

Environmental Conservation Education in a Spatial Approach and Local Wisdom at Trisik Beach, Yogyakarta

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ABSTRACT

The educational activities aimed at tourists and the community in the “Trisik Release Tukik” event broadly aim to introduce a spatial approach to disaster mitigation and environmental conservation education based on local wisdom to tourists visiting Trisik Beach. The activities, which were carried out from July to August, involved the community and stakeholders, including community organizations such as Pokdarwis Banaran. The methods used were qualitative, with traditional lectures supported by visual media and presentations accompanied by narratives of local wisdom. The activities took place in a fun and educational atmosphere, accompanied by question and answer sessions and interactive discussions. The results of the study show that the educational process carried out to build high awareness and understanding in all aspects, especially in applying knowledge in the context of real life to the environment, is a form that must be applied sustainably. The spatial approach makes it easier for visitors to understand locations that are prone to natural disasters and require regular management. Meanwhile, local values strengthen the relationship between visitors and the local social and cultural environment. The non-formal educational approach is a simple, adaptive, and implementable measure in every coastal tourist area by optimizing the use of technology. These findings fully support the effectiveness of the spatial-cultural approach as a relevant, grounded, and widely replicable model for achieving the goals of disaster mitigation education and environmental conservation in other areas with similar tourist attraction characteristics.

Keywords: Trisik Beach, Spatial approach, Local wisdom, Pokdarwis, Banaran

INTRODUCTION

The Trisik Beach in Yogyakarta Province has unique geographical and ecological characteristics. These characteristics give the area advantages and at the same time pose major challenges in environmental management and disaster mitigation (Lapatty et al., 2021). The high diversity of flora and fauna, especially in coastal areas, makes this area strategic for turtle conservation efforts (Darmarani et al., 2020).

The natural wealth contained in these beaches, with their abundant natural resources, presents its own challenges in terms of management (Pereira et al., 2024). This

potential is not without serious threats. The coastal tourism area not only manages plant conservation but also wildlife in the sea, especially sea turtles. Amidst efforts to manage this natural tourist destination, the sustainability of one of the tourist attractions in Yogyakarta Province is currently under threat (Sri et al., 2024). The coastal and beach areas that function as a buffer for the balance of life for all living creatures are currently in a condition that requires immediate improvement (Susetyaningsih et al., 2020). Some of the existing problems include: First, low awareness of environmental management, especially related to waste management (Asy-Syidiqie & Roostika, 2024). Pantai Trisik Beach is often littered with trash, especially during the rainy season. The accumulation of trash around the beach can threaten the sustainability of the ecosystem (Pereira et al., 2024).

Second, there is abrasion. Recent climate change has threatened the survival of all living things (Hariyanto et al., 2018). According to a study conducted by Leontinus, the current climate change is an implication of global warming caused by an increase in greenhouse gases (Darmastuti, Salma Ardelia Nazar, Irfan Abu Setyawan, 2024). The increase in weather changes has caused a significant rise in global temperatures (Iqbal et al., 2024).

Third, the damage and neglect of public facilities. The collapse of a number of trees in coastal areas and the damage to public facilities due to high abrasion pose a threat to the sustainability of tourism in the region (Shao et al., 2025). Damage to facilities at tourist sites is an important factor that can affect the percentage of tourists visiting these sites. Therefore, if the current conditions are not immediately addressed, it is possible that tourists will not visit, considering that the area is dirty and poorly maintained (Putra et al., 2019). In the context of managing and addressing the above issues, community capacity building through an educational approach has been carried out by a number of local community organizations, in this case the Banaran Tourism Awareness Group (POKDARWIS) Banaran, is one of the key drivers in improving tourist attractions in an effort to overcome environmental issues, as well as a form of education for residents and tourists to remain aware of environmental issues (Manu, 2023).

The collaborative education carried out by Pokdarwis Banaran, the Abadi Turtle Conservation Group, Banaran Tourism Village, and the Trisik Beach Tourism Association for the community and tourists in a spatial and local wisdom approach is a tangible form of coastal environmental conservation efforts. Education in presenting the “Trisik Release Tukik” event, which is a program for stakeholders throughout July-August 2025, is an important instrument in filling this gap (Sugondo, 2025). This is mainly related to non-formal education that can form the foundation of knowledge and attitudes for the community and tourists in caring for the marine ecosystem (Ayu & Diswandi, 2023).

