

Beach cleanup and environmental Education at Teluk Bidara Beach, Seberang Pintasan, Dungun, Terengganu, Malaysia

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Abstract

Teluk Bidara Beach is located in Seberang Pintasan Village, Dungun, Kuala Terengganu, Malaysia. Teluk Bidara Beach is one of the tourist destinations on the east coast of Malaysia which has stunning natural beauty. However, behind its beauty there is still a lot of plastic waste littering the beach area. This trash not only destroys the beauty of nature but also endangers the surrounding marine ecosystem. Therefore, a beach cleanup and environmental awareness education was carried out through direct education methods and waste sorting activities in collaboration with the Geng Plastik Ija (GPI) community. This activity succeeded in collecting around 171.65 kg of plastic waste and 29.29 kg of glass bottles. The impact of this activity is the increasing awareness of the community in protecting the beach environment which will make the beach clean, comfortable and increase the attractiveness of tourists to the beach so that economic growth in the area will increase.

Keywords: Beach Cleanup, Environmental Education, Economic Growth

Abstrak

Pantai Teluk Bidara terletak di Desa Seberang Pintasan, Dungun, Kuala Terengganu, Malaysia. Pantai Teluk Bidara merupakan salah satu destinasi wisata di pesisir timur Malaysia yang memiliki keindahan alam yang memukau. Namun, di balik keindahannya, masih banyak sampah plastik yang mencemari area pantai. Sampah ini tidak hanya merusak keindahan alam tetapi juga mengancam ekosistem laut di sekitarnya. Oleh karena itu, kegiatan pembersihan pantai dan pendidikan kesadaran lingkungan dilakukan melalui metode pendidikan langsung dan kegiatan pemilahan sampah bekerja sama dengan komunitas Geng Plastik Ija (GPI). Kegiatan ini berhasil mengumpulkan sekitar 171,65 kg sampah plastik dan 29,29 kg botol kaca. Dampak dari kegiatan ini adalah meningkatnya kesadaran masyarakat dalam melindungi lingkungan pantai, yang akan membuat pantai menjadi bersih, nyaman, dan meningkatkan daya tarik wisatawan ke pantai, sehingga pertumbuhan ekonomi di daerah tersebut akan meningkat.

Kata kunci: Pembersihan Pantai, Pendidikan Lingkungan, Pertumbuhan Ekonomi

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1. Introduction

Terengganu is a state located on the east coast of Peninsular Malaysia. This area has tourism potential because of its stunning natural beauty. In addition, Terengganu is a tourist area that has a rich culture, beautiful beaches and delicious culinary so that not a few local and foreign tourists who make Terengganu as a tourist destination. At present, it is possible to develop the tourism potential of Terengganu State so that the number of tourists visiting does not decrease and more and more tourists visit so as to improve the economy of the local community (Suri et al., 2024)

One important factor that can maintain natural beauty and increase tourist attractiveness is environmental cleanliness. A clean beach environment will increase visitor comfort so that the tourist experience becomes better and more memorable. Currently, the problem of waste in coastal areas is increasingly worrying. This garbage not only destroys natural beauty, but also threatens the surrounding marine ecosystem (Fatoni et al., 2024). The problem is that most of the waste found in coastal areas is waste that cannot be completely decomposed such as used beverage cans, plastic, rubber and glass (Idris et al., 2023)

The coastal environment has a very important role in maintaining the balance of marine and terrestrial ecosystems. In recent years the coast is increasingly threatened by waste pollution. This problem is also detrimental to local communities who depend on the tourism and fisheries sectors. Most of the garbage in the coastal area does not only come from community waste carried by ocean currents but also from tourists visiting the place (Firmansyah et al., 2024). In order for the number of tourists coming to the coastal area to increase, real efforts are needed to overcome the problem of abundant waste in the coastal area (Junaidin et al., 2024). However, the lack of public awareness of the importance of maintaining beach cleanliness is one of the main causes of the accumulation of garbage in coastal areas.

Therefore, there is a need for real efforts involving various parties, including universities, in the form of community service activities. Education and action-based community service programs, such as beach cleanup activities and socialization of the importance of protecting the environment can help apply knowledge about the impact of pollution and build a sense of collective responsibility for environmental sustainability (Fatoni et al., 2025). This activity will increase awareness and active participation from the community in maintaining beach cleanliness.

Beach cleanup activities are a form of real contribution in increasing public awareness of the environment. Through this activity, it is expected to create synergy between students, local residents, and related parties to jointly maintain and care for coastal areas. In addition, this activity is also an effective means of environmental education for all groups, especially the younger generation. With the implementation of beach cleanup activities, we hope to help reduce pollution in coastal areas, increase public environmental awareness, and build a sustainable culture of environmental care.

