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Tourists perception toward public open space's physical elements (case study: Cermin beach)

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Abstract. *A well-designed public open space in the countryside attract tourists more than usual ones. As a tourism destination, public open space is not just for the recreational purpose, but also could support the local economy. Serdang Bedagai district has lots of nature-based tourism potential, such as a shoreline or beach tourism. Physical elements in this public open space as a tourism destination could attract tourists and affect tourists perception and loyalties. One of tourism destination which managed by local government and empowering locals is Cermin beach. This destination has public open space which has the possibility for social interaction. However, its physical elements tend to left behind compared to another similar tourism nearby. The aim of this study is to identify the quality of physical elements in public open space as a tourism destination based on tourism perception. This research used descriptive analysis with a qualitative method by observed site and a quantitative method by distributed questionnaire. The result indicates that Cermin beach developer is less aware of physical elements in this public open space, both physical carrying capacity and the hygiene throughly.*

1. Introduction

The existence of tourist destinations as one of the supporters of the economic movement encourage the government to continue to develop the existing tourism potential [1][2]. In its development, visitor perception towards tourist destinations led to the loyalty of tourists that impact on the determination of the next tourist destination [3][4].

Public spaces as tourist destinations should be able to provide visitors with space experience that complete the needs of visitors [2][5]. As a recreation space, public open space can take the form of a tourist destination that affects the social activities of tourists [6]. The most prominent element in public open space as a tourist destination is the physical element. Planning of physical element is very important because it can affect the activity in it. The quality of a good physical condition will provide a positive perception for visitors and visitors will spend more time in the space [7]. Not only that, this physical element can be a generator that tourists will be considered to continue to visit [8].

Serdang Bedagai Regency, North Sumatra has a 95 km long coastal area developed into a tourist area. Some tourist areas have been managed in such a way as to increase the number of tourists who come, but the condition of Cermin beach looks quite undeveloped compared to other similar tourism which will further impact on the perception of tourists that affect their satisfaction [9]. It emphasizes that the role of visitors is considered quite crucial in the development of tourism because it helps managers in understanding the context of space [4]. As a tourism destination, Cermin beach's physical



elements is still not attractive enough, which would give impact to the number of visitors. Whereas, Cermin beach is one of Serdang Bedagai tourism destination which is popular enough among people.

Based on this, it is such a need to do research related to the quality of physical elements of the public space as a tourist destination so it can give an idea of how managers should develop this tourist area so as not to lag behind other similar tourism nearby. Based on this, the problem that will be lifted is how the quality of physical elements of public space as a tourist destination based on the perception of tourists.

2. Physical elements of public open space as a tourism destination

The presence of open public space in community environment can improve the life quality for the visitors and become facilities to be able to compare social without limitation of space and time [4][10]. To optimize the activity that takes place, it takes a good and right space both regarding design and management [11].

The physical elements in a public open space are the main product especially in its role as a tourist attraction. These elements can be formed from the environment to provide meaningful ad experience for the visitors. Regarding planning and management, a public open space in which in this study is a coastal area that can consider such things as their function as the recreational facilities, as the conservation facilities, and as a facility that enables many users at once. To accommodate large numbers of tourist, this coastal area must have a considerable dimension that limits the wet area and facility area [12].

The planned design can provide an apace that allow visitors to interact with each other. Gehl [7] explains if public space that has a good spatial scale are the spaces that allow visitors to interact with each other and have an uninterrupted and disturbed circulation by other things. Not only that, a well physical dimension of space also affects the activity that occurs by adjusting to the existing conditions. This physical dimensions also makes space can be enjoyed both from inside and outside, including natural and artificial elements [10][13].

Table 1. The physical element maker of public open space

Element	Indicator
Spatial arrangement	Support the indoor activities
Space management	The provided recreational facilities
The scale of space	Ease of interaction between visitors
	There is no interaction barrier between visitors

Well planned physical elements can help the visitors in relaxation or recreational activity especially for children [14] (table 1). As a tourist destination, this public open space should be designed, promoted and coordinated to provide a satisfying experience [15], which will create a perception that will influence the traveler in determining the destination. Furthermore, this things can be used as an indicator in determining the quality of tourism [16].

