

Reinventing Traditional Malay House for Sustainable Housing Design: Obstacle and Proposed Solution

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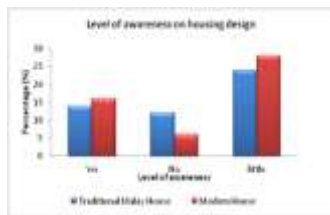
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Graphical abstract



Abstract

Traditional Malay House design has the key of energy efficiency dwelling to create a sustainable housing. Today, modern houses are massively built replacing the Malaysia's heritage house. Despite of this rapid development, the owners are aware on the drawback of this type of houses. Therefore, this study is conducted to investigate factors of developers reluctant to build the Traditional Malay House and correct the public misconception toward the housing perception. Survey questionnaire and in-depth interview were conducted. The results indicate that costing is the major problem for housing developers to construct Traditional Malay House.

Keywords: Traditional malay house, sustainable home, modern house, malay house evolution

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1.0 INTRODUCTION

World has experienced devastating natural disasters that caused by global warming. It is impossible to instantly stop global warming, but efforts could be done to reduce the effect of this scenario. Wanek [1] stated that the building is the largest energy consumption. Therefore, the solution to global warming must involve the sustainable design of the building.

Considering current economic unstable condition, retrofitting an existing building could be more cost effective than rebuilding a new facility in order to create a sustainable home. As one of the cultural heritage in Malaysia, the Traditional Malay House should be kept as a reference for the next generation. However, the design seems to be faded with time and replace by massive construction of modern house such as semi-detached house and terrace house.

Traditional Malay House is an excellent model for today's architects and designers in understanding climatic and environmental design, building systems, and design flexibility [2]. Rahman [3] stated that it is ironic that the traditional Malay house, can achieve a degree of passive control to achieve comfort condition. Therefore, reinvent the Traditional Malay House could be the ultimate solution in producing more sustainable home.

However, the indigenous house seems to ignore by today society including the most of the Malay people. They haste for Western-type progress and modernity, many of its virtues have been abandoned [4]. Therefore, this study had been conducted to explore the advantages of Traditional Malay House that can be preserved and overcome the drawback in creating more sustainable house. Apart from that, comparison will be made to the modern house particularly detached house in Malaysia. This research also dissect the factors contribute to the rapid development of modern houses and also, reveal cause of the ignorance in Traditional Malay House design.

2.0 LITERATURE REVIEW

Malay House is one of the best examples of sustainable design. Many researchers believed that Traditional Malay House is carefully designed in accordance to the weather, and thus, resulting in a climatically responsive house that provides comfort for the dwellers [2,3,5]. This summarize that Traditional Malay House has high energy efficiency. In contrast, modern house design especially terrace houses are based on cold climate region