

Exploring Street Furniture Problems for Public Space in Ragunan Zoo

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Abstract: This study identifies and analyzes existing street furniture issues in public spaces in the Ragunan Zoo area. The condition of street furniture in Ragunan Zoo, especially in the picnic area is the main concern in this study because the existing street furniture facilities in the area is inadequate and need to meet the basic need of its users. In order to achieve the goal, sustainable development of street furniture need to be designed according to user need this present and in the future. This study uses qualitative method with descriptive analysis approach with literature study review on public space and street furniture including observation and interview to the users about the feasibility of street furniture in the location. The results of this study in the form of data and recommendations of sustainable design solution that can be used as a reference for the design of street furniture in the future. This study also seeks to improve the quality of street furniture in the public space at Ragunan Zoo.

1 INTRODUCTION

Several cities in the world today are starting to see the need for public spaces to contribute significantly to the quality of life in urban communities, both individually and socially. Known city managed to cultivate public space for its community expressed as a city that managed to understand the social, cultural, economic and sustainable development needs of the community. The role of success of a public space is inseparable from the completeness of supporting facilities in the public space, which is called street furniture. Street furniture facility is a series of public facilities placed in public spaces with various goals of good, functional, aesthetic, identity, and others. Included in the street furniture facility include the object of a bench or seat, street lights, waste bin, plants, directions, parking, places to sell and more. Street furniture other than as part of the public space facility also has the added impact of being able to raise the image of a place when the place has become comfortable, safe and attractive. Seeing the role of street furniture is big enough in improving the function of public space in urban areas, it is necessary to study the public spaces in urban areas, especially in the capital city of Jakarta which is part of the world's big cities.

Ragunan Zoo located in the South Jakarta area was chosen as a place of study by looking at the condition of Street furniture is inadequate while the needs of visitors continue to increase. Since its establishment in 1966, the Ragunan Zoo has undergone many changes and currently has a mission as one of nature conservation, education, research and recreation places as well as water catchment areas, urban lung and green open spaces. With an area of + / - 140 Ha which is filled with various trees and inhabited by more than 2025 scarce animals, Ragunan zoo has become an attractive destination for citizens of Jakarta and surrounding areas as a place of recreation (PoskotaNews, 2018). This study will identify the problems of street furnishing in the public area, especially in the picnic area at Ragunan Zoo. In general, street furniture has standard criteria in its application in the public space, but the condition is not the same in all places because each location has problems and needs of different street furniture. Field conditions that do not support the activities of its users are part of the problems that arise in the application of street furniture and as a barometer used common street furniture criteria to assess how big the problem.

2 METHOD

This research uses descriptive method of analysis that identifies and analyzes existing street furniture problems in the picnic area in Ragunan Zoo area. The study begins with observation of the condition of street furniture and the behavior of visitors in using street furniture in the picnic area. This is done to determine the form of activity patterns that are done by visitors in the picnic area and what are the needs of visitors in doing these activities. The relationship between activities and facilities is a reciprocal relationship that complement each other so that activities can be done comfortably and safely. To help analyze the problem, used the criteria of street furniture, namely; (i) visitor type: anyone using the picnic area (age, gender and number), (ii) Activities: any activities undertaken during the picnic area, (iii) Weather and environment: weather and environmental conditions around the area picnic. To complete the results of observations conducted interviews to visitors as perpetrators who use direct street furniture in the field. Form of interviews in the form of questions related to the criteria of street furniture is the profile of visitors, activities carried out in the picnic area, What needs are needed related to weather changes and opinions of visitors about the existing street furniture facilities and the last opinion of visitors about the environment in the picnic area. To analyze the results of observation and interview objectively, analysis of literature study that discusses the function of public space and street furniture as a reference theory in analyzing the problems found.

3 RESULT AND DISCUSSION

3.1 Definition of Public Space

Summarize the opinions of some experts, public space can be defined as an area or space used by the community in carrying out their activities either individually or in groups. Public spaces relates to all those parts of the built and natural environment where the public has free access. According to Regulation of the State Minister of Indonesia (2007), the definition of public space is the spaces within the city or the wider region either in the form of area / area or in the form of elongated area / pathway where in its use is more open which basically without building. It encompasses: all the streets, squares and other rights of way, weather

predominantly in residential, commercial or community/civic uses; the open spaces and parks; and the public/private spaces where public access is unrestricted. It includes the interfaces with key internal and private spaces to which the public normally has free access (Carmona, 2010).