3. Methods

The research location is a coastal tourist area of Cermin, Serdang Bedagai district, North Sumatra. This area has a public open space of $\pm 84,346$ sqm with a beach lip length of about 630.91 m (figure 1). The Cermin beach is a coastal lane from the waters of the Strait of Malacca belonging to the east coast of Sumatra which has a low brightness level [17], so it has turbid water conditions with grayish sand color.

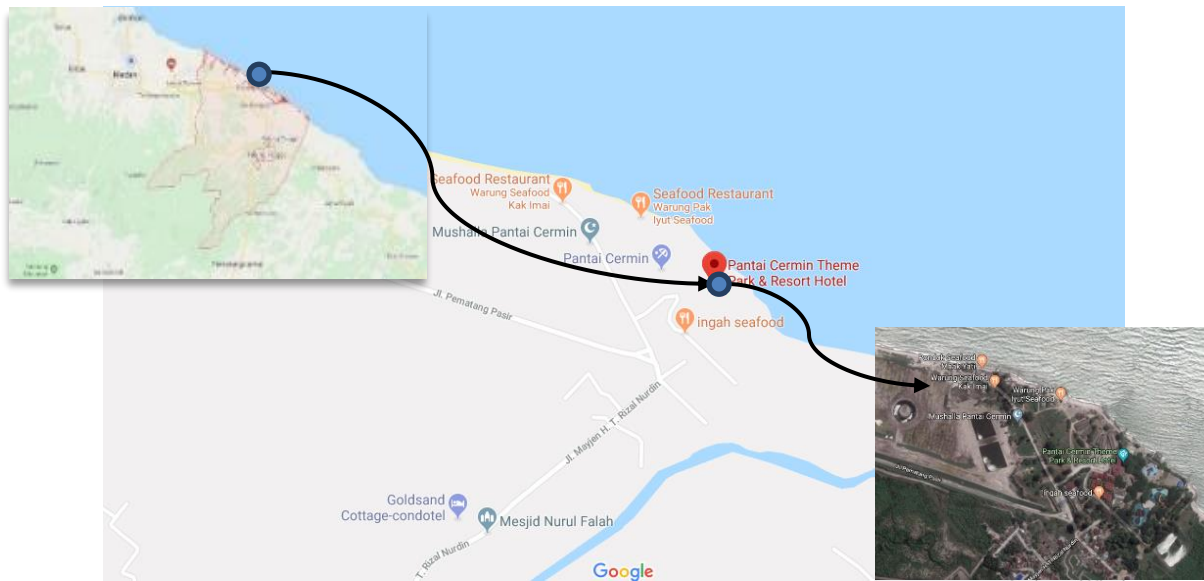


Figure 1. Research location

To obtain the perception of visitors to the quality of public open space as a tourist destination, then conducted descriptive research with mixed methods [18]. Variables and indicators of research obtained from the results of the literature review have been done. Based on this, primary data is obtained from questionnaires and field observations and secondary data in the form of location-related information and various literature required.

Data collection in the form of the questionnaires conducted in coastal tourism area Cermin. The sample selection was done by random sampling method which focused on the tourists of Cermin beach, Serdang Bedagai as many as 100 people because the number of population cannot be known for certain [19]. While the observation data is done by taking pictures in the study area.

To know the tourist rating, the quantitative data using the Likert scale as applied in Nasution research [20] is then tabulated by frequency method [21] and comparison of mean value applied by Meng and Uysal [22]. The quantitative and qualitative data obtained are then analyzed and interpreted based on the results of the previous literature review.

