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BAMBOO APPLICATION IN BUILDING DESIGN: CASE STUDY OF GREEN SCHOOL, BALI, INDONESIA

Bambang Karsono [1*], Mohamad Shihadeh A. Arar [2], Julaihi Wahid [1], Bassim Saleh [2]

[1] *Department of Architecture, Faculty of Built Environment, University Malaysia Sarawak, Kota Samarahan, Sarawak, MALAYSIA.*

[2] *Department of Architecture Engineering, College of Engineering, Ajman University, Al Jurf, Ajman, UAE.*

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ABSTRACT

Bamboo has been known widely as a material for buildings since the dawn of the century. Nevertheless, bamboo is often regarded as a low-class building material which has commonly used by low-income people. Since the issue of global warming and sustainability, bamboo became a focus for building material due to its sustenance and fast growth in the natural environment. Architects and builders alike started to choose bamboo as an alternative to wood. Furthermore, it is difficult to get good-quality woods for construction and historically, a vast tract of land has been ruined due to deforestation that caused an adverse effect on the surroundings. This paper attempts to discuss the properties of bamboo and how it is inventively applied in building design. Descriptive-qualitative methods were used in this study to reveal an understanding of the application of bamboo in building design. To further enhance the finding and context of discussing a case study on how bamboo has been used in designing the structure in an innovative organic form. The result from this research found out that bamboo is noble to be considered as an alternative material in building design due to its natural properties, exclusively for curvilinear organic-form building that hardly achieved in steel and concrete.

Disciplinary: Architecture (Green/Sustainable Architecture).

1. INTRODUCTION

The image of bamboo usually reflects the characteristics and context of Asian and tropical countries. Usually, in Indonesia, it is easy to find a bamboo plant with various kinds of species in almost every region of the country. Scientists indicated that 1,250 bamboo species found in all around the world and 11 percent of them are locally endemic to Indonesia. Bamboo plant has a definite property to preserve an environmental balance such as to avoid erosion and to improve

*Corresponding author (Bambang Karsono) Email: kbambang@unimas.my