

# DIRECTION FOR CITY FOREST DEVELOPMENT AS AN OPEN SPACE IN SOUTH TANGERANG CITY (Case Study: BSD City Urban Forest Setu District)

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## **Abstract**

*BSD City Urban Forest is one of the Green Open Spaces in the Setu District Area, South Tangerang City. The urban forest which is located on Tekno Widya Street is included in the category of natural tourism. There are many facilities in it such as jogging tracks, children's playgrounds and many ornamental plants in it. It can be seen from its development that BSD City Urban Forest has potential advantages to be developed into the tourism sector, but the condition of BSD City Urban Forest is also underdeveloped due to the lack of supporting facilities. The purpose of this study is to determine the direction of the development of the BSD City Urban Forest in order to maximize the potential and overcome the problems that are owned by the BSD City Urban Forest. The method used in this research is qualitative and quantitative methods and uses development direction analysis to determine the development strategy to be carried out in BSD City Urban Forest able to make BSD City Urban Forests as an open space that is beneficial for the people of South Tangerang City and surrounding areas.*

**Key Words:** BSD City Urban Forest, Development Strategy.

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## **Preliminary**

Green Open Space has very important benefits in urban areas, the benefits to the lives of urban people can be felt directly and indirectly. The benefits that we can feel directly are of course physical comfort (for example shade and fresh air), while the benefits of green open space that we cannot feel directly but in the long term are the protection of water systems and the conservation of biodiversity or biodiversity. Basically, urban green open space has the main function as the main supporter of the sustainability of urban community life, so that the existence of Green Open Space in urban areas is a requirement that must be fulfilled for a healthy community life.

Urban forest is one of the main needs for a city by providing 30% of green open space from the total area of the city. One manifestation of green open space in South Tangerang City is by providing urban forests. The city forest should function as a catchment area and recreational vehicle for local residents. Lack of community interest to visit the city BSD City Forest is one of the government's failures in the socialization of the importance of parks as a vehicle for interaction, especially for residents who live in urban areas.

The urban forest located on Jalan Tekno Widya, South Tangerang City is included in the category of natural tourism. In addition, the jogging track facility, many people who visit to exercise. Visitors who come to the BSD City Urban Forest are free of charge. The City Forest of BSD City is indeed open to the public from 6.00am to 6pm.

The city forest of BSD City has an area of around 7.5 hectares, this urban forest is often visited by tourists who want to exercise or relax. In addition to exercising and relaxing, the BSD City urban forest is also often used as a

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recreational area in South Tangerang City. In addition, the location of the BSD City urban forest adjacent to the Jalan Raya Victor, makes the forest have its own charm. On Jalan Raya Victor there are stalls selling various kinds of ornamental plants, such as orchids. This has become one of the potential attractions for visitors who come to the BSD City Urban Forest.

Based on the existing conditions, BSD City Urban Forest has a poor condition and is poorly maintained. This condition can be seen from the condition of the forest which is full of scattered rubbish and many facilities in the damaged and untreated BSD City City Forest area. Such forest conditions will affect the level of visitors who come and give a bad impression of visitors who come.

Based on the condition of the urban forest identification characteristics as an input in the development of an appropriate urban forest, in order to maximize the potential of the urban forest and to overcome the problems that become BSD City's City Forest shortages. This is done with the hope that BSD City Urban Forest will be able to become a more developed urban forest while still maintaining its natural preservation.

### **Research methodology**

The method used in this research is quantitative and qualitative methods. Quantitative methods are used to examine populations and samples from this research study. In this research study, the sample is visitors who come to BSD City Urban Forest.

Qualitative method, is a method used to answer certain phenomena and explore a certain meaning in this research study. While the quantitative method, is a method used to calculate answers from populations or research samples.

### **Population and Sample**

The sampling technique for the questionnaire in this study was done through the calculation of the number of visitors. This is intended to determine the population, i.e. city bsd city visitor. The population in the city bsd city forest is  $\pm 180$  people / day.

