

CIRCULAR ECONOMY INTEGRATION IN THE DAULAT SAMPAH PROGRAM BY STAKEHOLDERS IN TRISIK BEACH, YOGYAKARTA

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ABSTRACT

The waste problem at Trisik Beach in Yogyakarta Province remains a complex and urgent issue that requires immediate attention. Addressing this environmental challenge while supporting economic growth in coastal ecosystems necessitates ongoing collaborative efforts. The Banaran Tourism Awareness Group (Pokdarwis), along with local artists and other stakeholders, has initiated a social activity focused on environmental cleanliness called Daulat Sampah. This program promotes sustainable practices and applies the circular economy concept, where waste is recycled into artworks that possess both aesthetic and commercial value. This not only contributes to the economic development of the Banaran community but also serves as a model for environmental improvement through the reuse of materials. Joint actions, such as waste reduction and reuse, function as community education tools, fostering greater awareness and concern for the surrounding environment. This research employs field observations, in-depth interviews, and literature reviews, with data analyzed descriptively and qualitatively. The findings suggest that adopting the circular economy concept offers a viable solution for integrated environmental management. The structuring process within this program shows potential to mitigate ecological damage caused by recent weather changes. Moreover, waste management activities at this marine tourism site exemplify practical sustainable development. Such initiatives can be implemented comprehensively across various marine tourism sites, especially along the southern coastal region of Java Island.

Keywords: Banaran, Circular Economy, Daulat Sampah, Pokdarwis, Trisik Beach

INTRODUCTION

Indonesia is a country primarily composed of islands, with its borders mainly consisting of water regions. These maritime areas are crucial for the nation's existence (Alfath, 2020). The vastness and diverse resources of these geographical conditions

highlight the strategic importance of the marine territory (Darmarani et al., 2020). Within these waters, Indonesia holds remarkable natural wealth, characterized by a rich diversity of marine flora and fauna (Setiawan, 2022).

The waters and coastal areas of Indonesia possess significant geographical wealth, serving as

vital natural resources (Nikawanti, 2021). These resources provide livelihoods for the nation, create income opportunities, and contribute to national prosperity. Consequently, this natural wealth can be developed across various sectors, particularly in tourism (Febiana & Burhanuddin, 2023).

The ongoing development of the tourism sector aligns with initiatives aimed at promoting national development, enhancing public welfare, and improving living standards (Pebriana et al., 2021). Thus, managing the tourism sector effectively is a collective responsibility that addresses waste management as part of broader development programs. This effort aims to create a healthy, prosperous nation with a clean environment and a preserved natural landscape (Widari, 2020).

The Special Region of Yogyakarta province, with its unique geographical features, particularly its coastal scenery, offers promising potential for coastal tourism (Putri et al., 2019). The extensive coastal waters in the southern region boast a coastline of approximately 113 km, spanning three districts. Gunung Kidul Regency has a coastline of 71 km, while Bantul Regency and Kulon Progo Regency have coastlines of about 17 km and 25 km, respectively (Setiana, 2023). The length of this coastline presents a shared responsibility, with contributions from both community and local governments needed to collaborate, address challenges, and optimize various aspects of life, including economic, environmental, and social dimensions (Chan, 2023).

Trisik Beach, located in Kulon Progo Regency along the southern coastline of Yogyakarta Province, requires significant attention to coastal management. The coastal ecosystem faces multiple challenges, with waste management being a primary concern. The issue of waste at Trisik Beach is severe, as highlighted by Sumartono et al. (2019). A substantial amount of garbage frequently enters the area from the river estuary, indicating the need for practical cleanup efforts. One initiative addressing this issue is the Coastal Clean Up action, organized by the local Environmental Service (DLH), in collaboration with PT Petrokimia Gresik (PTK) and PT Pertamina International Shipping (PIS). During a recent cleanup event, these organizations successfully collected twenty-eight tons of waste, which had polluted the coastal environment (Dewanto, 2024).

Additionally, recent changes in weather patterns profoundly alter environmental conditions, and waste management remains a complex global issue, with Indonesia being particularly affected due to its extensive coastline. The large volumes of water surrounding the country exacerbate problems in the aquatic environment (Nelwan et al., 2021). If natural resources are not managed properly, they can lead to significant damage to ecosystems, particularly in coastal habitats, which are under increasing pressure (Prabowo & Suprpto, 2022). This environmental degradation is evident through water and soil pollution, the loss of biodiversity, ozone layer depletion, and

rampant deforestation, often associated with land clearance for new development. These changes have a profound impact on human life and needs (Riskanita & Widowaty, 2019). Their social action to clean up the trash was successful in collecting twenty-eight tons of used objects and goods that had polluted the coastal environment (Dewanto, 2024).

