

The Houses of BAMBOO

ARTISTIC AND AESTHETIC, increasing use of Bamboo in construction industry throws up employment opportunities in rural North East and global demand ensures sustained economic development

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WHENEVER you think of construction, think of Bamboo as well -- for flooring, furniture and decorative items.

Stronger and lighter than wood, it is not for nothing Bamboo is known as poor man's timber and traditionally has been used for housing construction, irrigation pipes, furniture and hand-craft items, more so in North East region of the country that possesses 66 per cent of bamboo cultivation. Second only after China in Bamboo cultivation, India has a chance to benefit from the \$ 25 billion annual business globally unleashing livelihood and employment potential for thousands of people in this labour intensive activity.

Technology now allows Bamboo to be converted into high end products for flooring, decking, panels and veneers and structural beams -- that are not only aesthetically pleasing but also stronger and lighter than wood. With an international and domestic market for these products growing, bamboo is being dubbed as Green Gold as the environmental benefits of switching to bamboo are many.

As bamboo cultivations need land and space, available in rural areas, the villages now have got an opportunity to exploit the global and domestic demand that bamboo offers, adding to economic development.

Nearly 66 per cent of India's bamboo cultivation is in the North East region, where central government and state governments have set up dedicated research centres to help people take up bamboo cultivation and processing on an economically viable scale and earn livelihood. North east region is the biggest source for dense bamboo brakes, in green sound weight and number green sound culms. ●



BAMBOO AND ITS MANY USES

HANDICRAFTS: Characterized by manual processing and high value addition to limited quantities of Bamboo

BAMBOO SHOOTS: High value Agricultural food crops that can be grown in parallel with the production of Culms

Bamboo utilized in Construction purposes, including Bamboo utilized for traditional construction, and in newer prefabricated housing.

INDUSTRIAL PRODUCTION: This involves the mechanized and semi mechanized processing of larger volumes of culms. These include:

■ **Bamboo based Panels:** Bamboo panels present significant advantages over wooden boards owing to their strength, rigidity and flexibility. At present, there exist more than 20 different types of panels produced in Asia, which are broadly classifiable into: a. Veneers b. Strip Boards c. Mat Boards d. Fibre boards e. Particle boards f. Medium density boards g. Combinations of the above h. Composites of the above with wood and jute

■ **Bamboo flooring:** Bamboo flooring is a high value product with a large domestic and international market. Bamboo flooring has advantages over wooden floors in terms of smoothness, brightness, hardness, insulation qualities and flexibility.

■ **Bamboo Sticks for Blinds and Incense sticks**

■ **Bamboo furniture:** As a category it includes traditional products made of round or split bamboo, and also newer 'pack-flat, knockdown' furniture, which retains physical, environmental and aesthetic qualities of bamboo while addressing shortcomings of variable quality, low productivity and high labour and transport costs.

There are about 125 different varieties and species of bamboo available in India from the 9 million hectares of forest area. Now a little over a decade old, central government's focused programme on promoting bamboo, its cultivation and processing as a livelihood enhancement activity, has resulted in encouraging results – because the state governments too recognized the benefits for its people. First off the blocks was the Union government's Agriculture ministry's Mission for Integrated Development of Horticulture under which the National Bamboo Mission is a significant sub scheme.

It has resulted in a holistic growth

of the bamboo sector by expanding cultivation and marketing of Bamboo products – which involves supply of high quality Bamboo shoots from new nurseries. Research and development forms the core activity of these specialized centres set up under the mission.

In year 2000, the Cane and Bamboo technology Centre was set up in collaboration with UNIDO at Guwahati in Assam with an objective of improving technologies for processing of Bamboo and manufacture of industrial products. Over the years, the efforts of centres like these have fructified into sustainable economic development of the region as also for the thousands of villagers who took up to Bamboo.



Most of the North East states have set up their own respective Bamboo development agencies that help small scale units to manufacture and market the products.

Bamboo Development Agency, Mizoram was set up in 2002, as an autonomous body registered as Society under the Government of Mizoram to encourage, start, organize, carry on, assist, lease, develop and regulate resources, plantation, utilization, research and development of bamboo. The Agency in turn has set up Bamboo Technology Park (BTP) at Sairang, located 6 km from Aizawl city. Ten industrial plots were developed within the Park, where bamboo technology is on display and demonstration for anyone to take benefit. Research is carried out here in collaboration with Japan Bamboo Research Team, University of Kyoto. The Park is managed by the Secretary, Industries Department, Govt. of Mizoram. ●

CASE STUDY

TRIBAC (Tripura Bamboo and Cane Development Centre) set up jointly by INBAR (the International Network for Bamboo And Rattan) and its Indian Partner, CIBART (the Centre for Indian Bamboo Research and Technology), in 2003, to devise ways and means to solve problems faced by bamboo cultivators and processing units. Local artisans faced shortages of bamboo due to poor flowering the year before.

The TRIBAC Centre attempted to generate employment, redress bamboo resource losses and increase returns to women in the bamboo sector.

TRIBAC's Village Extension System, wherein a network of 71 young men and women reached out to 4,600 households and 331 Self Help Groups, was the backbone of the success of this programme. It took up Agarbatti industry for special attention. Traditionally, only agarbatti sticks were being manufactured in Tripura, with the remaining 99% of the value accruing to agencies and companies near production centres in South India (Bangalore and Mysore). TRIBAC helped to extend the local chain to batti manufacture, as a result of which 10% of the value now comes to Tripura's villagers. The centre also develops marketing systems and branding the products made in Tripura villages.

This model of cluster-based quasi-industrialisation has worked well in Mizoram. Until July 2008, TRIBAC had provided agarbatti enterprise and livelihood training to over 3,200 men and women. In 2008, TRIBAC's operations covered 25 villages, benefiting 1,387 people, of whom almost 95% are women. TRIBAC's intervention has raised incomes in the agarbatti sector by 86-88%. TRIBAC has also initiated training in processes contributing further in value addition (scenting and packaging) which together add 60% to the value of the product (the final 30% accruing from marketing), so as to ensure that locals are able to capitalise on more of the gains from value addition. The extension of the value chain to batti rolling generates 11 jobs for every stick maker, hence the immense employment opportunity of cluster development in Tripura.

In addition to the Agarbatti sector, TRIBAC has contributed significantly towards the bamboo sector in Tripura. Under TRIBAC, over 150,000 new bamboo plants have been raised, with 27,000 seedlings planted in 1,045 households with a view to meet raw material shortages. As an established technical agency in Tripura, TRIBAC also provides livelihood based training to individuals on behalf of other agencies.

The Experience of TRIBAC indicates the success of near-source value addition in significantly helping poor people earn better livelihoods, and also shows that minor interventions can solve age-old problems in the value chain. It points further at the potential levels of employment and income an industrial bamboo sector based on decentralized production and value chains, accompanied by appropriate marketing channels, can help achieve. Also, TRIBAC's Village Extension System, emphasizing community participation in economic activity, is to be commended for the inclusive nature of growth and the interest in Bamboo generated.

Likewise, the Bamboo and Cane Development Institute in Tripura was set up to cater to the changing design and technology needs of buyers and to provide support to artisans and craftsmen to become able to cater to the changing tastes and preferences of customers. ●