Based on this statement because the population of more than 100 populations, the sampling in this study is a random sample (random sampling). For the sampling technique in this study is to use the formula Taro Yamame or Solvin (Prof.Dr.Arikunto Dalam Putra, 2015) as follows:

$$n = \frac{N}{Nd2 + 1}$$

Information:

n = Minimum sample

N = Population

d = confidence level (90%)

With the following formula, a sample of the city forest is obtained

BSD City City Forest

$$n = \frac{180}{180(0,1)^2 + 1} = 64,28 = 65$$

## **Results and Discussion**

### **Analysis of BSD City Urban Forest Characteristics**

#### **A. Analysis of Forest Characteristics by Area**

The South Tangerang region has the BSD City City Forest, which was inaugurated by Mrs. Airin Rachmi Diany as the Mayor of South Tangerang. For urban forest area at least has an area of 0.25 hectares or at least 10% of the area of an urban area. BSD City City Forest has an area of  $\pm 7.5$  hectares, with this area indicating that BSD City City Forest is included in the urban forest

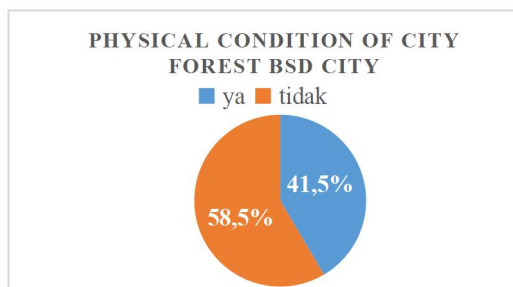
#### **B. Analysis of Characteristics of Urban Forests Based on Form and Function**

Based on its shape, BSD City Urban Forest is a grouped urban forest, in which there are protected trees and many entertainment and sports facilities are available. So that many people come to relax in the City Forest of BSD City. Whereas when viewed based on its function, the BSD City City Forest physically functions as the lungs of the city, and as a protector around the river channel and so on.

### C. Analysis of physical condition and facility availability

Based on the results of the field survey according to its physical condition, BSD City Urban Forest has a poor physical condition and is poorly maintained. This condition can be seen from the many piles of food waste and dry leaves waste that are along the streets of the BSD City Urban Forest area.

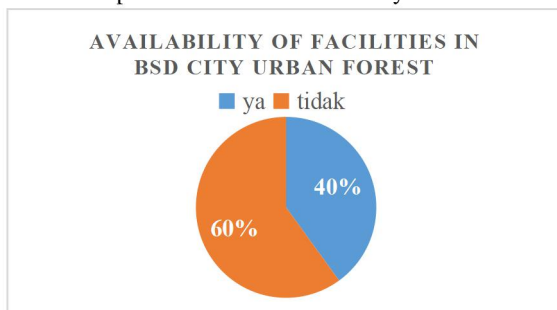
Reinforced also by the answers of respondents who visited the City Forest of BSD City, of the 65 respondents who were visitors of the City Forest of BSD City, 41.5% of respondents stated that the forest was well maintained while 58.5% of respondents stated that the forest had not been maintained with good.



Source: SPSS Data Processing Results 21

**Figure 1. Diagram of Respondents' Perceptions of the Physical Conditions of BSD City Urban Forest**

When viewed from the availability of its facilities, BSD City Urban Forest has incomplete facilities. This can also be seen from the respondents' answers related to the availability of facilities in the City Forest of BSD City, from 65 respondents, 40% of respondents stated that the City Forest of BSD City was equipped with complete facilities while 60% of respondents stated that the City Forest of BSD City did not yet have availability complete facilities.