The second significant cause of change is abrasion. The height and extent of land abrasion caused by sea waves disrupts various beach activities and currently pose a threat to the coastal area and its inhabitants. The high rate of abrasion affecting Trisik Beach is a concern that requires immediate attention due to the threat of a natural disaster. In recent years, there has been a notable decrease in land area caused by the encroaching sea (Juno, 2025). This decline in coastal conditions exacerbates the situation in this popular tourist destination. Additionally, the impact of abrasion is also felt in turtle breeding activities and marine animal conservation at Trisik Beach (Darmarani et al., 2020).

Continuous abrasion threatens one of the tourist attractions in the Trisik Beach area, namely the Abadi turtle conservation. This breeding ground is the most significant turtle nesting site in Kulon Progo and could be at risk in the long run (Ujul et al., 2024). For instance, the sea turtle conservation area is initially located about 100 meters from the shoreline. However, due to abrasion, this distance has now shrunk to just 10 meters (Dewantara, 2024b). If this trend continues unchecked, sea turtle hatcheries may eventually be lost to rising water levels (Mahira, 2025).

Thirdly, the damage to beach facilities is a growing concern. The ecosystems in coastal areas, which influence the spatial layout of the tourism industry, are vital for the sustainability of tourist attractions. The current situation is alarming. According to various sources, the beach environment and existing facilities are poorly maintained (Sri et al., 2024). This is evident from the damaged and neglected state of several concrete park benches and tables on the beach. Additionally, some semi-permanent stalls have also been found in a state of abandonment, leaving only ruins behind (Dewantara, 2024a).

In the current era of globalization, characterized by technological advancements, the tourism sector plays a strategic role in national development (Prarikeslan et al., 2024). These technological improvements can both support and optimize development efforts that benefit all the people of Indonesia. The structured approach to development is vital for advancing the national economy (Kurniawan, 2024). Additionally, the tourism sector in coastal areas creates job opportunities that can harness the local labor force, fostering more effective partnerships and leading to increased collaboration. This synergy can promote optimal investment growth (Hariyanto et al., 2018).

To address the challenges faced by Trisik Beach, promoting sustainable cooperation is essential. Overcoming these issues cannot be

achieved unilaterally or in isolation (Junaid, 2019). A comprehensive collaboration among all agencies and stakeholders involved is necessary to enhance and develop the tourism sector over time. Good cooperation among all parties interested in tourism is crucial for progress (Yusuf & Sella, 2021).

Maintaining the coastal environment and nurturing a clean marine ecosystem are vital steps in preserving the cultural values associated with local wisdom, which has long been integral to the community (Al Fahmi et al., 2024). On a broader level, safeguarding these cultural values is crucial for maintaining Indonesia's rich traditions. The country encompasses a diverse array of values, including economic, social, religious, legal, and other aspects of life.

Local wisdom, in terms of environmental preservation, is understood as a set of human policies rooted in philosophies, values, ethics, methods, and traditional practices for managing natural, biological, human, and cultural resources. These policies aim to ensure both sustainability and long-term survival, emphasizing the integration of cultural traditions with environmental practices. The concept refers to wisdom shaped by local beliefs, norms, and customs that are unique to specific regions (Rondhi et al., 2025).

Numerous studies in Indonesia examine coastal environmental restoration processes through waste management and strategies for mitigating ecological disasters, and these findings serve as valuable references for further research. Key points from prior studies conducted by Jayantri and Ridlo (2021) indicate that effective waste management in coastal environments can be achieved through existing waste sorting schemes based on categories or types. This sorting is followed by recycling, allowing transformed materials to be reused. Furthermore, Zahra et al. (2024) investigate waste management processes at Sendang Biru Beach and Pondokdadap Fishing Port, outlining methods for waste classification and calculating cleanliness levels at both locations.

