

# **CANE AND BAMBOO TECHNOLOGICAL UPGRADATION AND NETWORKING PROJECT**

**BACKGROUND:** The term 'North-east' is an abstraction. There are great variations in the region's geo-climatic conditions, forms of livelihood, sustenance and production, cultural roots and aspirations of the people. Any attempt to forge unity, even metaphorical, amidst the inherent diversity presented by the North Eastern states is difficult. But if there is a thread, which link the 'Seven Sisters,' a sort of glue, which bonds them, it is bamboo.

Bamboo has an important role to play in development. It is a natural element of sustainable, integrated farming systems and an excellent resource on which to build a variety of income and employment-generating opportunities. With its multiple uses and high value in a range of products aimed at national and international markets, there is a great potential for value-adding operations, and many different entry points for development interventions which are accessible to and appropriate for resource-poor people. To do this well, there is a need to improve our understanding of the bamboo sector, the people involved and the main problems they face.

**THE INDIAN CONTEXT:** The United Nations Development Programme (UNDP) launched the “Cane and Bamboo Technological Upgradation and Networking Project”, covering the seven North Eastern States of India. The Department of Science and Technology, Government of India is the Executing Agency for the Project, the United Nations Industrial Development Organization (UNIDO) is the assigned Implementation Agency and a specialized body, the Cane and Bamboo Technology Centre (CBTC) is the Field Implementation Agency, responsible for project activities. The CBTC acts as the secretariat and coordination body of the Network and is the conduit for the network’s linkages. The primary target beneficiaries of the Project are the rural poor while the secondary target beneficiaries are the local Governments and non-Government institutions.

## **OVERVIEW OF THE PROJECT:**

1	<b><i>Title</i></b>	“Cane and Bamboo Technological Upgradation and Networking Project”
2	<b><i>Budget</i></b>	US \$ 1.54 million
3	<b><i>Donor</i></b>	UNDP
4	<b><i>Objectives</i></b>	<ul style="list-style-type: none"> <li>• Identify and promote technologies for improving the incomes of craftspersons and small entrepreneurs in the cane and bamboo sector of North-East India;</li> <li>• Strengthen existing institutions by improving their networking and linking them with specialised institutions in India and abroad through CBTC; and</li> <li>• Provide training and access to improved technology and standardisation to craftspersons to generate higher incomes and increased employment.</li> <li>• Generate economic and legal proposals for enhancing the bamboo sector.</li> </ul>
5	<b><i>Core Competence</i></b>	<ul style="list-style-type: none"> <li>• A hub for information, technologies and networking for project partners and stakeholders.</li> <li>• A link for specialised institutions in India and abroad to strengthen existing institutions by enhancing their networking capacities.</li> <li>• A vehicle for multi-disciplinary approach from handicrafts to hi-tech applications of bamboo - housing, floorings, furniture, panels, wooden</li> </ul>

		<p>frames, veneers and boards.</p> <ul style="list-style-type: none"> <li>• Manpower development and Training - A training institution for craftsmen, entrepreneurs and trainers.</li> <li>• A co-ordinator for technical, legal and economic policies to increase the uses and trade in bamboo at national and international levels.</li> <li>• A catalyst to promote economic development using bamboo as a prime resource.</li> <li>• Facilitating Technology Transfer</li> <li>• Providing Consultancy to Small &amp; Medium Entrepreneurs</li> <li>• Resource Centre for information on Bamboo, Bamboo Crafts, Bamboo Industrial products etc.</li> <li>• Design Centre for new and innovative Bamboo &amp; Cane Handicrafts items</li> </ul>
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### **MAIN OUTPUTS**

- Over the months, the CBTC has singularly carried on with the task of generating awareness about the cane and bamboo sector. The seminars and workshops, which have been conducted by the CBTC have not only generated awareness but have instilled in the minds of the people the urgent need to do something with the vast resources of cane and bamboo, which is available in the region and which have hitherto been largely unutilised. There is also a perceptible shift in the minds of the people about the need to lay emphasis on the industrialization of the sector as compared to the traditional handicrafts and cottage industry.
- Owing to the thrust given to the sector by the CBTC, each and every State Government of the region has now earmarked funds under their budgets for development of the cane and bamboo sector. The North Eastern Council, which is the apex body for development of the region, has evinced keen interest in the sector. So much so that they have constituted a Task Force to look into the various aspects of the bamboo sector. Also a regional bamboo mission is being launched under the banner of NERBaM. The Government of India through the Planning Commission has already formulated a National Bamboo Policy for the country as a whole.
- Because of constant promptings by the CBTC, the States of Assam, Arunachal Pradesh, Nagaland and Meghalaya are now formulating policies for the bamboo sector. It is worth noting that the States of Mizoram and Tripura already have a Bamboo Policy and have thus become the first States in the country to do so.
- So much interest has been generated in the field that the States of the North Eastern Region have recently appointed Nodal Officers in the Forest and Industry Departments to handle issues related to the cane and bamboo sector and to deal with the CBTC directly.

