

**REVITALISASI KAWASAN WISATA PANTAI MELALUI GERAKAN
BERSIH SAMPAH TERPADU UNTUK KEBERLANJUTAN
LINGKUNGAN, STUDI KASUS: PANTAI TIRANG**

**REVITALIZATION OF BEACH TOURISM AREA THROUGH
INTEGRATED WASTE CLEANUP MOVEMENT FOR ENVIRONMENTAL
SUSTAINABILITY, CASE STUDY: TIRANG ISLAND**

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Abstrak: Manusia merupakan konsumen yang bergantung pada hasil alam dan lingkungan, tetapi kesadaran manusia dalam menjaga dan melestarikan alam masih sangat rendah. Penelitian ini merupakan bentuk pengabdian dan menggunakan pendekatan partisipatif yang melibatkan elemen masyarakat dan pengurus tempat wisata. Kegiatan dilakukan dengan observasi kemudian dilanjutkan dengan 3 tahapan kegiatan, yaitu sosialisasi program, aksi bersih pantai dan edukasi sistem pengelolaan sampah. Penelitian ini ditujukan untuk mengedukasi masyarakat dalam menjaga lingkungan dan menuangkan dalam gerakan nyata. Penelitian ini berkontribusi secara signifikan dalam merevitalisasi kondisi pantai Tirang dari kondisi penuh sampah menjadi bersih kembali dengan sistem pengelolaan sampah berkelanjutan yang dijalankan oleh masyarakat lokal.

Kata Kunci: Keberlanjutan lingkungan, Pantai, Revitalisasi, Sampah.

Abstract: Humans are consumers who depend on natural products and the environment, but human awareness in maintaining and preserving nature is still very low. This research is a form of service and uses a participatory approach that involves elements of the community and the management of tourist attractions. The activity was carried out by observation and then continued with 3 stages of activity, namely program socialization, beach clean-up action and waste management system education. This research is aimed at educating the community in protecting the environment and pouring it into a real movement. This research contributed significantly in revitalizing the condition of Tirang beach from full of garbage to clean again with a sustainable waste management system run by the local community.

Keywords: Beach, Environmental Sustainability, Revitalization, Waste.

INTRODUCTION

The issue of environmental cleanliness is still a serious challenge in Indonesia, especially related to waste management in tourist areas which continues to increase in various regions. In some areas, littering is still considered a normal thing and is often done by the community, indicating a low awareness of the importance of maintaining environmental cleanliness (Hutajulu et al., 2024). This condition is exacerbated by the lack of adequate waste management infrastructure and the lack of sustainable education programs on waste management.

In Semarang, Central Java, there is a tourist area called Tirang Beach, located in the western region of Semarang City, and is one of the beaches facing serious environmental challenges. The beach experiences significant abrasion problems every year, resulting in shoreline changes due to natural and anthropogenic factors (Prahmani, et., al., 2022). In addition, this area also faces pollution problems, including heavy metal contamination from industries in Tugu Subdistrict that enter through the Tapak River, with the highest Pb metal content reaching 49,16 mg/kg (Maulina, et., al., 2023).

Despite facing various environmental challenges, various rehabilitation efforts have been carried out in Tirang Beach. One of the significant efforts is the integrated waste clean revitalization program and mangrove forest rehabilitation which has succeeded in increasing the mangrove area from 1.44 Ha in 2007 to 2.84 Ha in 2022 (Hutapea, et., al., 2023). The program involves various parties including student organizations, NGOs, and companies through CSR programs, which aim not only to protect the coastline from abrasion but also to dampen large waves and increase tourism potential (Fauziningrum, et., al., 2023). However, the problem of sustainability of the coastal environment that always arises is the accumulation of garbage that continues to grow every day. This problem needs special attention to be sought for solutions, public awareness as the main element in maintaining the beach area needs to be increased as a real action in responding to this waste problem.

Various efforts have been made to increase public awareness in maintaining environmental cleanliness, one of which is through environmental revitalization programs. This program has shown positive results in changing people's behavior, where residents began to actively participate in striving for environmental sustainability. Through this kind of program, the community not only learns to manage waste better but can also take the potential of useful products, both for personal use and for public facilities (Zumar, *et. al.*, 2024). The success of this program shows that a practical and participatory approach can be an effective solution to the waste problem.