In a broader context, this aligns with a research conducted by Salsabila and Najicha (2020), which argues that stakeholders play a crucial role in improving the coastal environment by mitigating the dangers of plastic waste. From a different perspective, a research by Firdausi et al. (2025) found that approximately 60-70% of pollution in water areas originates from domestic waste, with only about 6.1% being properly processed. This significant volume of environmental damage caused by water pollution, particularly in coastal areas, presents a considerable challenge in efforts to conserve water resources. Waste management activities that incorporate the handling of post-consumption items into social initiatives—transforming them into artistic value—and efforts to boost local community income in developing tourist destinations are new programs worthy of support from various stakeholders (Pereira et al., 2024).

The establishment of communication patterns between institutions and agencies, enabling

collaboration to address issues at Trisik Beach, represents a breakthrough. In this context, the Banaran Tourism Awareness Group (Pokdarwis) in the Trisik Beach area initiated concrete steps by collaborating with various institutions, including local artist associations, community organizations, local governments, and other agencies, to collectively tackle multiple issues in the coastal area (Ardhiana et al., 2022).

The objective of this research is to identify the application of circular economy principles that can be implemented in the development of the Trisik Beach tourism destination while comprehensively engaging the community and all stakeholders in collaborative efforts to promote coastal environmental conservation (Harnino et al., 2021). To narrow the scope and be more selective, the literature review aligns with the theme of the current research. This structured approach examines previous research findings that are relevant and appropriate (Kho, 2022). Research utilizing a circular economy approach investigates efforts to process specific objects or goods to maximize their overall utility and benefits. Collaboration among stakeholders is aimed at sustainable efforts that are continuously implemented (Martadina & Ardiansyah, 2023).

METHODS

The research is conducted in Banaran Village, located in the Galur District of Kulon Progo Regency, Yogyakarta Province. The Trisik Beach area is well-known for its gentle slopes and lies at the mouth of the Progo River. Due to these geological conditions, this area faces the potential risk of accumulating waste carried by the Progo River. Therefore, efforts to preserve the environment and manage waste regularly through the Daulat Sampah movement are essential. These collaborative actions aim to create a clean and sustainable environment. Additional initiatives include environmental conservation efforts and collaborations aimed at preserving cultural values that enhance the lives of the local community.

The residents of Banaran, who live along the coast, heavily depend on the condition of the sea and coastal ecosystems for their livelihoods. The research employed a qualitative methodology (Moleong, 2017) to gain an in-depth understanding of the dynamics and cultural transformations within the local community, particularly through the role of the Pokdarwis, currently led by Edi Yulianto as the Chairman. The information presented enables outsiders to gain a deeper understanding of social movements. This collaborative effort involves Banaran Pokdarwis, the community, and other organizations, aiming to raise awareness and tackle waste management issues and other challenges.

The research is based on an ethnographic study of community efforts to maintain and care for the environment at Trisik Beach, with a specific focus

on social movements aimed at cleaning the beach of waste. The Daulat Sampah program, led by the Banaran Pokdarwis, is a collaborative development initiative that engages various local youth communities (Karang Taruna Jangkar Muda) and other institutions. The active involvement of stakeholders, such as Banaran Pokdarwis and multiple organizations, demonstrates a commitment to fostering a culture of environmental care and sensitivity in the community, particularly concerning the marine ecosystem, which needs dedicated individuals to protect it.

The approach used in this research is based on the concept of a circular economy. According to the Ministry of Environment and Forestry, a circular economy is an economic system designed to promote growth by maintaining the value of products, materials, and resources within the economy over a specific period (Malihah, 2024). The Ellen MacArthur Foundation describes the circular economy as a model that aims to increase the longevity of products and the mass of goods. It involves the circulation and transformation of objects, as well as the conversion of products, raw materials, and existing resources into goods with sustainable utility or value (Widayanti et al., 2024). Waste management is viewed as a means to repurpose items that are no longer in use and to systematically process them so that they can be transformed into objects of artistic and economic value. This cycle is intended to be ongoing, with an emphasis on optimal long-term use (Yulistika, 2023).

The principles of the circular economy focus on a series of actions aimed at reducing waste and minimizing pollution. By maintaining the quality of products and materials, these principles ensure their long-term use while also regenerating natural systems, allowing the resulting cycles to continue providing benefits for all stakeholders. According to the Ellen MacArthur Foundation, activities related to the circular economy lead to more effective outcomes by relying on fewer materials or goods (Utami et al., 2024). When applied in practice, these principles establish a framework for developing sustainable systems that strike a balance between ecological preservation and economic efficiency.