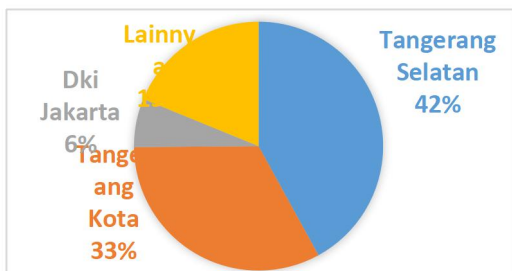


Source: SPSS Data Processing Results 21

**Figure 2. Diagram of Respondents' Perception of the Availability of Facilities in BSD City Urban Forest**

### Analysis of Visitor Characteristics

#### A. Characteristics of Visitors Based on Residence

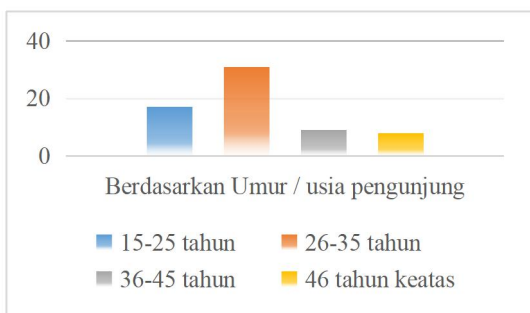


Source: SPSS Data Processing Results 21

**Figure 3. Percentage Diagram of Respondents by Residence**

So it can be concluded that most or dominant visitors who come to the City Forest BSD City come from around the South Tangerang area. The origin of the visitors who are still in the area of South Tangerang has a relatively close to the location of the City Forest BSD City in the District Setu, South Tangerang City

**B. Visitor Characteristics Based on Age / Age**



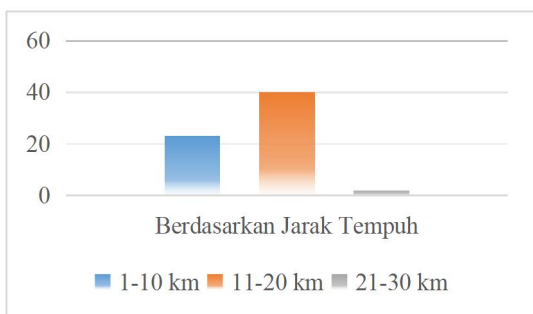
Source: SPSS Data Processing Results 21

**Figure 4. Respondent Graph Based on Age / age**

It can be concluded that the dominant age or age of visitors to the City Forest of BSD City is in the age group of 26-35 years. In this age group, it can be said that these visitors are in the productive age group.

**Visitor Behavior Analysis**

**A. Based on Mileage**

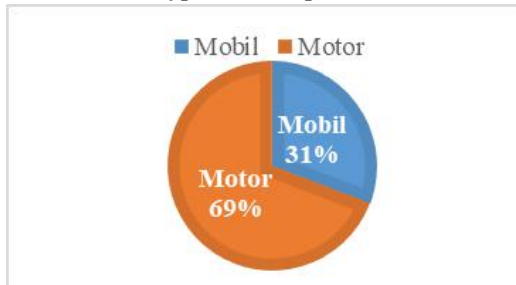


Source: SPSS Data Processing Results 21

**Figure 5. Respondent Graph Based on Distance**

So it can be concluded that visitors who come to the City Forest of BSD City are more dominant in a distance of around 11-20 km. Because the location is on the border of Bogor Regency and with a distance that is not too close, many visitors come from the north and east of South Tangerang.

**B. Based on the Type of Transportation Used**

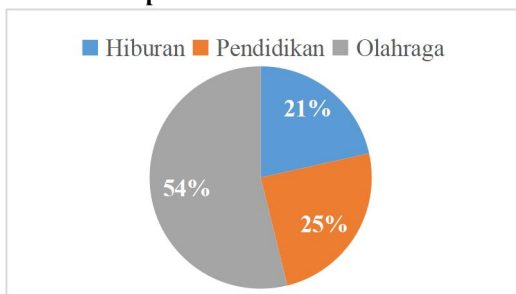


Source: SPSS Data Processing Results 21

**Figure 6. Percentage Diagram of Respondents Based on Transportation**

So it can be concluded that the majority of visitors who come to the BSD City Urban Forest use motor vehicles.