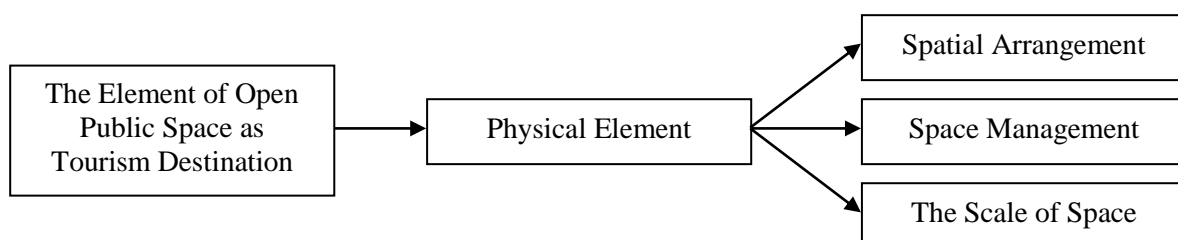


Figure 2. Chart Analysis

4. Result and discussion

The data of questionnaires shows the mean scores of tourists perception of the quality of physical elements in Cermin beach. Spatial arrangement in the area of Cermin beach has an average value of 2.77 which is in the range "less good", for space management, the average is 3.43 which is in the range of "good enough". The scale of the space assessed by the respondents earned an average of 3.43, in other words, the scale of public space open tourist area of Cermin beach is quite good (table 2).

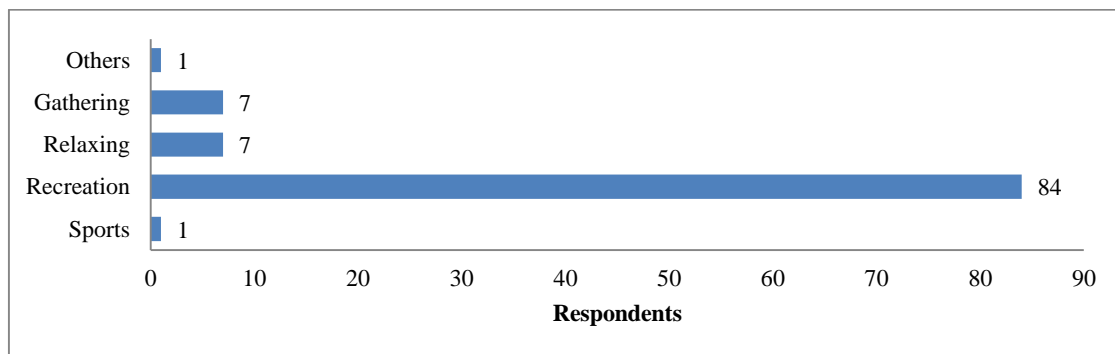
Table 2. Physical elements' mean score

Physical elements	Mean score
Spatial arrangement	2.87
Space management	2.77
The Scale of space	3.43

4.1. Physical elements study based on its spatial arrangement

As a recreational facility, the public spatial arrangement of Cermin beach tourism provides ample space for active activities, as well as some of shacks along the shoreline that can be used for leisure, as can seem in figure 1, the red lines stand for shacks. The shacks have spacing between rows of huts about 3 meters (figure 3). The shack is about 1.5 m x 2 m with the main material of wood and roof of rumbia. The elements support recreational visitors (84%), fatigue (7%), gathering (7%), sports (1%) and others (1%) (diagram 1). But also, there are some already damaged huts and in unsuitable conditions that interfere with the visual of the coastal tourist area of Cermin (figure 4).

**Figure 3.** Tourism destination's regulation**Figure 4.** Shacks' distance**Figure 5.** Shack's condition

**Diagram 1.** Tourism purpose

The influence of physical elements on visitor expectations is also explained by Hernández-Lobato et al. [19] stating that the elements of the tourist area environment to form the image of tourism for visitors who then encourage tourists to determine the destination tourism, which is supported by the data results of questionnaires spread in table 3. Data obtained indicate if the expectations of tourists to public open space Cermin coastal tourism spelled out good enough (3.00) (table 3).