In keeping with the objectives laid down in the Project Document, the CBTC has over the three years of its existence build up a strong name for itself and has positioned itself as the leading Institute, not only within India, but also for the whole of South Asia.

### **PRINCIPAL ACHIEVEMENTS/ IMPACT**

- Over the months, a number of Policy makers, officials, entrepreneurs etc. have been sent for Training to various Institutes in China. Majority of them have excelled in their Training and were successful in setting up large Industrial Units on Bamboo Floor Board and Bamboo Concrete Forming Board. Also, they are key functionaries of the State Government for Bamboo Development.

- Over 1300 peoples have been trained up at the Cane and Bamboo Technology Centre (CBTC), Guwahati in the specialized courses on Cane and Bamboo Machine Tools Operation, Handicrafts, Jig Making, etc. from all over NE States and institutions.
- A Regional Policy Workshop was held for all the seven States of the North Eastern Region. The goal of this Workshop was to promote the economic status of the people of the region and to enhance the incomes of the masses through the development of the Cane and Bamboo based economy.
- In order to enable the entrepreneurs to set up a small and medium bamboo and cane projects in North East India in the areas of Management, Financial Management, Project Formulation etc., a two-week long course was conducted in collaboration with the Indian Institute of Entrepreneurship, Guwahati in which the participants from five North Eastern States participated in the Training.
- The CBTC is leading the way in creating awareness about the vexed issue of Bamboo Flowering. An Action Plan has also been drawn up to mitigate the devastating consequences of the phenomenon with Rain Forest Research Institute, Jorhat.
- Based on the advice by the CBTC, the Hindustan Paper Corporation Ltd. have come up with the concept of setting up captive plantations under their Farm Forestry Scheme. A number of Entrepreneurs and Industrialists have also promoted the concept using new methods of plantation, management and harvesting.
- The test of the properties of the Indian Bamboo species carried out in China are extremely encouraging and have proved that Indian bamboo species are suitable for conversion into Industrial products.
- The concept of setting up a 'Bamboo Processing Zone' is considered as a major innovation and every State in the region is contemplating to set up one such Zone.
- A three-week workshop on bamboo-based housing in collaboration with INBAR and the Government of Mizoram was held in Berawtlang, Aizawl. The workshop focused on transfer and adaptation of Latin American earthquake-resistant and affordable bamboo housing technology to India.
- A meet on "Machine made Manufacturing Sticks' was held at Bangalore in which over 80 major Agarbatti producing houses graced the occasion. The Meet was also being attended by over 45 machine made Agarbatti Stick manufacturers from the NER.
- The CBTC has conducted the Technology Fair (BAMTECH) together with a Bamboo Festival (BAMFEST) in Guwahati from March 11 – 13. The Fair cum Festival was graced by 10 countries apart from a host of Indian delegates.
- The CBTC has also set up a Mother Processing Facility at Guwahati where machines for both primary and secondary processing are being installed. The Centre trains a number of artisans, craftsmen etc., and also conduct research on process parameters, etc.

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In fact, what had not been achieved in the last fifty odd years insofar as cane and bamboo are concerned, this 'Project' was able to make a beginning and provide the initial thrust for a concerted effort towards harnessing the untapped potential.

## Post - March 2004 Scenario

Over the last three years, the project has created a visible impact in the North East. Almost all the States in the North Eastern Region have enacted and adopted Bamboo Policies. Most of these policies take into account the fact that Bamboo is a 'resource' and that it can be used as an 'enterprise'. The CBTC despite all odds and the ethnic and cultural diversity that exists within the region, has managed to generate mass awareness about the prospects of bamboo not only at the grass root level but also at the highest policy making level. This is in one sense the tremendous achievement that CBTC has made and the outcome is that all the Chief Ministers of the Region have placed bamboo as a 'Special Purpose Vehicle' (SPV) for overall economic development of their States.