In this research, the data are collected through direct engagement with the community of Banaran Village, which allows for a detailed examination of residents' daily activities and provides a comprehensive understanding of local environmental conditions. The findings are systematically documented and validated through in-depth interviews with the head of the Banaran Pokdarwis and two members of the local artists' association, ensuring both accuracy and contextual depth. This combination of observational and interview data enhances the reliability of the findings and offers a multifaceted perspective on community-based environmental practices, thereby strengthening the overall credibility of the research.

RESULTS AND DISCUSSIONS

The orientation of the Pokdarwis organization within the community is focused on establishing institutions that support the programmatic development of local tourist attractions. This orientation reflects the principle that each Pokdarwis in the community maintains a work program that consistently aligns with the needs and interests of the residents. These programs aim to achieve mutual progress and actively engage the community, thereby strengthening participatory approaches to tourism development (Aspri et al., 2024).

The research provides an overview of the background, implementation process, expectations, and follow-up actions that Pokdarwis can undertake as part of a regular program designed to foster change and progress in the region. Yulianto leads the initiative and involves collaboration among various Pokdarwis institutions. It also includes government agencies, local and non-local cultural figures, youth organizations, universities, and local governments.

This collaborative effort addresses waste management issues at Trisik Beach on an ongoing basis. Local Yogyakarta artist Jajang R. Kawentar has partnered with the Chairman of the Banaran Pokdarwis to explore potential solutions to the waste problem. In one of his statements regarding the background of this initiative, Jajang remarked:

“This Trisik Beach Cleanup Movement is a collective call for us to reflect on what we have done over the past year toward the natural environment that is an integral part of our lives.”

In response to environmental concerns, the community develops an ecological cleanup program called Daulat Sampah. This waste management initiative evolves into a sustainable agenda involving Banaran Pokdarwis, local artists from Yogyakarta, and various other organizations (Bagaskoro, 2025). Through the program's development, significant progress is achieved, and invitations are widely shared on multiple social media platforms, including WhatsApp, Instagram, and Facebook. Collaborative efforts are promoted through social activity posters that are regularly designed and disseminated for each community service event. Figures 1 (A, B, and C) present the posters created each month as invitations for joint activities from December to February.

Yulianto and his colleagues are using posters shared across various social media platforms to invite all members of society and relevant stakeholders to take part in collective social actions aimed at addressing environmental issues in coastal areas. These efforts underscore the strategic utilization of digital communication tools to foster community involvement and promote shared responsibility in environmental management. In his statement, he elaborates on the motivations and goals of this initiative, introducing them in the following words:

“The activities carried out in an effort to improve the coastal environment are a concrete way of encouraging the community to care more about their surroundings, especially the coastal environment that has been their home for so long.”



(A)



(B)



(C)

Figure 1 Daulat Sampah poster

It is important to emphasize that this activity represents a planned form of cooperation intended for regular implementation. Yulianto explains that Daulat Sampah program originates from efforts to address the ongoing accumulation of waste at the mouth of the Progo River. This initiative reflects a community-driven response that not only tackles local environmental issues but also enhances collaborative efforts in sustaining coastal ecosystems.

“The condition of waste accumulation at Trisik Beach has been ongoing for a long time, and to this day, no optimal solution has been found to address this issue.”

Yulianto emphasizes that, to date, the Banaran community only disposes of waste in trash bins without engaging in effective management practices, and this behavior prompts the Banaran Pokdarwis to take action in addressing the waste on the beach

(Mahira, 2025). Similarly, the event coordinator, Teguh Paino, provides an explanation regarding this social initiative, noting that the Trisik Beach Cleanup Program, as part of broader coastal cleanup activities, aims to raise public awareness of the importance of residents maintaining beach cleanliness. These accounts highlight the role of local leadership in mobilizing community participation for environmental management efforts (Juno, 2025).

The implementation of this program is intended to encourage community participation in local nature conservation efforts. In this context, Paino emphasizes that the activities carried out not only address immediate environmental concerns but also function as a bridge to broaden community awareness. Such initiatives highlight the importance of preserving nature as the ecosystem in which humans live and fulfill their needs, thereby reinforcing the connection between ecological sustainability and human well-being (Juno, 2025).

Yulianto provides an in-depth explanation regarding efforts to address waste issues in his area. He emphasizes the importance of involving all stakeholders in social activities aimed at reducing waste. Yulianto notes that the success of these initiatives depends on the implementation of other sustainable programs (Herlina et al., 2023). This implies that ongoing programs should be followed by future joint work agendas that build on previous efforts. To achieve this, it is essential to continue empowering each development program in a sustainable manner, focusing on initiatives that protect the environment. This approach will foster optimal growth and have a profoundly positive impact on the community's well-being.

