

Ecotourism Product Development Strategy at Bunder Forest Park in Gunung Kidul

Nabilla Rasya Syaharani, Ike Nurjuita Nayasilana*, Supriyadi, Ana Agustina

Forest Management, Sebelas Maret University, Surakarta, Indonesia

*Corresponding Author: nayasilana@staff.uns.ac.id

Article history

Received	Received in revised form	Accepted	Available online
26 August 2024	10 April 2025	10 May 2025	24 May 2025

Abstract: Conservation area in Tahura Bunder has the potential for natural resources and environmental services that can supply the strengthening of the tourism sector. Special interest nature tourism through educational tourism/educational tourism is a special attraction. The strategy for developing educational tourism is a great opportunity in developing educational tourism. This research was conducted on March, 2024, taking qualitative data in the form of descriptive information, narratives, images, or symbols which were then analyzed using an inductive approach with quantitative descriptive analysis. The results of the study show that there is potential for landscapes and views that can be developed, as well as SWOT and alternative approaches that can be taken for the development of the BunderForest Park as an ecotourism product. landscapes and views that can be developed.

Keywords: Tahura Bunder, development strategy, ecotourism.

1. Introduction

Forests are one of the most valuable natural assets for human life and ecosystem sustainability. A forest is an ecosystem in the form of a stretch of land containing biological natural resources dominated by trees in its natural communion, which cannot be separated from each other [1]. According to FAO through *The Global Forest Resources Assessment* (FRA) program, a forest is an expanse of land with an area of more than 0.5 hectares that is overgrown by trees with a height of more than 5 meters and with a canopy cover of more than 10% or overgrown by trees that naturally (natively) grow in that place with a tree height of more than 5 meters. Land whose use is dominated by agricultural crops or land for urban areas is not included in the forest category. Indonesia is the third largest Mega biodiversity country in the world, known to have very high natural wealth, flora and fauna.

In addition, Indonesia is also an archipelagic country that has extraordinary natural resources that have great potential for tourism development with a lot of tourism potential and cultural potential. The wealth of natural resources can be in the form of natural capital that can be utilized in various sectors. Natural resources in the form of land such as forests and the vast ocean of Indonesia have the potential to be used continuously for the sake of development. This potential is an asset that must be utilized optimally through tourism.

One of the human needs that must be met is the need for recreation or tourist activities which generally aim to find another atmosphere and break away from routine. According to The World Tourism Organization (WTO), tourism activities are human activities that travel out of their home environment for no more than

one year on vacation, trade or other transactions, it is stated that in a broad sense, tourism is a recreational activity outside of domicile to escape from routine work or find another atmosphere [2]. At this time, tourism is starting to be looked at as one of the most promising sectors for regional development on a global scale. Along with its development, the concept of community-based ecotourism emerged, namely tourism that presents all resources. Natural areas not only develop environmental aspects for conservation, but also provide benefits for the surrounding community, as one of the efforts to develop rural areas as an effort to improve the community's economy.

Ecotourism can be seen based on its relationship with 5 core elements, namely natural, ecologically sustainable, the environment is educational, benefits the local community, and creates tourist satisfaction [3]. According to Fikile and Adanlawo [4], ecotourism is a sustainable form of natural resource-based tourism that focuses on nature-based experiences and learning, which is managed by minimizing impact, non-consumptive, and locally oriented (control, profit, and scale). The economic sector itself has a real contribution both to the country's foreign exchange, local revenue, and the absorption of human resources [5]. According to Utama [6], tourist attractions consist of natural tourist attractions, cultural tourist attractions, and artificial tourist attractions. Success in attracting tourists depends on the three important components offered to tourists in tourist attractions, namely attractions, amenities, and accessibility [7]. Attractions are all things that are interesting in tourist attractions so that tourists are interested in visiting these tourist attractions. Tourists visit tourist areas to acquire things that are not found in

their daily lives. A tourist attraction is called a tourist attraction if it has a variety of attractions that are able to attract tourists to visit the tourist destination area [8]. The development of an ecotourism area should be carried out to produce better ecotourism activities and benefit the community and managers.