**C. Visitor's Purpose**



Source: SPSS Data Processing Results 21

**Figure 7. Percentage Diagram of Respondents Based on Visitor's Purpose**

So it can be concluded that visitors who come to the City Forest BSD City aims to exercise.


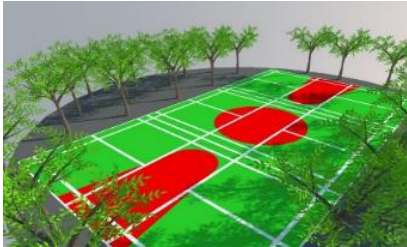
**Analysis of BSD City Urban Forest Development Direction**




To find out the direction of development that can be done in the City Forest of BSD City by knowing the standard facilities and existing conditions. Urban forests have an area of at least 0.25 Ha. However, BSD City Urban Forest has an area of 7.5 Ha, this area is more than the minimum area of Urban Forest. For this reason, in developing City Forest, 80% of the City Forest BSD City can be assumed, while 20% of the City Forest area is used for the development of City Forest Facilities and Infrastructure which is divided into parking lots, sports arenas, playgrounds, roads and toilets .




For more details, see the table:

**Table 1. Direction of BSD City Urban Forest Development**

No	Analysis	Development Direction
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<p>1</p>	<p>Based on the existing parking lot conditions in the City Forest of BSD City, the car park has fulfilled the standard for providing parking space. But the unavailability of parking lots for motorized vehicles is one of the shortcomings of the City Forest of BSD City, so many visitors who bring motorized vehicles must park in the car park.</p>	<p>Judging from the existing conditions, things that need to be done as one of the directions of development that can be done in the City Forest of BSD City is to add an area or parking area for motorized vehicles. So it can be assumed that the direction for developing parking lots is 3% of the area of urban forest.</p>  <p><b>Example: A motorized parking lot</b></p>
<p>2</p>	<p>Based on the existing conditions in the City Forest BSD City there is no sports arena, but only empty land that is not utilized. For this reason, it is necessary to provide a sports arena by utilizing the vacant land.</p>	<p>Judging from the existing conditions, the thing that needs to be done as one of the directions for the development of the BSD City Urban Forest is to provide a sports arena. In the existing condition there is an empty land with a size of about 16 meters x 15 meters which is enough to be used as 3 badminton fields. In addition, the three badminton courts can also be used as a playing field for basketball.</p> <p>The provision of the sports arena is done to meet the provision of facilities in the City Forest of BSD City that can be utilized by visitors who come. So it can be assumed that the direction of the development of sports arenas is 7% of the urban forest area.</p>  <p><b>Example: BSD City Urban Forest Sports Arena</b></p>
<p>3</p>	<p>When viewed based on its existing conditions, BSD City City Forest does not have a playground area, but only has vacant land which is used as a playground. For this reason, it is necessary to provide a playground and playground facilities. This was done, in order to remember visitors who come from the age group of 26 years to 35 years.</p>	<p>Judging from the existing conditions and analysis that has been done, the direction of development that can be done is to add a playground area that is equipped with playground facilities (play area for children) and an area for visitors with age groups 26 years to 35 years. Provision of playground facilities is done because most visitors who come with groups of 26 years to 35 years tend to carry children. So that the provision of playground facilities is needed for visitors who come. So it can be assumed the direction of the development of playgrounds at 6% of the area of urban forest.</p>