The active role of various stakeholders, including students, religious institutions, and community organizations, is key in raising environmental awareness. Through activities such as socialization, training, and concrete actions to clean up the environment, there has been a significant increase in people's knowledge and motivation to keep the environment clean (Hutajulu *et al.*, 2024). These community service programs that involve various elements not only have an impact on improving the physical cleanliness of the environment, but also build an understanding of the importance of sustainable management of natural resources for the future.

Through this research, community service was conducted by a team of students from UIN Walisongo, Semarang. The community service program is focused on the goal of environmental revitalization, the growing garbage needs to start practices to reduce and attention in maintaining. Trash that has been scattered along the coast needs action from the community and environmental activists such as academics or students to be cleaned directly, this is a necessity as a first step in maintaining environmental cleanliness. As a preventive measure for recurring problems, students need to convey education to related parties, this education can be in the form of providing strict regulations regarding the discipline of disposing of waste for tourists and education on wise waste management for the community.

METHODS OF IMPLEMENTATION

This community service activity was carried out using a participatory approach by involving various stakeholders in the Tirang Beach area. The implementation stage begins with conducting a location survey to identify problems and needs in the beach area (Khatimah, Utami, Pransiska, Faradila, & Hazirin, 2023). This survey included mapping the points of waste accumulation and analyzing the dominant types of waste in the area.

The program implementation was divided into three main stages. The first stage is the socialization of the program to the local community by providing environmental sustainability education and discussion about the importance of maintaining beach cleanliness (Nisak, *et. al.*, 2023). The second stage is the implementation of beach cleaning actions involving local community groups, beach cleaners, and student service teams. This activity was carried out in a structured manner with the division of work areas and grouping of the types of waste collected.

The third phase focused on establishing a sustainable waste management system through empowering community groups. The method used is training and mentoring in waste management, including sorting organic and inorganic waste (Purwaningsih, *et. al.*, 2020). This program adopts the Asset Based Community Development (ABCD) approach to optimize the potential of local resources in coastal waste management (NAFI'AH, 2023). Program evaluation is carried out periodically to ensure the sustainability and effectiveness of the activities that have been implemented.

RESULTS AND DISCUSSION

The beach is one of the tourism potentials that can generate economic benefits not only for the community but also for the region and country. The development of coastal tourism areas can have a positive impact on the socio-economic conditions of coastal communities, such as creating new jobs and increasing the income of local communities (Raihan & Oktavianus, 2023). For example, the development of the Tirang Beach tourism area in Semarang has had

a significant socio-economic impact on the surrounding community. However, unfortunately there are still many beaches in Indonesia that are not kept clean, thus reducing their selling value as tourist attractions. The lack of public awareness of cleanliness and the lack of trash facilities in the beach tourism area are the main factors causing this problem (Juliawan, *et. al.*, 023). As a result of littering, Indonesia's beaches experience a variety of serious negative impacts.

One of the most significant impacts of beach littering is microplastic pollution. Microplastics, which are the degradation products of plastic waste, have become a serious threat to marine and coastal ecosystems (Lovina, Bahri, & Viruly, 2024). These microplastic particles can be absorbed by marine organisms such as fish and shellfish, which can eventually enter the human food chain (Widianarko & Hantoro, 2018). Coastal pollution also causes severe damage to marine ecosystems. Plastic waste that decomposes in the sea can contain harmful substances such as PBTs (persistent, bioaccumulative, and toxic substances) and POPs (persistent organic pollutants) (Lovina, *et. al.*, 2024). These substances can poison marine biota and disrupt the balance of the ecosystem.

The accumulation of trash on beaches and in the ocean can lead to the death of various marine biological resources. Marine life such as fish, shellfish, and other organisms can be trapped or eat plastic debris resulting in death (Lovina *et al.*, 2024). This not only impacts biodiversity, but also the fishing industry and livelihoods of coastal communities.

This service activity is part of a form of concern for the surrounding environment. A beautiful beach with its charm must be preserved, one of the things that can damage the environment is plastic waste that is brought when visiting, so it is not uncommon to see plastic waste scattered on the beach.

The first stage carried out was for researchers to make initial observations and socialize the program to the local community and tourists. Initial observations were carried out to see what the latest condition of Tirang beach was before the decline in service. And through the results of the observations made, the condition of Tirang beach really needs attention, a lot of garbage is scattered on the coast, starting from garbage that comes from nature itself, such as fallen trees and shells

that usually do not reach the shoreline. In addition, there is a lot of garbage from the irresponsible attitude of humans, such as the large amount of baby diapers and plastic waste scattered around.