Bunder Forest Park (Tahura) is geographically located at the coordinates of 110°32'55"- 110°33'35" E and 07°53'25" - 07°55'10" LS. Tahura Bunder is the only forest park that is still managed by the province while the other forest parks are managed by the government. The forest park is located along the edge of the Yogyakarta-Wonosari Highway, Gunung Kidul Regency, D.I.Yogyakarta Province. The circular Tahura area is currently under the management of the DIY Forestry and Plantation Service. Quoted from the website of the Yogyakarta Provincial Government, the Tahura Bunder area has an area of about 634.10 hectares which is administratively located in Patuk District and Playen District, Gunungkidul Regency. The topography of the Tahura Bunder area is generally flat to hilly, from the lowest to the highest is located at an altitude between 112.5 and 200 meters above sea level. Since 2017, tahura has been transformed into a conservation forest which was previously a production forest. Tahura is divided into 5 blocks consisting of utilization blocks, protection blocks, collection blocks, traditional blocks and special blocks.

The potential found in Tahura Bunder is in the form of scientific research and development, a collection of biodiversity richness, and the existence of an edutourism area. Tahura Bunder also has the potential for natural resources and environmental services that are quite good and strategic that can be offered as a *supply* element for the development of education-based natural tourism. The existing potential includes landscapes with unique *landscapes* and *views*, biodiversity potential, aquatic biological resource potential, and socio-cultural value. The potential of natural resources, of course, is supported by artificial resources that are used to enrich the treasures of objects and tourist attractions.

Based on the information above, it is known that there is a lot of potential in the Bunder Forest Park. Therefore, there is a need for a strategic analysis to develop ecotourism products in Tahura Bunder. Because this foundation is what makes this research carried out in the Bunder Forest Park and it is hoped that the results of this research can help area managers to develop their ecotourism products

2. Material and Methods

2.1. Materials

The used in this study was stationery, questionnaire paper, interview paper, camera, and GPS. This research was conducted in Tahura Bunder Gunungkidul, Special Region of Yogyakarta (DIY), in March 2024. Sampling was carried out in the Tahura Bunder Utilization Block

with a total area of 38.69 Ha or 6.30% of the Tahura Bunder area. The location of the utilization block was determined in most of the lowest areas of Tahura Bunder (the banks of the Oyo River) in Plot 15, Plot 19, and Plot 22 and around the Ngalang-Nguwot-Gading Road Trase which crosses Tahura Bunder in Plot 23 and Plot 24. The utilization block mostly coincides with the protection block (Plot 19 and Plot 15) as well as the traditional block and special block (Plot 23 and Plot 24).

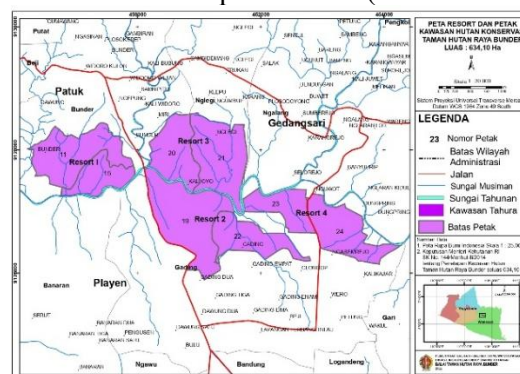


Figure 1: Situation map of Tahura Bunder

2.2. Methods

This type of research is qualitative descriptive analysis. Qualitative research focuses on a deep understanding of the context, meaning, and experiences of individuals or groups in the situation being investigated. This method collects data in an unstructured manner through interviews, participatory observations, or document analysis.

An interview was conducted by the researcher with the management of the Bunder Forest Park area, several questions were asked such as how the management system is, what are the benefits felt by the local community, and what are the advantages and potential that have not been developed from this area. In the participatory observations, the researcher placed himself in an environment or social group and then observed the behavior, interaction, and social practices of the people living around the Bunder Forest Park area.