		 <p><b>Example: Playground Forest City BSD</b></p>  <p><b>City</b>  <b>Example: Areas for visitors from 26 to 35 years old.</b></p>
	<p>Based on the existing conditions, the provision of roads in the City Forest of BSD City has not met the standards and has unfavorable road conditions, this can be seen from the number of damaged roads.</p>	<p>Judging from the existing conditions and the results of the analysis that has been done, the direction of development that needs to be done is to provide or add to the road and make improvements to the damaged road. Roads that need to be provided are pedestrian paths and jogging tracks with a width of 1.5 meters and paths for bicycles with a width of 1.5 meters. So that the path provided has a minimum width of 3 meters, this is done to meet the standard provision of roads in the urban forest and provide comfort for visitors of the BSD City Urban Forest. So it can be assumed that the direction of road development is 3% of the urban forest area..</p>  <p><b>Example: Road in BSD City Urban Forest</b></p>
<p>5</p>	<p>Based on the existing conditions in the BSD City Urban Forest, there is only one toilet facility at the front of the forest. So it can be concluded that the availability of toilets in the forest has not met the needs of visitors. Because if visitors are in the back of BSD City Urban Forest, visitors will find it difficult to reach the toilet.</p>	<p>Judging from these conditions, the direction of development that needs to be done is to add to one toilet facility in the City Forest of BSD City. The toilet facilities are placed in the back of the forest, so that visitors who are in the back of the forest are able to reach the toilets available in the City Forest of BSD City. So it can be assumed the direction of the development of public toilets by 1% of the area of urban forest.</p>

		 <p><b>Example: BSD City Urban Forest Public Toilet</b></p>
	<p>Based on the existing conditions, because the BSD City Urban Forest area is not equipped with trash facilities, the forest area tends to look dirty and unkempt. In addition, there is no trash bin, making the visitors who come to throw garbage in any place until they become piles of garbage.</p>	<p>Judging from the existing conditions and analysis that has been done, the direction of development that can be done is to provide a trash can at the point that is the center of the crowd around the City Forest of BSD City. For example, placed around the play area, sports area and so forth.</p>  <p><b>Example: BSD City Urban Forest Bins</b></p>
	<p>Based on the existing conditions, the information boards available in the City Forest of BSD City do not contain all the information contained in the forest. So the addition of information boards is needed.</p>	<p>Judging from the existing conditions and the results of the analysis that has been done, the addition of information boards is needed to facilitate visitors who come. The information boards will be provided at the front of the forest, the back of the forest and in every area in the forest. The information board will be equipped with a map of the location of the forest area, rules and directions for going to certain areas.</p>  <p><b>Example: Information Board</b></p>

**Conclusions and recommendations**

**A. Conclusion**

1. BSD city forest has different forest characteristics from other urban forests:
  - a. BSD City City Forest is an urban forest with a grouping form, in which there are protected trees and many available entertainment and sports facilities as well as the largest open space in South Tangerang City.
  - b. BSD City City Forest serves as the lung of the city of South Tangerang, and as a protector around the river path.
2. Factors that influence the community to visit the city forest bsd city:
  - a. Visitors who come to the city bsd city forest come from the southern city of tangerang also strengthened by the distance of visitors between 11-20 km.



- b. Visitors who come to the city BSD city forest are aged between 26 to 35 years, which is as much as 47.7%, with this age many visitors come with children.
  - c. Many visitors who come to the city BSD city forest aim to exercise
3. BSD City urban forest is a city forest that is visited by many people for the purpose of sports and recreation, but the urban forest is not supported by the availability of facilities, so it is necessary to develop, add and improve some facilities in the BSD city urban forest such as the facility parking requires 3% development, sports arena requires 6% development, public toilets require 1% development, Roads require 3% development and playgrounds require 7% development.

## **B. Suggestion**

1. Making the city forest BSD city as an open space facility for the people of South Tangerang and surrounding areas
2. Add some facilities that support the visitors of the city BSD city forest.
3. Improve the care of the urban forest of BSD City and the facilities contained therein.
4. Hold an event in the city BSD city forest to attract the visitors who come.

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