Picture 1. Installing the Beach Code of Conduct

The community as the foremost element guarding the beach tourism area needs to be given education in the process of managing the beach tourism area wisely. Through this service program, the community and beach tourists are given environmental sustainability education, education is carried out by the research team directly by providing direction on caring for nature which can be started from teaching not to damage the environment by littering. In addition, the research team also invited the community and tourists to follow the rules that had been set, the rules that had been set contained an invitation to maintain human behavior towards the environment, an invitation to preserve the environment, not littering and other destructive behavior. The rules that have been set are printed in banner media and placed near the entrance to beach tourism, this is intended so that every tourist and community who will visit the beach can know the rules that must be carried out while on the beach.



Picture 2. Beach Cleanup Activity

After conducting socialization in the first stage of the service program, the research team continued to the second stage, the research team took direct action to clean up the garbage along the coast. The beach cleaning process was carried out by the UIN Walisongo research team with the help of local communities and beach administrators, the process of revitalizing the beach from scattered garbage was carried out simultaneously on Friday, December 6, 2024.



Picture 3. Human Waste

The revitalization process runs smoothly with a mutual cooperation system between the research team and related communities, through this program it is known that public awareness and tourists still need to be improved, this is based on evidence of the large amount of waste from human use such as plastic bags, baby diapers and damaged clothes scattered along the coastline. With evidence of problems like this, routine education is treated so that similar things do not happen again, because humans are active consumers of natural products, so it is an obligation to always maintain and care for nature which functions as a producer for humans.



Picture 4 and 5. Natural Products Waste

Waste from human use is the dominant waste that increases in number. But apart from plastic waste and used clothes that come from human use, there is also a lot of waste that comes from nature itself. High sea waves in the sea area of Semarang often uproot various kinds of trees on the coast, trees that fall are the result of human cultivation or those that grow by themselves with relatively small tree sizes.

In addition to uprooted trees, there is some natural waste that is shells, animal carcasses such as jellyfish to live shells. Live shells that normally live in the depths of seawater are found on the coast, this shows that the quality of water that is their habitat has been polluted, garbage and factory waste are the main reasons for changing the quality of seawater, so this problem needs to be handled directly by local parties who are obliged.

After going through beach waste revitalization activities, sustainable maintenance is needed to always keep the beach in a clean and beautiful condition as it should be. Through the third stage, the community and beach officials are equipped with a sustainable waste management system, the community is given education on how to sort waste in general, starting from organic to non-organic waste, the community is given an understanding that through the waste that has been collected it can be utilized into various useful things, such as shells that can

be used as handicrafts and trees that can be used as household furniture. As for the non-organic waste, it can be handed over to the relevant manager to be recycled and utilized for other useful things.

Through this service activity, the research team has made a significant contribution in revitalizing the condition of the beach from a condition full of garbage to a clean and beautiful environment. Researchers hope that activities that have positive value like this can be continued and developed with superior programs by other researchers.

CONCLUSIONS

The community service activity in the revitalization of Tirang Beach has successfully achieved its goal in increasing public awareness of the importance of maintaining a clean beach environment. Through a three-stage program that includes socialization, beach clean-up, and education on sustainable waste management systems, this program has had a significant positive impact on the environmental conditions of Tirang Beach. The active involvement of various parties, including local communities, beach managers, and the research team, shows that the participatory approach is effective in overcoming waste problems in tourist areas. This program not only succeeded in cleaning the beach from waste, but also built a sustainable waste management system that can be run by the local community. The education provided about waste segregation and utilization of waste into valuable products has opened the community's insight into the economic potential of proper waste management. The success of this program is expected to be a model for the development of similar programs in other coastal tourism areas in Indonesia.