Local wisdom forms a source of traditional values and practices that can strengthen disaster mitigation education and environmental conservation (Turambi et al., 2023). The presence of local knowledge, such as the life patterns of sea turtles and their migration patterns within a certain period of time, which can be learned by the community and tourists, can provide a strong foundation of knowledge for the creation of contextual and participatory education (Sant’Anna et al., 2024). Therefore, in relation to the context described above, an approach that combines spatial advantages and cultural richness is needed. This is intended so that the learning that takes place is not only informative or merely exhortative, but also socially and geographically relevant.

The application of spatial-based disaster mitigation education combined with local wisdom has not been widely developed in the context of non-formal education (Rachmad, 2023). Therefore, non-formal education in disaster mitigation efforts is a potential way to educate the community and tourists to get closer and experience firsthand the existing forms of environmental conservation. Previous research shows that media such as maps, when combined with a local narrative approach, can bridge the gap in students' understanding of disaster risks and conservation strategies (Pambudi, 2025).

In a study conducted by Moch Rio Pambudi (2025), he emphasized the importance of a spatial approach and local wisdom that can be used to educate the community and tourists on how to protect the marine ecosystem from the threat of natural change (Pambudi, 2025). Meanwhile, in a study conducted by Riswal (2021), the findings stated that coastal management activities were carried out with the aim of increasing public awareness in facing and reducing disaster risks and providing a basic understanding of disaster mitigation in coastal areas. In a broader sense, studies related to coastal environmental management form the basis of disaster mitigation efforts that can be implemented as activities to reduce the impact of disasters (Karamma, 2021). The objective of this activity is to develop educational methods that integrate spatial approaches and local wisdom as instruments for learning about disaster mitigation and environmental conservation at Trisik Beach. The novelty of this activity lies in its contextual and participatory approach, using simple but relevant media, and combining scientific and local cultural aspects. The scope of activities includes delivering material through lectures, discussions, and interactive observations focused on improving cognitive capacity in three aspects: remembering, understanding, and applying information obtained on an ongoing basis (Sri et al., 2024).

METHOD

The research location is in Yogyakarta City, Central Java Province, Indonesia. The research location is in the Trisik coastal area. The Trisik Beach tourist area is a beach tourist destination that has turtle conservation activities in the tourist area, with the location name "Penakaran Penyu Abadi" (Permanent Turtle Breeding). The focus of this research is to educate the community and tourists about efforts to preserve nature in dealing with coastal environmental issues, which are fraught with natural disasters, and also to ensure the sustainability of wildlife in the "Trisik Release Tukik" tourism activity from a joint program with stakeholders (Sugondo, 2025).

The method used in this educational activity is qualitative, which includes socialization and counseling in classical lectures, demonstrations of activities, and participatory discussions between facilitators and participants (Moleong, 2017). This approach is designed to be simple and enjoyable for the community and visitors to the activity, with the aim of conveying the message to the visitors. Short lectures are used to convey basic information about disaster mitigation and environmental conservation, particularly in the effort to release turtles into their habitat in the sea. Meanwhile, applied education is carried out by involving each participant in releasing the turtles so that they can continue to live in their habitat, namely in the open waters.

The use of visual media in the form of information delivery and introduction to the Trisik Beach ecosystem area is used to help visitors understand the geographical and spatial context of the material presented. The learning media used in this activity consists of

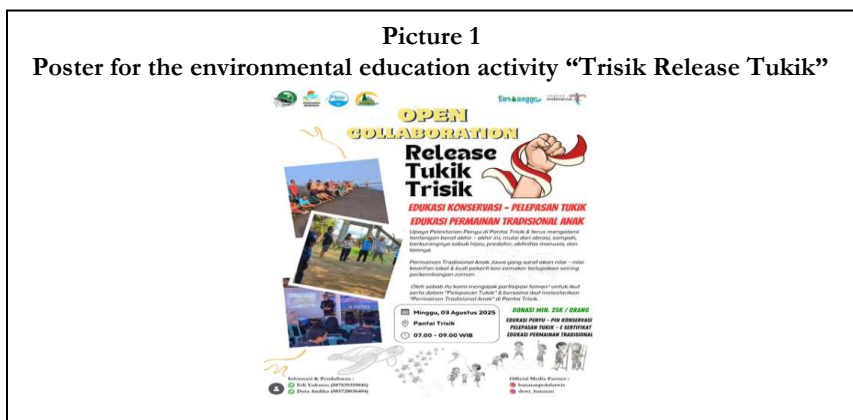
structured delivery related to the beach area and activities carried out in the care of sea turtles, as well as visual presentations that explain disaster mitigation and environmental conservation material, with examples of relevant local wisdom. The observation data is presented in a descriptive narrative form without quantitative statistical analysis. Furthermore, the implementation of the core educational activities began with a joint geographical introduction to the Trisik Beach area, followed by the delivery of material related to disaster mitigation and environmental conservation based on local wisdom. This session ended with a light discussion and joint reflection as a form of strengthening students' understanding and active involvement in the continuous learning process.

