

A green alternative for rural India

Parul Sharma

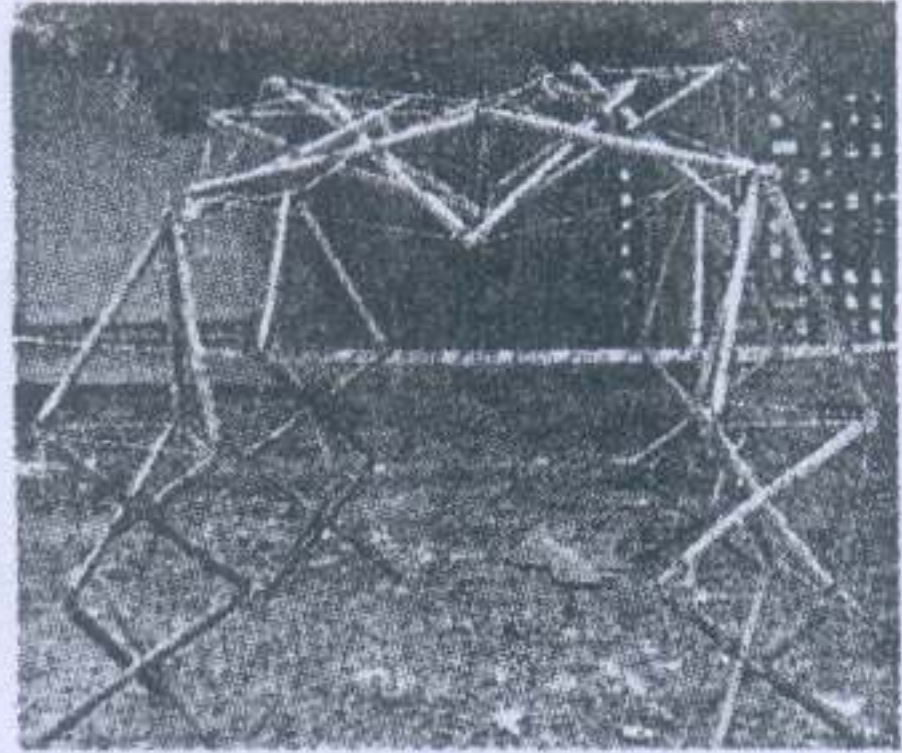
NEW DELHI: Projecting the bamboo as a "green" alternative to concrete and steel for modern structures, a group of students from Indian Institute of Technology, Delhi, have designed a poultry shed using bamboo and the concept of "tensegrity".

"Tensegrity" refers to structures with an integrity based on a synergy between tension and compression components.

Five under-graduate students of Civil Engineering at IIT-Delhi, under the guidance of faculty member Suresh Bhalla have been working on this project that deals with possible replacement of concrete and steel by the eco-friendly bamboo as a modern engineering construction material.

A bamboo poultry shed fabricated by the team was on display at "I2Tech Open House 2009" on the IIT campus a few days ago. The poultry shed had ropes in tension and bamboo in compression.

"A combination of the tensegrity concept and bamboo as a building material has a vast potential to result in eco-friendly and economical structures that are lightweight, transportable and storable," he added.



Poultry shed made with bamboo by IIT students.

The bamboo proves to be a great advantage for rural areas as it is cheap, easily available and durable. Bamboo structures, claims the IIT-Delhi team, can endure strong wind forces and are strong enough to sustain earthquakes of reasonable intensity.

"The structure can be dismantled in no time. We have designed a poultry shed, but one can make bridges and small structures using this concept. Establishing the bamboo as a modern building material can trigger a sustainable growth for the rural economy and also help ease global warming by the reduction of the usage of cement and steel," explained Brahmjot.

The other members of the team are Nikhil Vyas, Rachit Jain, Rajat Dhanda and D. Hari Hara Rohit.