

Guadua Bamboo as Eco-Friendly Element in Interior Design and Architecture

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Abstract : Utilizing renewable resources has become extensive solution for most problems in Egypt nowadays. It plays role in environmental issues such as energy crisis, lack of natural resources and climate change. This paper focuses on the importance of working with the key concepts of creating eco-friendly spaces in Egypt by using traditional perennial plants, such as Guadua bamboo as renewable resources in structures manufacture. Egypt is in critical need to search for alternative raw materials. Thus, this paper focuses on studying the usage of neglected yet affordable materials, such as Guadua bamboo in light weight structures and digital fabrication. Guadua bamboo has been cultivated throughout in tropical and subtropical areas. In Egypt, they exist in many rural areas where people try to control their growth by using pesticides as it serves no economic purpose. This paper aims to discuss the usage of Guadua bamboo either in its original state or after fabrication in the context of interior design and architecture. The results will show the applicability of using perennial plants as complementary materials in the manufacturing processes; also the conclusion will focus the lights on the importance of re-forming shallow water plants in interior design and architecture.

Keywords : digital fabrication, Guadua bamboo, zero-waste material, sustainable material, interior architecture

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