The data obtained in qualitative research is in the form of descriptive information, narratives, images, or symbols which are then analyzed using an inductive approach, where new findings and patterns are developed from existing data. Data collection by observation, interviews and documentation. Data analysis with data reduction, data display, conclusion.

3. Results and Discussion

3.1. Physical potential of landscapes and view

The Great Forest Park or Tahura Bunder Gunungkidul, Special Region of Yogyakarta (DIY) is one of the forests and conservation areas that are used as natural tourist attractions. The oyo river is one of the characteristics of the Bunder Forest Park. The Oyo River is a river that is directly adjacent to Tahura Bunder. The Oya River is a type of periodic river that

flows through the northern and southern limestone hills which is formed due to karst rock erosion and the consequences of significant temperature changes. The water flowing in the oya river is quite clear so that it was used as a water ecotourism area in 2019. One of the reasons why this water ecotourism area is no longer operating is because of *covid*. Most of the community participates in the running of the ecotourism so that the existence of this water ecotourism can help support the income of the surrounding community. People who live around this tahura have routine events that are held together such as gymnastics and performances.

Since 2014, Tahura Bunder has had a management block that has been ratified based on the Decree of the Director General of KSDAE Number SK.345/KSDAE-SET/2015 concerning the Management Block of the Bunder Forest Park, Gunungkidul Regency, Special Region Province of Yogyakarta. The Management Block consists of a protection block, a utilization block, and other blocks. Blocks that can be used for the development of ecotourism are utilization blocks. The Tahura Bunder Utilization Block has a total area of 38.69 Ha or 6.30% of the total area of Tahura Bunder. The location of the utilization block is determined in most of the lowest areas of Tahura Bunder (the banks of the Oyo River) in Plot 15, Plot 19, and Plot 22 as well as around the Ngalang-Nguwot-Gading Road Trase which crosses Tahura Bunder in Plot 23 and Plot 24.

The utilization blocks are mostly bordered by protection blocks (Plot 19 and Plot 15) as well as traditional blocks and special blocks (Plot 23 and Plot 24). The utilization block is an area that has tourist objects and attractions so that it is possible to build infrastructure facilities that are able to support the use of environmental services, research, education, and natural tourism. This utilization block is used as a center for tourist activities in Tahura Bunder. Initially, the area near the highest point of Tahura Bunder was a utilization block with various facilities, but in the future it will be used as a protection block with projections as a protection of spring water sources both in Tahura Bunder and around Tahura Bunder. This is a recommendation of the Tahura Bunder Study that the Plot 19 area is directed for conservation activities in order to maintain spring water sources. In addition, the utilization blocks around the Oya River, precisely in Plots 20 and 21, are also directed to be protection blocks, both plots have steep topographic conditions and also high vegetation density so that they allow many wildlife. Changes in the transfer of block functions are highly recommended so that the utilization block can be used as much as possible.

The existence of the Utilization Block can also be used as an educational vehicle in accordance with the direction of the development of Tahura Bunder as Wana Wiyata (forest for educational activities). In this utilization block, there are several strategies that can be

developed to help the development of ecotourism in the Bunder Forest Park.

The location of Tahura Bunder which is directly adjacent to the Oyo River can add to the attraction for visitors. KTH Wanatirta is a forest farmer group that was established in 2018 which is tasked with managing water tourism. In 2020, KTH Wanatirta made preparations in an effort to develop water tourism on the banks of the Oyo River by conducting trials of water rides such as paddle duck boats, rubber boats, tubing and wooden boats for tourists. However, since Covid, this water tourism has not been operating again because of the cessation of activities which have caused several existing infrastructure to be neglected. This water tourism area has asphalt road access so that it is easy to pass. In addition, this area also has clean toilets and gazebos that can be used as a place to relax in quite large numbers. There are several boats that are still stored in this area, but they are no longer suitable for use due to lack of maintenance.