Table 3. Tourists expectation

Tourists expectation	Mean score
Image destination	3.00

However, tourists judge if the arrangement is still not good (2.87) (table 2). This is certainly contrary to the opinion Vengesayi [23] which states that the importance of elements forming a variety of tourist attractions affect the image received by tourists. Based on the theory, there need to be improvements made to the damaged huts that do not provide negative perceptions for visitors.

4.2. Physical elements study based on its space management

This coastal tourist area of Cermin is managed by the government by empowering the local community. As public open space, there are no specific criteria for visitors who want to go to the coastal tourist area Cermin. It causes visitors who come from various backgrounds, both regarding the ages and areas of origin. The number of visitors indirectly increases the amount of waste generated. Seen from the observation that shows the amount of garbage scattered around the tourist area (figure 5). This condition is encouraged by the absence of garbage provided and lack of awareness of both managers and visitors to cleanliness. Not only people's waste but there also some mangrove's roots stranded in the shoreline which could endanger tourists and interfere with their activities (figure 6).

**Figure 6.** Many of waste around Cermin beach



Figure 7. Mangrove's root in Cermin shoreline

Also, the manager only relies on natural attractions from the beach Cermin to attract tourist. There are no other supporting attractions that allow for variations of activity for visitors, so the activity that occurs only around the game of water and relaxes, unlike other tourism nearby. If this condition keeps on going, there will be a possibility Cermin beach would lag behind, besides the uniqueness and the characteristic of tourism destination are prominent to make this destination as competitive tourism [8]. Likewise, visitors assess the attractiveness offered is quite good (3.04) (table 4).

Table 4. Tourism attraction

Element	Mean score
Attraction	3.04



Figure 8. Cermin beach shoreline

The results of the questionnaire which mentions if the management of public open spaces Cermin beach tourism area is still not good (2.77) (table 2). The data support the statement of Bedimo-rung [24] which states if poor management will affect how tourists judge the quality of open public road. Therefore, there should be special attention related to cleanliness and comfort in the open space of coast tourism Cermin. The developer should provide some trash bin all along the coastal to minimize the amount of people's waste, then plan variations of activities that will be the attraction so that visitors are willing to spend longer. Otherwise, there should be strategic management by increasing amenities and natural attraction [25].

4.3. Physical elements study based on its scale

Public open space is devoted to creating social interaction between individuals and groups in the absence of space and time constraints [4]. The observation results show that if the open space within the coastal area of the Cermin coastal area of approximately 630.91 sqm, has a large enough space scale, allowing visitors to have uninterrupted circulation paths and not encouraged by other visitors as described by [7]. This is supported by the distance between the lodge with the beach as far as 4-10

meters. These conditions form a space that allows interaction between visitors, coupled with the arrangement of cottages that tend to not have the distance from each other increasingly maximize social interaction that occurred. That fact is supported by the data from questionnaires which indicate tourists perception about the scale of space in Cermin beach is quite good enough (3.43) (table 2).



Figure 9. Cermin beach's scale

5. Conclusion

This research figured out that among those three elements, Cermin beach's space management is need proper attention. Because it can affect how tourists do their activities and its visual could leave some personal impression on tourists. This is unfortunate because Cermin beach is popular enough among people who visit Serdang Bedagai district. But, as a place for recreational or just to escape from routines, Cermin beach offer a quite atmosphere, unlike others destination nearby which have a crowded environment.

Regarding physical elements, the overall average quality is quite good. Visible from how visitors can interact with each other with the influence of the distance between the adjacent huts and space activities that no limits. However, regarding developing and spatial arrangement is still not good because of the lack of landfills provided for visitors and the existence of some huts that are not feasible to use. Therefore, managers need to pay attention related to the cleanliness and condition of the cottage that can disrupt the visual space so that impact on the feasibility of the space as a tourist destination. And the need for the development of physical elements that can create variations of tourist attraction in this space. Not only that, the safety of tourists activities in the open space of the Cermin beach from various objects carried by the coastal currents must be considered.

For the next research, there should be a study to figure out what impacts the tourist perception could give to destination images in Cermin beach, so the researcher could tell about why tourists should go to Cermin beach instead of similar destination nearby.

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