The program aimed at keeping the beach environment clean is a social initiative that requires the involvement of all stakeholders. Therefore, the sustainability of the Daulat Sampah program, currently in progress, is pursued alongside ongoing development efforts. Achieving environmental sustainability hinges on the attention and collaboration of everyone involved. In a broader context, the success of the Daulat Sampah program depends on the active participation and cooperation of all stakeholders, including the local community, Pokdarwis, educational institutions, and local government (Achmad et al., 2023).

During a joint cleanup (*gotong-royong*) activity at Trisik Beach, several participating agencies make significant contributions to addressing the environmental crisis. Among them are Banaran Pokdarwis and a community youth organization, Karang Taruna Jangkar Muda Trisik. In addition, representatives from the academic sector, including Unikom UTY and Trisik’s SD Negeri Trisik (Trisik public elementary school), work alongside the local government and surrounding community, with their enthusiastic involvement serving as a key driver in promoting environmental development and management (Zebua, 2025). One illustration of this collaboration is shown in Figure 2, which depicts

members of the Communication Science Student Association at Yogyakarta University of Technology (HIMAKOM UTY) participating in social activities alongside other participants as part of a community service initiative.



Figure 2 HIMAKOM UTY as one of the participants who plays a role in social activities at Trisik Beach

During the social service activities, several artists performed, underscoring the importance of these collaborative efforts to strengthen ongoing relationships between agencies. They emphasized the importance of teamwork and increased awareness of environmental issues (Zebua, 2025). The involvement of multiple artists was clearly evident, as illustrated in Figure 3, where artists engaged the audience with their dance performances. The arrival of participants from various groups added a unique aspect to the event, as shown in Figure 4, where a visitor is enjoying one of the artworks alongside a child.



Figure 3 Local artists are exhibiting their artwork to participants in social activities at Trisik Beach



Figure 4 One of the visitors to the beach cleanup activity was enjoying an artwork made from recycled waste by an artist

During the ongoing activities, the Daulat Sampah Program invites several media outlets to

participate in the event, and their involvement is highly appreciated as it enhances community participation. Various media, particularly online platforms, cover the activities taking place in the coastal area and its surroundings by being present to report directly and gather information for publication. Outlets such as *kompas.com*, *megaswaranews.com*, *bacajogja.id*, and *dailyjogja.com* actively engage in covering and summarizing the event, and their enthusiastic participation further strengthens the dissemination of environmental awareness to a wider audience (Rachmad & Sasongko, 2023).

The event, which involves all stakeholders, features various educational activities (Juno, 2025). One notable highlight was an art performance that integrates installation art, performance art, and environmental conservation, culminating in the release of turtles at Trisik Beach. This performance showcases a collaborative effort between artists and coastal communities. Key activities during the coastal environmental cleanup include art performances, garbage collection, the transformation of waste into artworks, and the planting of coconut trees and other plants (Pri, 2025). The environmental conservation program is gradually being implemented and has become a routine agenda for Pokdarwis organizations and other agencies. Each organization involved contributes to the development and improvement of coastal areas, making it a valuable opportunity for community participation (Hidayah et al., 2022).

The enhancement and development of tourism at Trisik Beach can be achieved through the implementation of cooperation programs with other institutions, which foster integrated and comprehensive changes across economic, social, environmental, and related aspects. In this regard, the application of the circular economy concept requires consistent and thorough collaboration among multiple stakeholders. Such collaboration not only strengthens the sustainability of tourism development but also ensures that environmental and community needs remain central to the process.

The core principle of the circular economy concept is to minimize negative outputs, as demonstrated by the Daulat Sampah program, which is regularly implemented by the Pokdarwis organization in collaboration with various agencies. These initiatives actively address environmental challenges, particularly the ongoing waste issue affecting the Trisik Beach environment (Ramadesta et al., 2022). The accumulation of waste is reframed as a potential resource with economic value and unique appeal. Waste materials, both organic and inorganic, generated from consumption and industrial production can be processed in ways that allow them to be transformed into high-quality, useful products (Yulistika, 2023).