This water tourism has various benefits for the surrounding community, because they participate directly in the running of this tour. Therefore, a strategy is needed to develop the water ecotourism area again so that it can benefit many people. Based on the identification carried out in this area, there are several strategies that can be carried out, namely pruning so that this area remains safe for visitors. Repairing toilets and adding prayer rooms will complete the infrastructure in this area. Interpretation can be added so that visitors are more careful when in the area. Adding trash bins will also help maintain the cleanliness of this area. Repairing existing ships can also be done so that water tourism in Tahura Bunder has an attraction for tourists through water rides. In addition, the safety equipment that managers must have, one of which is a buoy. The Oyo River has a depth that varies from 0.5-12 meters so safety must still be considered. According to Hopkin [5] there are four options in risk reduction that must be considered by adjusting the severity and frequency of the resulting hazards. These management options include accepting tolerable risks, avoiding risks, reducing risks, and transferring risks.

The location of Tahura Bunder which is directly adjacent to the Oyo River can add to the attraction for visitors. KTH Wanatirta is a forest farmer group that was established in 2018 which is tasked with managing water tourism. In 2020, KTH Wanatirta made preparations in an effort to develop water tourism on the banks of the Oyo River by conducting trials of water rides such as paddle duck boats, rubber boats, tubing and wooden boats for tourists. However, since Covid, this water tourism has not been operating again because of the cessation of activities which have caused several existing infrastructure to be neglected. This water tourism area has asphalt road access so that it is easy to pass. In addition, this area also has clean toilets and gazebos that can be used as a place to relax in quite large

numbers.

There are several boats that are still stored in this area, but they are no longer suitable for use due to lack of maintenance. This water tourism has various benefits for the surrounding community, because they participate directly in the running of this tour. Therefore, a strategy is needed to develop the water ecotourism area again so that it can benefit many people. Based on the identification carried out in this area, there are several strategies that can be carried out, namely pruning so that this area remains safe for visitors. Repairing toilets and adding prayer rooms will complete the infrastructure in this area. Interpretation can be added so that visitors are more careful when in the area. Adding trash bins will also help maintain the cleanliness of this area. Repairing existing ships can also be done so that water tourism in Tahura Bunder has an attraction for tourists through water rides. In addition, the safety equipment that managers must have, one of which is a buoy. The Oyo River has a depth that varies from 0.5-12 meters so safety must still be considered. According to Hopkin [5] there are four options in risk reduction that must be considered by adjusting the severity and frequency of the resulting hazards, these management options include accepting tolerable risks, avoiding risks, reducing risks, and transferring risks.



Figure 2: Example of Deer Feeding Activity
(Source: Taman Safari Indonesia)

Apart from the fauna aspect, there is also development in the flora aspect of the arboretum. Bunder Forest Park has an existing area of plant collections which include a *native karst* arboretum located on plot 19. The *native karst* arboretum has an area of ± 6.5 hectares which is divided into several blocks (Figure 10). In this arboretum there are already several types of plants such as black durian trees, feathertrees and there are also several live stands such as eucalyptus, ylang ylang, sandalwood, mahogany, acacia. Arboretum means a place where various trees are planted and bred for research or educational purposes. Luxury is not the main element, the most important thing about an arboretum is that it will add many benefits to the environment (Figure 11). Arboretum is one of the environments in which it becomes a place or habitat for some fauna.

So that with the development of the arboretum, in addition to increasing tourist

attractiveness, it can also be increasingly useful for various aspects such as being a model for patterned greening that serves as a means of learning about conservation and biodiversity. In addition, the arboretum will also increase green open space, provide detailed references in the field of plants, plants, and biodiversity, plants, provide a field laboratory for botanical, ecological, conservation and horticultural education; preserve endemic and natural plant species; have conservation, aesthetic and economic value. The provision of plants that have attractive flower colors will also add to the attractiveness of visitors (Figure 12). Some plants are planted to give beauty to the arboretum such as star magnolia trees (*Magnolia stellata*), tulips (*Liriodendron tulipifera*), and trumpets (*Cecropia peltata*), these trees are an attraction in themselves because they have colors that can spoil the eyes.