UIN Salatiga's Faculty of Economics and Islamic Business (FEBI) responded to this challenge by participating in an environmental service activity titled Beach Clean Up, which is part of the International Heritage Program 2024. The event was organized by Universiti Teknologi MARA (UiTM) Terengganu, Malaysia, at Bidara Bay Beach on September 13, 2024, in collaboration with the local community, Geng Plastik Ija (GPI). The service involved 95 participants from three countries who focused on cleaning the beach and educating the community on the impact of plastic waste on the ecosystem.

Zulkefli Sarji as the head of the Geng Plastik Ija (GPI) community, which is a Non-Governmental Organization (NGO) that focuses on managing the cleanliness of the coastal environment, explained that since its establishment in 2017 every weekend the community members, which numbered approximately 100 people, would collect garbage around the coast together. Initially, GPI only cleaned the coastline in the Kemaman and Dungun areas because many GPI members came from these two areas. However, over time, GPI expanded its social activities to the Kuala Terengganu, Marang, Setiu, and Besut areas.

This activity is expected to increase public awareness which is expected to help improve the cleanliness of the beach area so that visitors become more comfortable and the beach area remains crowded with visitors which in turn will have an impact on increasing the economic welfare of the community around the beach area. Because in principle, a beautiful and clean beach will attract tourists, both local and international tourists (Bahiyah et al., 2018; Fitriansyah & Arisandi, 2019; Paradida et al., 2023). This is indirectly able to improve the economy of the local population.

2. Research Methods

The implementation of this service was carried out at Teluk Bidara Beach, Seberang Pintasan, Dungun, Terengganu, Malaysia. This activity was attended by 95 volunteers consisting of 2 lecturers and 6 students from the Faculty of Economics and Islamic Business UIN Salatiga, 3 students from Gunma University Japan, 4 students from Universiti Teknologi MARA Malaysia and 80 members of the Geng Plastik Ija (GPI) community. The method used in this service is carried out into three stages, namely preparation, implementation and evaluation. (1) the preparation stage is opening and coordinating with the Geng Plastik Ija (GPI) community, preparing equipment, and determining the distribution of location points

Activities and direct education conducted by lecturers from the Faculty of Economics and Business UIN Salatiga to Geng Plastik Ija (GPI) members, students, and communities around the coast. The socialization and education contain the importance of awareness of maintaining environmental cleanliness, especially in the beach area and providing socialization about the tridharma of higher education, one of which is service, and (3) the post-implementation stage of the activity, namely the stage of evaluating activities, weighing waste is carried out together with sorting between organic and inorganic waste, formulating follow-up plans, and taking photos together. The flow of the stages of activity implementation is shown in Figure 2.

