

**DEVISE/FORMULATE AN APPROPRIATE DESIGN AND TECHNOLOGY  
TRANSFER PROCESS TO EXISTING BAMBOO PROCESSING CRAFTSMEN  
AND HANDICRAFTS INDUSTRY TO USE MODERN MANUFACTURING  
PROCESSES AND METHODOLOGY TO BE EFFECTIVE IN FORMING  
THE SUPPLY CHAIN FOR MASS MANUFACTURING OF BAMBOO BASED  
PRODUCTS IN CONSTRUCTION AND HOUSING AS WOOD SUBSTITUTE**

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**ABSTRACT**

Bamboo has for long been considered as one of the most important resources that can influence the state of society, as it is known to lessen rural poverty, empower women and rejuvenate the environment. Worldwide, especially in the tropical and sub-tropical regions, bamboo has been traditionally used as a building material. Bamboo has well established itself in the area of construction. Its usage is more prevalent in the rural areas. Roughly, 1200 species of bamboo grow in 14.5 million hectares of land, with the majority growing in Asia, Africa and Latin America. Approximately, bamboo grows at the rate of 7.5 to 40 cm a day, with the world record held by a bamboo shoot in Japan that grew at the rate of 1.2 m in just 24 hours. Bamboo is ready for harvest in about four to five years in the commercial varieties. Following their maturation, the wood can be harvested multiple times every second year; they continue to yield indefinitely in most of the species; however, in some, the yield is restricted to 120 years. In India, the use of bamboo in brick making provides an alternative source of income to those living in areas where the soil has been ravaged. The rural community primarily uses bamboo as its construction material, and as such, bamboo is essential in developing countries. In rural areas, mainly domestic houses are constructed, which are often simple in design. Traditional construction methods rely on local skills and methods. The other structures constructed in a rural area include farm and school buildings and bridges. In addition, bamboo is used for constructing scaffolds and water pipes, as well as for shuttering and reinforcement of concrete, in both rural and urban settings.

**KEYWORDS:** Flattened Bamboo, Composite Bamboo, Corrugated Sheets