Figure 3 Block division of Tahura Bunder Arboretum



Figure 4: Example of an Arboretum
(Source: Landmark Unpad Jatinangor)



Figure 5: Example of an Arboretum
(Source: Romantic Asheville)

Not only the development of ecological aspects (flora & fauna) is developed, but the beauty aspect also needs to be studied in order to increase the attractiveness of tourists to visit. Especially targeting tourists with special interests that provide interesting photo spots with interesting views. The process of introducing interesting locations will later be documented in the form of photos which will later be published through social media, so that in the hope that the photo can be seen by many people to be interested in visiting the location. The results of research from According Arini and Putra [9] show that social media makes the biggest contribution to tourists' interest in visiting because they will always access information about tourist destinations through social media first before they visit. The photo spots offered can be done by combining natural and artificial views such as engineering so that it looks beautiful.

Generally, it contains writing, flower arrangements, artistic forms and even photospots that test adrenaline, such as photos at heights or extreme photos. (Figure 13 & 14). Tahura Bunder is located in an area that has a satisfactory view, one strategy that can be developed is to add several photo spots. Photo spots can also add to the attractiveness of visitors and can also be a new characteristic of the Bunder Forest Park. Tourist attractions like that are now the main destination for tourists, especially millennial tourists.



Figure 6. Sample Photo Spot
(Source: Tribunnews.com)



Figure 7: Example of Photo Spot
(Source: IDN Times)

The management planning strategy that can be developed in ecotourism activities is the establishment of interpretation boards. According to Maulany *et al.*, [9] interpretation is the art of explaining the state of the environment to visitors who come to tourist attractions so that visitors who come increase their knowledge and realize and preserve the environment of the tourist attractions. This is an excellent opportunity for sustainable natural resource management. Providing interpretation boards can be done in several trees located in the utilization block by giving the interpretation board to the visitors. Local name, scientific name and some brief information about the tree (Figure 15). The criteria for a good interpretation board placement location include placing the board in a strategic location and easily seen by tourists; not disturbing and obstructing pedestrians; facing the right direction, such as in the direction where tourists can clearly see the interpretation object; considering the distance between the object and the position of the interpretation board placement; and also considering the beauty of the local environment. It is hoped that nature tourism actors can recognize nature and its systems so that their awareness of protecting nature will increase.



Figure 8: Example of Interpretation Board (Source: Synergy Media Advertising)

The strategy of planning and managing ecotourism activities requires a combination with facilities and infrastructure. This is important for better development. Management of facilities and infrastructure such as public toilets, trash bins, rest

areas, and prayer rooms. With the establishment of toilets in several areas will help tourists to feel comfortable in the area, a clean toilet will also be the main point for the place to be visited. Trash bins are one of the efforts to keep the environment clean, the manager will still need the help of tourists to participate in maintaining environmental cleanliness, one of which is by providing trash bins at several points. Places to rest such as chairs, or gazebos are also important to maintain the comfort

and safety of a tourist spot. Adequate lighting will help improve visitors' comfort and safety.

The natural tourism development strategy (ecotourism) in Tahura Bunder is carried out with a SWOT analysis approach, which aims to systematically identify various strategic factors in order to maximize strengths and opportunities, which at the same time can minimize weaknesses and threats, so as to meet all criteria for sustainable tourism development as shown in Table 1.