DISCUSSION

Background of the “Trisik Release Tukik” event

The idea or concept that was developed to address all the problems at Trisik Beach originated from cooperation between stakeholders. In his argument, Edi Yulianto explained that the “Trisik Release Tukik” activity, which was carried out, was a program conducted for us as part of an institution in the community to clean up and try to recover after the previous condition of the community and tourism managers at Trisik Beach, which had collapsed due to the destruction of various facilities in the turtle conservation area. In addition, Edi also emphasized that the event, which was held throughout July and August, was a step towards realizing the spirit of environmental conservation and nature preservation, which can be represented by concrete actions to care for Trisik Beach as the largest turtle nesting habitat in Kulon Progo and return the hatchlings to their habitat (Sunartono, 2025).

A collaborative event involving several community organizations, namely Pokdarwis Banaran, the Abadi Turtle Conservation Group, Banaran Tourism Village, and the Trisik Beach Tourism Association. This annual event, held during the turtle hatching season, is open to the public. This is a plus point and a major attraction of Trisik Beach with its educational program (Herlina et al., 2023). During the event, visitors are invited to learn about sea turtle conservation, participate in beach cleanup activities, and, in a further effort, encourage visitors to participate in the release of hatchlings back into their natural habitat. During the event, 100 turtles were released and returned to their habitat (Sunartono, 2025). The poster for this environmental conservation effort can be seen in Figure 1 below.



Spatial education and local wisdom

Environmental conservation activities carried out by several Banaran community institutions provide a form of non-formal education that can guide visitors to tourist sites to acquire three aspects of cognitive abilities, including the ability to remember, understand, and apply the material. Activities aimed at raising awareness in remembering, understanding, and conveying this educational material are in line with the spatial approach taken by stakeholders in implementing these events (Sulaiman et al., 2024).

The spatial approach, or spatial analysis, is an approach that studies the diversity of space on earth by analyzing every aspect of space. In this approach, every condition that appears in the area or space that is the basis or location of the study can be studied further. Each space that is the subject of the study has similarities and differences in geospheric phenomena through spatial aspects. The spatial aspects (spatial geography) studied include location, natural conditions, and the socio-cultural conditions of the local community (Kho, 2022). The spatial approach is an approach that specifically looks at the geographical location of the area concerned and where the research is carried out. At a deeper level, the spatial approach is divided into a thematic approach, the presence of human activity, and a regional approach (Pambudi, 2025): a) Thematic approach. The first step in the spatial approach can be done by starting with the main topic of interest to the author. In the context of a spatial approach that takes Trisik Beach as the location or object of research, we can begin the research by looking at the conditions or circumstances of the environment in that area, starting from the condition of the soil, the state of the beach, the activities of the surrounding community, and various other things that exist and occur in the area (Sitompul, 2021). Therefore, in relation to the phenomenon of community activities and the condition of the beach, which is currently carrying out annual activities in the form of sea turtle conservation education efforts and at the same time providing understanding and non-formal education to the local community and visitors. We can explain and summarize the various activities of the community and stakeholders there (Nelvan Junita Kristiani Daeli & Satato, 2024).

Our attention is focused on the activities carried out at that location, things that can be studied about the activities at the research site, what is being done there, who is involved, and so on. The things that are summarized and explained can show that we can convey the necessary information and study the phenomenon of stakeholder activities in the area in depth (McNaughton et al., 2020). An important thing to note in the topic approach in geography is that the relationship between space and the topic to be studied and analyzed cannot be separated. The interaction between humans and their environment is an inseparable whole (Susetyaningsih et al., 2020).

Picture 1
Community and visitor activities in participating in environmental conservation activities at Trisik Beach



b) Human activity approach. Human activity is an activity that brings about real efforts in environmental conservation. Activities that involve community participation in the implementation of such events are a tangible form of community activity in the area concerned. This means that in the approach of mutual cooperation to preserve the coast, it becomes a shared responsibility that must be continuously manifested in action (Mensah, 2021). Human actions in environmental conservation efforts are the center of activity on the earth's surface. The existence of a number of these activities can trigger changes to the existing spatial structure or even the opposite. Human actions carried out on the surrounding environment can damage the existing spatial structure and be damaged by those who previously occupied the location (Sari et al., 2024).