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BIBLIOGRAFI

- Fauziningrum, E., Sutini, S., Ngaijan, N., & Hermawati, R. (2023). Sosialisasi Konservasi Mangrove di Pantai Tirang. *ALKHIDMAH: Jurnal Pengabdian dan Kemitraan Masyarakat*. Retrieved from <https://api.semanticscholar.org/CorpusID:271784046>
- Hutajulu, A., Hutajulu, H. D., Simatupang, T., Silali, Y., Sihaloho, L., & Hutagalung, B. K. (2024). Peranan Mahasiswa Manajemen Pendidikan Kristen dalam Meningkatkan Kesadaran Lingkungan dan Pengelolaan Sumber Daya Alam di Gereja HKBP 1 Sidikalang Kabupaten Dairi Provinsi Sumatera Utara. *Jurnal Abdi Masyarakat Indonesia*. Retrieved from <https://api.semanticscholar.org/CorpusID:273816216>
- Hutapea, F., Afidah, S. N., Syafitri, L. M., Mukti, V. K., Fariz, T. R., & Nugraha, F. A. (2023). Rehabilitasi Mangrove di Pantai Tirang, Kota Semarang. *Jurnal Dharma Indonesia*. Retrieved from <https://api.semanticscholar.org/CorpusID:260143595>
- Juliawan, E., Musdalifa, M., Purnamasari, I. A., Jumardan, R., Kartomo, K., Syaiful, M., & Hariono, H. (2023). Peningkatan Kesadaran Masyarakat Terhadap Kebersihan Melalui Penyediaan Sarana Tempat Sampah di Pantai Ayu Lestari Kabupaten Kolaka, Sulawesi Tenggara. *Jurnal Abdi Masyarakat Indonesia*. Retrieved from <https://api.semanticscholar.org/CorpusID:263693061>
- Khatimah, H., Utami, D. S., Pransiska, P., Faradila, P. A., & Hazirin, T. H. (2023). Pengelolaan lingkungan pesisir melalui gerakan bersih pantai dan optimalisasi pos siskamling di kawasan wisata sungai pisang. *Open Community Service Journal*. Retrieved from <https://api.semanticscholar.org/CorpusID:270779922>
- Lovina, R., Bahri, S., & Viruly, L. (2024). Dampak Pencemaran Mikroplastik Pada Ikan, Kerang dan Sedimen Di Perairan Indonesia: Review. *Jurnal Pengendalian Pencemaran Lingkungan (JPPL)*. Retrieved from <https://api.semanticscholar.org/CorpusID:273619589>
- Maulina, D. R. A., Pringgenies, D., & Haryanti, D. (2023). Kandungan Logam Berat Pb dan Cd dalam Sedimen di Pantai Trimulyo dan Pantai Tirang, Semarang. *Journal of Marine Research*. Retrieved from <https://api.semanticscholar.org/CorpusID:267504072>
- NAFI'AH, M. (2023). Sosialisasi dan Gerakan Aksi Bersih Pantai Sebagai Upaya Mewujudkan Wisata Ramah Lingkungan di Pantai Cemara Desa Mojomulyo Puger. *Al-Ijtima': Jurnal Pengabdian Kepada Masyarakat*. Retrieved from <https://api.semanticscholar.org/CorpusID:265093168>
- Nisak, R. Z. K., Nugraha, Y. A., Fajarsari, I. M., & Badian, M. (2023). Gerakan Bersih Pantai Sebagai Upaya Mengurangi Sampah Di Kawasan Pantai Kertosari Banyuwangi. *Jurnal Pengabdian Masyarakat Bangsa*.

Retrieved from <https://api.semanticscholar.org/CorpusID:266782651>

- Prahmani, Y. S., Deanova, D., Fariz, T. R., & Heriyanti, A. P. (2022). Dampak Abrasi Kawasan Pesisir Pantai Tirang Terhadap Lingkungan Fisik di Kecamatan Tugu. *Uniplan: Journal of Urban and Regional Planning*. Retrieved from <https://api.semanticscholar.org/CorpusID:256524084>
- Purwaningsih, O., buchory Muh Sukhemi, & Triwahana, T. (2020). Pemberdayaan Kelompok Masyarakat 'Gardu Action' dalam Pengelolaan Sampah untuk Mewujudkan Kawasan Wisata Pantai Parangkusumo yang Bersih. Retrieved from <https://api.semanticscholar.org/CorpusID:234387533>
- Raihan, A., & Oktavianus, F. (2023). Dampak Pengembangan Wisata Pantai Terhadap kondisi Sosial Ekonomi Masyarakat Pesisir. *Riset Sains dan Teknologi Kelautan*. Retrieved from <https://api.semanticscholar.org/CorpusID:266386593>
- Widianarko, Y. B., & Hantoro, I. (2018). Mikroplastik dalam Seafood dari Pantai Utara Jawa. Retrieved from <https://api.semanticscholar.org/CorpusID:127261324>
- Zumar, M., Anshori, S. A., Umam, M. T., & Jannah, E. U. (2024). Upaya Menumbuhkan Kesadaran Masyarakat dalam Menjaga Kebersihan Lingkungan Melalui Program Ecobrick di Desa Sumber Rejo, Kecamatan Winongan, Kabupaten Pasuruan. *Jurnal Pemberdayaan Masyarakat Universitas Al Azhar Indonesia*. Retrieved from <https://api.semanticscholar.org/CorpusID:273564252>