Table 1: SWOT and Strategy Analysis

	Strength (S) <ul style="list-style-type: none"> ▪ The potential for natural resources and environmental services in Tahura Bunder is very rich and diverse ▪ The diversity and distinctiveness of the flora and fauna place the area as a very strategic part to be developed as a tourism or education area. 	Weakness (W) <ul style="list-style-type: none"> ▪ Accessibility within the Tahura area identified hazards, namely roads that are slippery due to moss and potholes.
Opportunity (O) <ul style="list-style-type: none"> ▪ It is located on the side of the provincial highway so that the intensity of community mobility is more massive and easy. ▪ The community around Tahura Bunder has strong ties and communicates well so that ecotourism development can be done easily. 	Strategy (S-O) Conduct massive promotions through social media related to the potential in the Bunder Forest Park, as well as maximize the potential of the forest for visitors and the community in a sustainable manner.	Strategy (W-O) Increasing accessibility to the area by building and improving basic facilities and infrastructure that support natural tourism so that tourism potential can develop even more.
Threat (T) <ul style="list-style-type: none"> ▪ Forest security from theft of forest products or irresponsible destruction of community infrastructure can make a threat, and forest vulnerability in the form of forest fires in the dry season can occur. 	Strategy (S-T) A special team is needed to always monitor the security of the area in the Bunder Forest Park so that forest resources remain sustainable and the community prospers.	Strategy (W-T) Improve the quality and quantity of local human resources (local communities) so that they can be involved in participatory efforts to defend the region and be empowered in their own areas.

4. Conclusion

Based on the discussion, it can be concluded as follows:

1. Landscape and scenic potential There are other potentials that can be developed such as improving the arboretum, adding photo spots, feeding deer programs and providing interpretation boards.
2. The existing socio-cultural potential is the Tahura Bunder development area which is still thick with arts and traditions in Gunung Kidul.

3. Alternative development strategies can be carried out by increasing accessibility, improving facilities and infrastructure, improving water ecotourism, improving environmental hygiene management and access security, utilizing potential optimally, and increasing more qualified human resources.

Acknowledgement

The author would like to thank Bunder Gunung Kidul Forest Park for the permit to conduct research related to ecotourism. The author would also like to <http://dx.doi.org/10.22135/sje.2025.10.1.34-40>

thank all parties who have assisted in the completion of this research, as well as Sebelas Maret University for providing facilities for this research.

References

- [1] Republic of Indonesia, "Law Number 41 of 1999 concerning Forestry."
- [2] L. Hakim, *Dasar-Dasar Ekowisata*. Malang: Bayumedia Publishing, 2004.
- [3] J. Hill dan T. Gale, *Ecotourism and Environmental Sustainability: Principles and Practice*. Burlington: Ashgate, 2009.
- [4] X. A. B. A. Fikile dan E. F. Adanlawo, "The Potential Role of Ecotourism in Sustainable Development: A Systematic Review," *Journal of Ecohumanism*, vol. 3, no. 4, pp. 3356–3367, March 2024.
- [5] D. Abdillah, "Pengembangan wisata bahari di pesisir pantai Teluk Lampung," *Jurnal Destinasi Kepariwisata Indonesia*, vol. 1, no. 1, pp. 46-66, June 2016.
- [5] P. Hopkin, *Fundamentals of risk management: understanding, evaluating and implementing effective risk management*. New York: Kogan Page Publishers, 2018.
- [6] I. G. B. R. Utama, *Pemasaran Pariwisata*. Yogyakarta: ANDI, 2017.
- [7] M. Dzulkifli dan J. M. Masjhoer, "The measurements of tourist satisfaction levels on attractions, accessibility, and amenities in Pulesari Tourism Village, Sleman Regency," *Jurnal Pariwisata Terapan*, vol. 4, no. 1, pp. 48–58, September 2020.
- [8] M. Simanihuruk, "Tourist Attraction and Tourist Facilities Intentions to Visitor Satisfaction: Case of Sindang Barang Cultural Village," *E-Journal of Tourism*, vol. 6, no. 2, pp. 210–224, September 2019.
- [9] N. N. Arini and I. N. S. A. Putra, "Healing at Gunung Salak: Festival Budaya untuk Promosi Desa Wisata Gunung Salak Selemadeg Timur Tabanan Bali," *HUMANIS: Journal of Arts and Humanities*, vol. 27, no. 4, pp. 434–450, March 2023.