To derive economic value from goods or materials within a circular economy model, it is essential to maximize the use of raw materials to prevent them from becoming waste. Materials that retain potential value should be processed to ensure the

sustainability of existing products and extend their life cycles (Miterianifa & Mawarni, 2024). These practices not only reduce the burden of waste generation but also contribute to broader sustainability goals by integrating economic efficiency with environmental responsibility.

The implementation of a circular economy is evident in production actions and the raw materials used, which continue to circulate within the existing processes. Maintenance efforts, periodic reuse of products, continuous improvement, and practices such as reproduction, recycling, and composting must all be considered (Hartini, 2022). For instance, efforts to utilize waste at Trisik Beach include an artist assembling discarded materials to create artwork that provides economic benefits and supports the sustainability of Trisik Beach (Bagaskoro, 2025).



Figure 5 An artist uses garbage on Trisik Beach to make it a valuable work of art

From Figure 5 above, it becomes clear that efforts to rejuvenate items deemed unused and categorized as waste are gaining significance upon closer examination. Waste in the surrounding environment, especially in coastal areas, still holds potential for reuse and transformation through innovative approaches. The creative contributions of artists showcase how discarded materials can be reimagined into new forms, thereby merging environmental conservation with cultural preservation and generating additional economic value. When these artists create new products to attract tourists to the beach, it can foster green economic growth in alignment with overall sustainable development goals (Khairina et al., 2020). To achieve circular economy development and create a waste-free environment at Trisik Beach, it is crucial to understand the underlying principles involved.

One of the key actions in addressing environmental challenges is the eradication of garbage and pollution. Currently, Trisik Beach experiences significant pollution, with various types of waste contaminating the coastal environment and disrupting the ecological balance. To tackle this issue, continuous and systematic cleaning efforts are necessary to establish a waste-free environment and mitigate the negative impacts of pollution (Al Fahmi et al., 2024).

The waste at Trisik Beach is a significant source of pollution in the coastal environment. The

accumulation of goods and other items poses a threat to the survival of living organisms in the area. These conditions indicate that the community remains largely unaware of the importance of environmental conservation efforts (Rondhi et al., 2025). Additionally, public awareness regarding proper waste disposal is low. Therefore, processing existing waste into materials of renewed value is one of the most effective solutions to this problem.

The abundant solid waste at Trisik Beach can be transformed into high-value art objects by artists from Yogyakarta, who actively participate in the Daulat Sampah initiatives. One example is presented by Yogyakarta artist Erwan Sukendar, who creates a long chair structure located by a river estuary using discarded materials. His artwork features a chair surrounded by figures made from twigs, roots, and dried coconuts, symbolizing a family enjoying the sunset. It depicts a mother, father, children, and their pets visiting Trisik Beach to appreciate the sunset (Mahira, 2025).

The beach cleaning activity represents both a positive step and an opportunity to encourage people to care for their environment. Maintaining and preserving nature is essential for the future of generations to come. In simpler terms, this activity invites communities to participate in tourism development by protecting the coastal ecosystem. On a deeper level, caring for the environment by addressing waste issues reflects respect for nature as one of God's creations that must be preserved and cared for. By safeguarding the environment, society also expresses gratitude to God, the source of life (Anindyarini et al., 2024).

Another crucial action in addressing environmental problems is ensuring the circulation of products and materials. Waste decomposition can be approached in various ways, one of which is through the framework of the circular economy. This waste management approach emphasizes that cleanup efforts should not cause additional ecological damage or exacerbate existing environmental issues. In the case of Trisik Beach, adopting patterns of utilization and reuse allows discarded goods and objects to be revalued, transforming waste into resources that contribute to sustainable coastal management (Atyadhisti & Sarifudin, 2019).

The mechanism that can be implemented follows the 5R steps: Reduce, Reuse, Recycle, Recovery, and Repair. These five principles encourage reducing the use of raw materials from nature (Reduce) by optimizing the use of materials that can be reused (Reuse). Additionally, materials that have undergone the recycling process contribute to resource recovery (Recovery), and repairing items that already exist is also part of this approach (Bahtiar & Kamelia, 2024).

In the recycling process, unused objects and goods can be transformed into cultural value through the creativity and actions of individuals. This transformation reflects a more profound shift in cultural values towards more effective use of environmental resources. Furthermore, it highlights

the emergence of economic benefits alongside other significant values derived from recycling practices (Ermayanti et al., 2024).

