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The Application of Pedestrian Ways Design Concepts as an Implementation of Sustainable Urban Open Spaces

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Abstract

The main factor of the urban development in a physical aspect is the increasing of population. Semarang, Jakarta and other cities have many urban open spaces. Every government is expected to provide the urban open spaces equipped by some pedestrian ways to reduce both the traffic jams and carbon monoxide as a sustainable concept implementation. In the research methodology, the thermal comfort variables would be analyzed by quantitative methods on the time series. Meanwhile, the activity supports, design of urban open spaces and culture would be reviewed by qualitative approaches. This study will result guidelines to design the comfortable pedestrian ways.

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1. Background of study

According to Carr, a city, its government and public open spaces are units that cannot be separated where all aspects are complementary. Urban space has a complex meaning associated with the activities of the city and social interaction as well as its properties. So a city needs an open space in the non-physical elements of behavior and culture. The Indonesian Ministry of Public Works regulates the percentage of open space within a spatial urban area through the regulation number: 8/2008 on the Spatial Urban Planning. Based on the government regulation, the open space is 30% of the entire city area

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consisting of 20% public open space and 10% private open space such as open spaces in the houses or buildings. Human activities in the city public spaces consist of various purposes such chat, bike ride, sports, relaxation, local culture performance, or even demonstration (Dobbins, 2009). On the one hand city public spaces also reflect aspects of the users' behaviour, on the other hand the significant influence of climate will affect the public space and designated-properties related to thermal comfort factors of users in public open space of the city. 80% of city walk in Indonesia have been failed because they neglect the climate aspect.

Shortly, the concept of sustainability in the urban open space not only tends to have the context of the natural environment but also contains how to respond to climate conditions and how to stimulate human behaviour in the social life of the city.

2. Research question and research aim

Based on the background of study, the researchers state the research question as: what kind of pedestrian the best for the tropical environment? And the aim of this study is to give the guidelines about the pedestrian criteria in the tropical environment like Indonesia.

3. Pedestrian in the urban open space

3.1. The role of sustainable open space in the city

The concept of sustainability in the urban open space not only tends to have the context of the natural environment but also contains how to respond to climate conditions and to stimulate the human behavior in the social life of the city. Every government has different policies to provide urban open spaces that are divided into passive parks and active parks.

- Active Park: Active Park is a park located in an area of town that is used either as a community gathering area or as community adhesive, and there are activities in it. So, the park is not only as a green area of the city but also a place where people do activities.
- Passive Park: Passive Park is a park that was established as a town green area of the city region in which people are not allowed to do activity. Since the purpose of this park is just as green and infiltration areas.

Table 1. Added parks in the City of Semarang (Centre Statistic of Semarang City)

No.	Year	Active Park	Passive Park	Total
1	2007	36	144	180
2	2008	37	149	186
3	2009	37	149	186
4	2010	27	149	186
5	2011	37	149	186

In the city of Semarang, the government tries to accommodate social interaction of Semarang people by building many different kinds of open spaces for examples KB Park, Simpang Lima Roundabout, Sri Gunting Park and many others. Since two years ago, the open spaces in the city of Semarang have been visited by many people. Open spaces in Semarang city such as KB Park, Tugu Muda Garden, Simpang Lima Square, as well as Pemuda and Pahlawan Road have become places of recreation, relaxation, places of hanging out for the citizens.

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