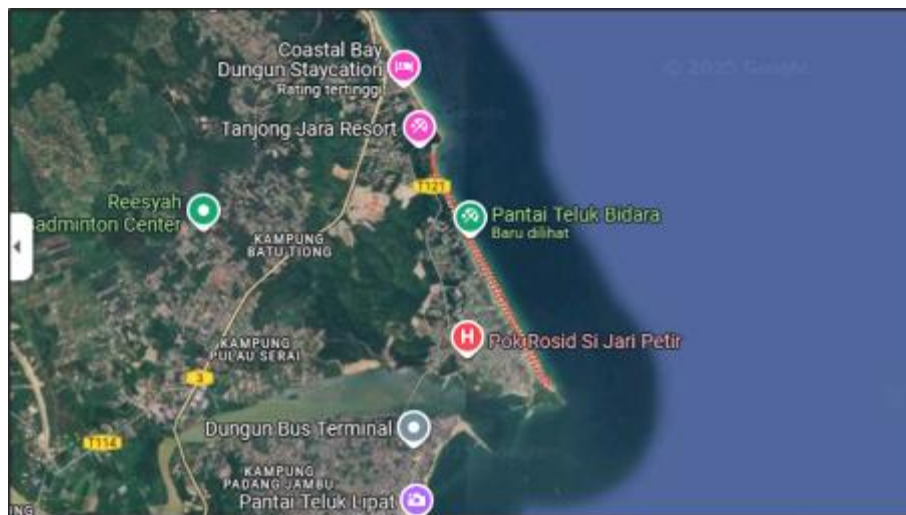


Figure 1. Map Location

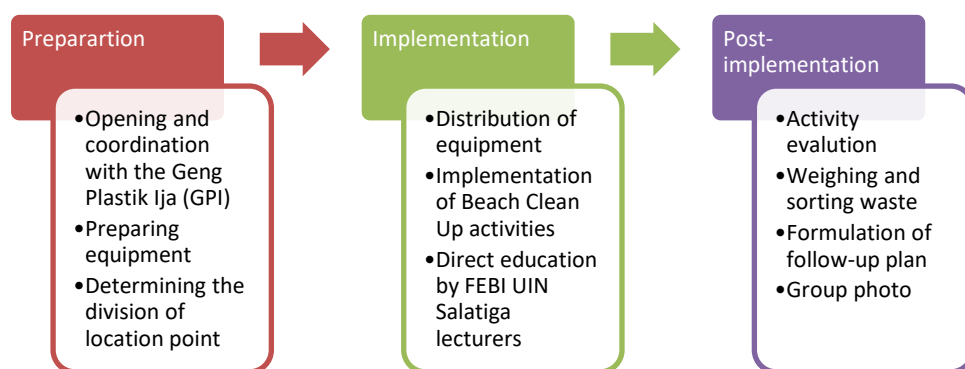


Figure 2. Activity Implementation Flow

4. Research and Discussion

The Beach Clean Up activity was organized by Universiti Teknologi MARA (UiTM) Terengganu, Malaysia at Teluk Bidara Beach on September 13, 2024, in collaboration with the Geng Plastik Ija (GPI) community. Service activities in the form of beach cleaning and environmental education can increase public awareness and tourists to reduce waste, especially plastic waste around the beach so that the ecosystem around the beach can be maintained properly (Lestari et al., 2023). Beach clean up has a positive impact on reducing waste on the coast, so as to create a clean environment and can increase the number of visitors so that it will have an impact on the economy around the beach.

This Beach Clean Up service activity is the third Pendekar and Serikandi Merdeka Plogging Program involving 95 volunteers consisting of 2 lecturers and 6 students from the Faculty of Economics and Islamic Business UIN Salatiga, 3 students from Gunma University Japan, 4 students from Universiti Teknologi Mara Malaysia and 80 members of the Geng Plastik Ija (GPI) community. The method used in this service is carried out into three stages, namely preparation, implementation and evaluation

In the preparation stage, coordination was carried out with the Geng Plastik Ija (GPI) community, preparing equipment that would be used to collect waste, and determining the division of location points. The opening and coordination of the activity was led by Zulkefli Sarji as the head of the Geng Plastik Ija (GPI) community. Then continued with the preparation of equipment such as garbage bags, gloves, and garbage tongs. After the opening, coordination and preparation of equipment, the next step was to divide the coastal location points to be cleaned. This is done so that the entire coast of Teluk Bidara Beach can be reached evenly.



Figure 3. Opening and Coordination with GPI

The next is implementation, in the form of equipment distribution, implementation of Beach Clean Up activities and direct education conducted by lecturers of the Faculty of Economics and Business UIN Salatiga. After the equipment was distributed, we then carried out Beach Clean Up activities or beach cleanup actions in the Bidara Bay Beach coastal area. This beach cleanup activity was held at 07.00 to 09.00. In this activity, all members of the Geng Plastik Ija community who were present, students and lecturers together carried out cleaning activities by collecting all the garbage in the area. The type of waste obtained is mostly plastic waste and also glass bottles.



Figure 4. Beach Cleanup

The education phase was carried out by 2 lecturers from the Faculty of Economics and Business of UIN Salatiga by briefing the community on the importance of beach cleanliness to protect the environment and its benefits for developing the economy around the beach. A clean beach will increase the attractiveness of tourists so that it will have an impact on the growth of the local business sector and encourage sustainable economic development. In addition, material was also presented about the Tridharma of Higher Education, one of the pillars of which is service. This activity is a concrete manifestation of community service, where the academic community, namely lecturers and students, actively contribute positively to the community and the surrounding environment by playing a role in maintaining environmental cleanliness and increasing public awareness about the importance of protecting the environment, especially coastal areas.



Figure 5. Lecturer 1 from FEBI UIN Salatiga Delivering Educational Outreach



Figure 6. Lecturer 2 from FEBI UIN Salatiga Delivering Educational Outreach

Then the last stage, namely post-implementation of activities, contains evaluation of activities and weighing of waste which is simultaneously carried out also sorting between organic and inorganic waste with the aim of facilitating waste management. The amount of plastic waste and glass bottle waste found in coastal areas can usually

be caused by the lack of availability of trash bins, low public awareness of beach cleanliness, and other causes such as wind gusts that cause current movements that will carry waste (Nisak et al., 2023).



Figure 7. Garbage Sorting Process



Figure 8. Garbage Weighing



Figure 9. Group Photo

Furthermore, the formulation of follow-up plans and group photos were held. In the Beach Clean Up activity which lasted for approximately 2 hours, 200.94 kg of waste was collected consisting of 171.65 kg of plastic waste and 29.29 kg of glass bottles. The condition of Bidara Bay Beach after the activity looks very clean as shown in Figure 10.



Figure 10. The condition of Bidara Bay Beach after the Beach Clean Up Activity

5. Conclusion

This initiative is a clear example that cross-country collaboration is essential to tackle global environmental issues such as plastic waste. The students are proud to take part in this global effort and hope that their experience can inspire more people to care for the environment. In addition, hands-on environmental education can also increase public and tourist awareness of the importance of keeping beaches clean.

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