At Trisik Beach, waste empowerment is achieved through the collaborative efforts of Pokdarwis and other stakeholders, positioning waste management and environmental care as positive actions aligned with the principles of sustainable development. By implementing the 5R pattern, the abundant waste found in the coastal environment is systematically collected and sorted into organic and inorganic categories. This waste can then be reprocessed using technology or transformed into new items with renewed economic value (Atyadhisti & Sarifudin, 2019). Instead of being discarded, waste materials are cleaned, repaired, and creatively reimaged by skilled individuals, such as local artists. Their innovative practices convert discarded objects into products that regain value, whether economic, artistic, historical, or cultural (Widayanti et al., 2024).

The primary issue with the increasing amount of waste arises from human negligence in caring for the environment. Natural disasters, such as floods and landslides, often result from human greed in overexploiting nature (Whitney, 2019). The destruction of environmental ecosystems reflects a lack of understanding regarding ecological balance, frequently driven by exploitative practices. The Daulat Sampah program is an initiative designed to restore and regenerate nature, offering a constructive and responsible response to environmental damage. Building and restoring natural ecosystems is a crucial step that should be supported and appreciated by all community stakeholders (Rachmawati & Fitriyani, 2024).

The condition of Trisik Beach, despite its various problems, highlights that the root of many environmental issues stems from human actions in exploiting natural resources to fulfill their needs. Consequently, it is essential to implement specific policies and strategies that regulate and limit activities that can harm the natural environment. The alteration and destruction of natural ecosystems, which threaten the extinction of several species and damage ecosystem functions both on land and in the sea, are closely linked to the relationship between food security, the environment, and the sustainability of human life in the future (Wang & Ye, 2024).

Current environmental conditions are a reflection of what future generations will inherit. Therefore, efforts to preserve biodiversity and protect ecosystem functions have become integral to global agreements led by international organizations such as the United Nations (UN). These agreements encourage all countries to implement the Sustainable Development Goals (SDGs), with a particular focus on the sustainable preservation and utilization of natural resources on land and at sea. The survival of humanity and future development depend on these initiatives, which also help meet economic, social, and other essential needs. Engaging in these efforts

is a shared social responsibility. The achievement of community welfare begins with collective actions to preserve nature and care for the environment, ensuring it remains a habitable space for all living beings (Nainggolan, 2025). Nature serves as a fundamental home for human life; thus, preserving the environment is crucial for enhancing the quality of human life for the better (Ratnadewati & Juvitasari, 2024).

CONCLUSIONS

Waste management and environmental cleanup efforts that aim to improve community living standards are closely interconnected. The relationship between ecosystems and economic needs plays a vital role in sustainable development. Therefore, environmental cleanliness movements that engage stakeholders and implement the circular economy concept require ongoing support and continuity. Renewal initiatives must be reassessed and strengthened, primarily to address the increasing threats of erosion and to protect sea turtles. Collaboration among stakeholders should also be expanded and reinforced through cooperative efforts, providing a solid foundation for restoring environmental resilience, particularly in the Trisik Beach area of Kulon Progo District.

Coastal environmental management is recognized as a shared responsibility among all parties involved. Its sustainability does not rely solely on the Banaran Pokdarwis but extends to a broader collective responsibility of the Indonesian nation. Waste management and coastal conservation can be achieved through efforts to preserve essential ecosystem functions, including mangrove ecosystems, sea turtle habitats, and other vital coastal environments. These efforts reflect a collective commitment to long-term sustainability, thereby enhancing the continuity of environmental conservation in coastal areas.

A key priority is the conservation of sea turtles, as these species face intensified threats to their habitats due to coastal erosion and other environmental factors. Their limited populations necessitate urgent and coordinated protection, making them a central focus in marine ecosystem management. Simultaneously, the preservation of mangrove vegetation is crucial as a natural defense against erosion, degradation, and coastal inundation. This effort is also vital for enhancing food security, further highlighting its significance within waste management and coastal conservation programs.

The continuous enhancement of environmental cleanliness is a tangible reflection of sustainable development in Kulon Progo District, Yogyakarta. These initiatives demonstrate that circular economy practices can serve as both a form of collective attention and shared responsibility in tackling climate change and broader global challenges. Ultimately, this research concludes that integrated conservation efforts, strengthened collaboration, and the application of circular economy principles are essential steps

for sustaining coastal ecosystems and improving community resilience. Future research should further explore the scalability of such initiatives, evaluate their long-term effectiveness, and examine policy frameworks that can enhance stakeholder collaboration in coastal conservation.

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