Various activities that can be done by the public in the public space, Zhang and Lawson divide the activities in the public space into three activities, namely; (i) a process activity that is a transition from two or more main activities. Forms of activity usually move from one place to another such as from house to kiosk, from house to school, (ii) physical activity carried out in the form of interaction between two or more people who directly communicate or other social activities, (iii) a transition done without a specific purpose alone, such as sitting watching the scene or other (Zhang, 2009). In relation to social activities in the public sphere, there are several criteria of social activity in the public space that can be measured success. One of them is used by Mehta by using several variables to measure and arrange good public space index, which is (Mehta, 2007):

1. Intensity of use measured by the number of people involved in static and dynamic activities in the outer space.
2. The intensity of social activity measured by the number of people in each group involved in static and dynamic activities in the outer space.
3. The duration of activity measured by how long the time people used to indulge in the outer space.
4. Variations of use measured by the diversity or quantity of activity typologies carried out in space.
5. Diversity of use measured by variations of use by age, sex and more.

By using the index can be measured effectiveness of public space activities conducted by the community and can be used as a guide in the successful implementation of public space.

3.2 Definition of Street Furniture

Street Furniture is a term used for a collection of objects and equipment installed on the streets or public areas for various purposes, including benches, street lamps, public toilets, kiosks, dumps, bus stops, walkways and more. Included in it are advertising objects and the like. Street furniture is part of the public space and becomes different when applied in

different public spaces. Selection of street furniture should be determined based on the needs of the community or community users. And street furniture is prepared based on the results of the analysis of existing patterns of use in order to serve its purpose effectively. Designing street furniture costs not much because the street furniture produced must be quality because of its universal and durable usage. Placement of street furniture should pay attention to various factors and based on the results of on-site analysis. So the placement should be in place that really need.

There are various approaches used to select or design street furniture, for example as the identity of a place, integrated with existing facilities or serves as a work of art. An important consideration in designing street furniture is how it affects the safety of users on the road and in public areas. In general there are five basic criteria for selecting and fixing street furnishings in the public space: (i) Function: seeing how important an object is and how it can meet its objectives; (ii) Determining the location and where each object should be located / layout, (iii) Design, form and appearance, (iv) Endurance and strength of the object, (v) Cost of manufacture (Evyapan, 2000). To plan the street furniture needs to set the type of public space that will be used, whether the street, plaza, mall, park or recreation area. Questions that must be answered after knowing the location and place was who the potential users of the public space, for what use and when the time of its use and how street furniture can serve the needs of its users.

Usually the application of street furniture has been planned as part of a wider design concept in order to succeed. It takes consideration and consideration in depth before determining the making of street furniture, such as (i) Sustainable material, environmental character and weather conditions, (ii) Whether street furniture should be made to follow the existing object or need new identity. And the last is the ease of care and facilities that are easily accessed by the user. Placement of street furniture on site should also be based on its function. In accordance with the conditions on location and overall design. Appearance of street furniture should not look messy should look neat and functional. In addition street furniture also does not deter other users, the pedestrians or other facilities users.

3.3 Criteria of Street Furniture Design

Street furniture facilities should be designed for universal use so they can be used by disabled people, children and the elderly. The position of street furniture is also expected to affect and stimulate the behavior of its users, such as the seating arrangement in the public space is made close so that users can interact or socialize, or the placement of the trash should be easily reached by users and according to function so that cleanliness can be maintained. Street furniture has several criteria for placement in the public space can be maximized, namely; (i) prioritizing safety and security with non -sharp design or injury, (ii) The use of weatherproof materials such as sunlight, rain and wind. Street furniture is widely placed in open public spaces that are exposed to the weather so it must be made of strong and safe material. The types of materials used in street furniture include iron, wood, stone, cement, recycle materials and other materials. Material selection depends on the needs and design constraints made such as weather resistance, easy to maintain and who the user. In addition, materials should be made of non-combustible materials such as metals, bricks or stones. Where materials such as wood should be avoided in areas that have a fire risk, (iii) Location also determines how the design of street furniture will be made. Whether the street furniture is in the center of the building, on the sidewalk or inside the park, (iv) Visual design is an important consideration as it is part of the attraction and identity of the public sphere, (v) Disability users are part of the community which should be considered in the design of street furniture. Because of the nature of street furniture is a facility in public spaces that serve all levels of society.

