prohibiting littering as stated in Article 53 will be subject to criminal sanctions with a maximum imprisonment of 6 months or a maximum fine of Rp. 50,000,000.00. However, enforcement of these sanctions is still ongoing. Enforcement against violations of this regulation is still weak, resulting in many people ignoring this qanun.

The low level of community participation is caused by several factors, including the lack of education and socialization regarding the importance of environmentally friendly waste management. Many people still do not fully understand the long-term impacts of poor waste management on their quality of life. In addition, the availability of waste management facilities, such as adequate temporary waste disposal sites (TPS) and efficient waste collection systems, remains limited, making it difficult for communities to actively participate in a structured waste management system. In addressing these challenges, a strategic approach is required that integrates the roles of various stakeholders, including the government, local communities, and the private sector.

In addressing the phenomenon of waste re-scattered around the coast after being cleaned by volunteers, local governments should take serious action to minimize the accumulation of waste on the coast by implementing sustainable environmental policies. These policies should include more efficient waste management strategies, increasing public awareness through education and training, implementing regulations that encourage active participation from all parties in maintaining beach cleanliness, and firm and clear law enforcement. With a comprehensive and sustainable approach, this problem can be minimized, and the beauty of the coast can be maintained.

Collaboration with stakeholders such as local governments, environmental organizations, and private companies plays an important role in improving the effectiveness of environmental activities and ensuring the sustainability of related programs. In addition, the development of adequate infrastructure, including proper waste disposal facilities, is essential to reduce environmental pollution and improve beach cleanliness. At the same time, empowering local communities is crucial for increasing public awareness and encouraging active participation in maintaining environmental cleanliness and preventing further pollution. Through the integration of stakeholder collaboration, infrastructure support, and community empowerment, efforts to protect and manage the coastal environment can be implemented more effectively and sustainably.

CONCLUSION

Addressing the phenomenon of trash re-scattering along coastal areas after being cleaned by volunteers is driven by a misperception among the public and visitors regarding the responsibility for cleanliness. The presence of volunteers, which should be a source of inspiration, instead negatively impacts their sense of responsibility for environmental cleanliness. In other words, the volunteers' pro-environmental initiatives are at odds with the awareness and pro-environmental behavior of most of the public, resulting in a recurring waste problem.

Local governments should take serious action to minimize coastal waste accumulation by implementing sustainable environmental policies. These policies should include more efficient waste

management strategies, increased public awareness through education, regulations that encourage active participation from all parties in maintaining clean beaches, and firm and clear law enforcement. With a comprehensive and sustainable approach, this problem can be minimized, and the beauty of the beaches can be preserved.

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