Analysis of Environmental Infrastructure Sustainability of Low Cost Apartment: Rusunawa in Jakarta

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ABSTRACT

Housing is a basic human need, but the Government has not been able to fully provide decent shelter for the community. Governments have an obligation to provide access to adequate housing communities, livable, prosperous, cultured, and social justice. This study aimed to analyze the sustainability of the environmental infrastructure of low cost rental apartment (rusunawa) in Jakarta. To determine the condition of existing low cost rental apartment in Jakarta, this study was conducted in five locations of Rusunawa. The sustainability of infrastructure environmental methods included Focus Group Discussion and Multi-Dimensional Scaling (MDS) approach using RAPFISH techniques program. An index value of sustainability infrastructure in rusunawa Jakarta is obtained based on an assessment of 29 attributes included into four (4) dimensions of infrastructure facilities (8 attributes), sociocultural (7 attributes), perception (7 attributes) and management (7 attributes). The results of multidimensional analysis produce an index value of sustainability infrastructure of rusunawa is 47.275. This value reflects that the existence of infrastructure of rusunawa in Jakarta is sustainable less. This research can be used as the basis for improvement of aspects that have not been sustained and become a model for other Rusunawa management.

KEYWORDS

Environmental Infrastructure, Low Cost Rental Apartment, Sustainability

INTRODUCTION

Basic needs and most importantly for the human race in order to survive is the fulfillment of needs for housing or shelter to interact with each other. The house is one of the human need, because without a home or fixed place for living, where a person is formally hard to admit (having an identity/KTP). Settlement development both in cities and in the villages, is essentially creating conditions of liveable, comfortable, safe and peaceful, which lead to have sustainability.

In terms of providing housing for the people, the government is obliged to grant access to its citizens to obtain housing livable, prosperous, cultured, and social justice. Residential development includes the development of basic infrastructure and facilities as environmental infrastructure. House as the built environment, have utility to provide a place for activities, creating a safe area, up to emphasize social identity and indicate status.

Apartments are defined as story buildings built in an environment that is divided into sections structured functionally in a horizontal or vertical direction. Each unit can be owned and used openly, especially for shelter, which is equipped with a joint part, objects together, and the land together.
Planning of a sustainable housing project would have to meet the social dimension of culture, understanding, and management. Construction of Rusunawa in several locations in Jakarta, built on the basis of Local Government concern due to the slums vulnerable to catastrophic fires that are caused by electrical short circuit. In other words, the regional government was providing solutions to local communities in order to reduce the fire disaster. The physical condition of the environment has close links with humans as reflected in social interaction (Koestoer, 2001). Successful management of humanistic or humanizing when moving the inhabitants of the river banks to the towers resulted in a change in the perception and behavior (Fitriani, 2010). Found that a model of sustainability construction of towers located in the variable manager of the towers through a humanist approach can change the perception and behavior that affect the changes of style life.

**LITERATURE REVIEW**

**Environmental Infrastructure**

Infrastructure refers to the physical systems that provide transportation, water, buildings, and other public facilities which are required to meet basic human needs economically and socially. Environmental infrastructure is an infrastructure that have environmentally conception and using environmentally-friendly infrastructure in order to reduce the negative impact of environmental problems. The use of environmentally-friendly infrastructure can save lives on earth. A concept that became the basis of the environmental infrastructure, namely: do not pollute the environment, supporting the natural cycle of elements in nature, safe, orderly, beautiful and fun. The concept of environmentally friendly development is economical, because it can generate greater profits with smaller capital that is a sustainable. Both in terms of biophysical-chemical environment because no physical damage as well as socio-economic and cultural. The complexity of development giving to a variety of pros and cons, that is to say, the collaboration development impact usually brings forth to two temperaments, namely:

- The construction will produce output that is positive, that directly or indirectly affect the change in quality of life.
- The construction will cause a negative impact also unfavorable as the establishment of the chemical industry. On the one hand, useful to support the quality of human life, but the industrial waste is problematic for the environment (Moffat, 2008). This environmental infrastructure research is aimed to be able to describe the concept of a residential area that is ideal and environmentally friendly.

In planning for sustainable development, the infrastructure must meet several dimensions, therefor the objectives of development will increase the level of welfare, health and the tranquility will be realized. Thus, in the construction of sustainable housing should be considered several dimensions of sustainability, namely:

1. **Physical Environment Dimension** that supports the sustainability of living things in the future with the aim to realize the quality of a healthy environment and adequate infrastructure. These include: the condition of the home, the condition of clean water, the condition of water supply lines, house ventilation, exhaust vents waste if solid waste and liquid waste must be separated, the condition of public roads settlements and open green spaces or parks with an area and the amount that can accommodate residents of towers in social activity.

2. **Social Environmental Dimension** of the residents in support to sustainability and environmental sustainability. These include: access to public services such as social organizations, education, health, houses of worship and green open space. Public service for interaction between citizens or
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