Picture 1
Local school children participating in social activities to preserve the environment



c) Regional Approach. The regional approach refers to the space where the phenomenon occurs. In a broader sense, the regional approach refers to the existence of territorial boundaries that constitute the area of a study. Based on the boundaries of the Trisik Beach area itself, we can reveal the causes of these natural changes and uncover actions that can be taken to overcome these problems (Darmarani et al., 2020). In other

words, spatial analysis basically studies location differences related to important characteristics of the space or area. For example, administratively, the Trisik Beach area is located around the mouth of the Progo River, specifically in Sidorejo Village. The boundaries of the Trisik Beach area include several regions: to the north, it borders Nomporejo Village, Galur District. To the east, it borders Poncosari Village, Srandakan District. The southern border is adjacent to the South Coast of Yogyakarta, and the western border is adjacent to Karangsewu Village, Kapanewon. From an astronomical perspective, Trisik Beach is located between 70°58'41.02" S and 110°12'11.64" E, with an area of 46.72 km² (Sumartono et al., 2019).

In the context of local wisdom that can be observed in these social activities, ideas, values, or policies can be found that have grown and developed within a community based on their experiences and traditions in facing various challenges. Therefore, in relation to efforts to develop tourist attractions and preserve the environment at Trisik Beach itself, it can be understood that the events or activities carried out by these stakeholders, by periodically striving to ensure the safety of sea turtles, which are currently facing extinction, and the joint efforts of the community to jointly manage the environment of the beach through various activities, are a tangible form of local wisdom born from these activities (Wardana et al., 2021).

The integration of local wisdom into these routine activities has made a significant contribution to improving the quality of environmental management and the economic income of the community. The shared expression of local cultural values can spread and foster ecological awareness and responsibility among visitors and the wider community. In the context of environmental management at Trisik Beach, local cultural narratives such as traditional conservation practices of coastal communities have provided a strong emotional dimension for visitors in their efforts to understand the importance of environmental preservation. In addition to strengthening cultural identity, this approach also strengthens the connection between visitors and their environment, making learning more grounded and socially meaningful (Febriyanti & Wispandono, 2022). Overall, the integration of spatial approaches and local wisdom in the "Trisik Release Tukik" educational activity is a concrete example of efforts to strengthen environmental conservation initiatives. It also serves as a tangible way to raise visitors' awareness of the importance of remembering, understanding, and implementing concrete actions to manage the environment collectively and sustainably. The effectiveness of these social activities in a deeper sense is able to connect scientific knowledge with local cultural experiences for visitors to the activities (Miterianifa & Mawarni, 2024). Learning at this level, in the context of non-formal education, becomes more contextual, adaptive, and meaningful, and can address the basic educational needs in coastal areas that are fraught with geographical and social challenges. Therefore, this non-formal education model can serve as a worthy example for reference in developing more inclusive and locally relevant marine tourism management, and can be further replicated in other regions of the archipelago with similar characteristics regarding marine tourism attractions (Amyati et al., 2023).

CONCLUSION

Non-formal educational activities carried out by stakeholders in an effort to preserve the tourist environment at Trisik Beach show that an integrated spatial-based educational

approach combined with local wisdom is effective in improving the cognitive capacity of tourists and the wider community. In an effort to comprehensively understand the issues of disaster mitigation and environmental conservation, which are important to be applied periodically in various tourist destinations, and not only limited to beach and water-based tourist attractions. This form of education can be a breakthrough that can significantly benefit visitors in three ways, namely remembering, understanding, and applying the material. In a broader aspect, this action can reflect joint efforts through contextual, participatory methods that are in line with local characteristics. The use of media as a visual aid can ground visitors' spatial understanding of disaster risks in the surrounding environment, while narratives of local wisdom strengthen cultural identity and shared ecological responsibility. This approach is inclusive and can be applied in areas with limited educational resources because it does not rely on high technology. The successful implementation of this education model, which can be applied in all fields, especially tourism, proves that a simple yet effective spatial-cultural learning model can serve as a reference in developing basic disaster education programs, particularly in coastal areas with unique geographical and cultural characteristics. It can also serve as a starting point for developing relevant sustainable mitigation education.

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