

## **Evaluating the Potential of Bamboo: A Sustainable Alternative for Building Construction**

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### **ABSTRACT**

This paper emphasizes issues pertaining to sustainability and carbon emissions of building construction, keeping the Indian construction industry in mind. Globally, India holds the second position in the production of Bamboo. The amplified reliance on conservative construction constituents is seized to be accountable for the concentrated wood capitals and for degradation of the environment, which has directed the thought of substituting steel and wood with bamboos. Bamboo is recognized as a simple economic, rapidly emerging, and sustainable material. According to the review, two variety of bamboo has been identified which is bamboo schard and dendrocalamus strictus these two bamboo species have the highest compressive as well as tensile strength. Consequently, it is vital to optimizing the use of eco-friendly resources for structures. Bamboos as an amalgamated material could be cast-off in several exteriors as well as in the interior of buildings like flyovers, foundations, multi-story buildings, dwellings, large span structures in recreational facilities, and interiors of airports. The present work focuses on Bamboo's perspective to be used as supportive substantial in construction industries rather than its conventional use and what not to do while adopting Bamboo as a construction material.

**Keywords:** *Carbon Emission, Sustainability, Bamboo, Eco-Friendly, Compressive and Tensile Strength.*