The scope of public spaces that became the area of this research is a picnic area located in the strategic location of the Ragunan Zoo. The picnic area is surrounded by a fairly large road that can be passed by 2 cars and can be used by pedestrians and some vehicles such as motorcycles and operational cars. The location of the picnic area is a strategic area because it can be accessed from various directions either from the north entrance, south entrance, west entrance and east entrance. Seeing the location of the strategic, no wonder this location to be a resting place for visitors who have been tired of traveling around the area Ragunan Zoo. Problems found in the picnic area by using the criteria analysis of street furniture are:

3.3.1 Type of Visitor /Users

Category of visitors who come to the picnic area is divided into 2 groups: small group consisting of 4 - 8 people and large group more than 15 people. For small groups it usually consists of adults, children and the elderly and usually uses a picnic area for only a few hours. This is because they spend more time around the new Zoo area they are resting in the picnic area, but some are aiming for a picnic without going around. As for large groups usually use picnic area almost all day. This large group is generally a community such as school children, employees or large family associations. Activities they do more diverse. Both groups have different activities and time duration in using the picnic area. Grouping of this group based on the results of observations on location, so this data can be used to identify problems street furniture on the location.

3.3.2 Activities

From the two categories above groups in each know have different activities and duration of time in using the picnic area. Where for small groups consisting of adults, children and the elderly most of the duration is shorter than the large group. And the activity is less than sitting, eating and drinking. As for large groups of activities carried out are sitting, eating, drinking, entertainment such as singing and dancing together. Sometimes done from morning until late afternoon.



Figure 1. Picnic Activities (YS doc).

3.3.3 Design

Type of street furniture in the picnic area consists of; park benches made of iron, metal, cement and wood with different designs; Garden lamp; bins with various sizes made of plastic and iron. The third type of street furniture is street furniture contained in the picnic area and looks less used by visitors. Although it seems there are benches that can be used as a place to sit but visitors feel more comfortable to sit on the grass or soil. This is because the existing bench is not sufficient and the shape is less comfortable.

While the existing garbage is placed quite far from the picnic area so less used by the visitors. This is seen from the trash that is still scattered in the picnic area. While the garden lights are more functioning at night as a garden lighting facility.



Figure 2. Street furnitures in picnic area (YS doc).

3.3.4 Climate and Environment

Around the picnic area there are also many food and beverage sellers offering their selling. They use pedestrian walkways as a place to sell. The sellers mostly sell bottled drinks as well as local foods such as *pecel*, *kerak telor* and fried noddle. There are also some sellers who sell toys and picnic accessories. They sell food on a small table brought by the sellers while the toy sellers are selling on the ground. This condition makes the environment around the picnic area to be unattractive and not well ordered. It also created unhealthy competition among sellers. The environment around the picnic area is quite comfortable because it is surrounded by many trees that are quite lush and shady so many visitors who sit under the trees to avoid the heat of the sun. But when it rains they must find a place to shelter because it is not safe for them to take shelter under the trees. In the picnic area there is no permanent shelter except at stops along the road. This condition is quite apprehensive because the existing street furniture facilities do not support the frequent weather changes.

4 CONCLUSIONS

From the discussion that has been done above then there are some results that can be concluded that is;

1. many public spaces in Jakarta that do not have adequate street furniture facilities, (ii) public spaces such as picnic area at Ragunan Zoo are a place where Jakarta people do recreation with family and community on weekends, so they need street furniture facilities that can support their picnic activities,

street furniture issues that need to be addressed in the picnic area ie sitting facilities that do not fit the

type of user groups, ie small and large groups, both in terms of number and design, (iv) placement and design incompatible and inappropriate trash bins. The size of the trash can follow the type of garbage and the designation of the trash used. And also interesting designs can shape the behavior of people to get used to throw garbage in place, (v) Design and placement of stalls sellers in picnic area location needs to be done to arrange the picnic area becomes more comfortable for visitors and sellers. Kiosks need to be designed by raising the local identity and culture of Jakarta to see most of the food being sold is local food. Location kiosk placement also needs to be in the order so that does not cover the access of other street furniture. The conclusions of this study indicate that community participation is an important element in creating street furniture in accordance with public space and the need of designing with sustainable design will cover all the need of user at present and in the future. The insights gained from this study will be useful in improving the quality of street furnishings in public spaces for the community.

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