However, the 'Project' funded by the UNDP came to an end in March, 2004. Thereafter, with the infrastructure and core competence built up over the past four years, the CBTC got itself incorporated under the Societies (Registration) Act, 1860 and is now functioning as an independent body, part-funded by the NEC.

Taking all the above factors into consideration, the North Eastern Council launched the "North East Bamboo Mission". It is the outcome of a resolution adopted at the Council Meeting held at Gangtok in September, 2003. It has also been decided by the Council that the Cane and Bamboo Technology Centre, Guwahati will be the Implementation wing for the North East Bamboo Mission.

**The greatest achievement of the CBTC has been in preparing the Detailed Project Report (DPR) for the National Bamboo Mission.** This entailed long discussions with the officials of various Ministries in New Delhi and State Governments. The DPR has since been accepted by the Government of India and the National Bamboo Mission is about to be operationalized.

**The principal roles/ activities being undertaken by the CBTC, at present, are the following:**

- A. Implementing Agency for the North East Regional Bamboo Mission
- B. Implementing Partner of the Building Materials and Technology Promotion Council, New Delhi for establishment of Bamboo Mat Production Centres in the NE States
- C. Technology Provider for Industrial Bamboo Units being established in the NE Region
- D. Training and Demonstration Centre for both Handicrafts and Industrial bamboo products
- E. Design Centre for Industrial Bamboo Products in collaboration with the Centre for Bamboo Initiative (CBFI) of the National Institute of Design (NID)
- F. Collaborator with the Uttaranchal Fiber and Bamboo Development Board (UFBDB) for promotion of Bamboo Handicrafts
- G. Render counselling services to Entrepreneurs for product selection, machinery selection, TEFR preparation, etc

- H. Designing of Clusters, Common Facility Centres, etc. to be set up in remote rural areas
- I. Facilitate revival of Shut-Down Plywood Units
- J. Designing and construction of Innovative Bamboo Structures

**Progress made by the North East Regional Bamboo Mission since April 2004.**

1. Task Force constituted to oversee the functioning of the North East Bamboo Mission.
2. Adoption of Special Bamboo Policies by Assam, Mizoram, Tripura and Nagaland
3. The remaining States viz. Arunachal Pradesh, Manipur, Meghalaya and Sikkim are in the process of formulating their Bamboo Policies
4. The Bamboo Development Agency of the Meghalaya Government is being moved to undertake Resource Mapping of the Bamboo growing areas. The State of Meghalaya has already taken up preliminary work on Resource Mapping in Ri Bhoi District
5. Detailed Project Report on Bamboo development for all the eight States is under preparation
6. State-wise expansion of areas for bamboo plantation identified
7. A committee of experts headed by the Principal Chief Conservator of Forests, Meghalaya. has been appointed to address the critical issue of bamboo propagation and plantation.
8. An expert Committee, headed by Mr. Lalhuma IAS, Additional Chief Secretary to the Government of Nagaland, constituted to finalize bamboo processing machineries with members from Building Materials and Technology Promotion Council (BMTPC), HUDCO etc.
9. All the eight States have been requested to identify suitable activities that can be taken up in the bamboo sector
10. All the eight State Governments have been requested to identify suitable area for establishment of Bamboo Technology Parks. Only the State of Tripura has identified the same while discussions are taking place with the Government of Assam
11. The number of Bamboo based Units set up under the North East Bamboo Mission are;17 in Mizoram, 5 in Assam and 2 in Meghalaya
12. The Government of Assam has been requested for allocation of a suitable plot of land for setting up the first ever Bamboo Mother Technology Park in South Asia
13. A Policy Workshop on Bamboo was held for Sikkim at Gangtok on 22 June 2004 for framing a Policy for the State. The State has now drawn up a draft Policy.

14. A proposal was submitted to the Government of India for a tie-up with UNIDO for specialized assistance in technical matters. This Project is on **“Enhancing Productivity and Quality of Bamboo Products for Domestic and Export Markets”**. This has since been rejected by the DIPP.
15. Steps have been taken for revival of shut-down wood-based Ply-Mill Units in collaboration with Federation of Indian Plywood Industries for using bamboo as a substitute. A National Workshop was held in the first week of August, 2004
16. Innovative bamboo-based housing activities for eco-tourism held in Nagaland. A Workshop-cum-Seminar was held at Kohima on July 7-8, 2004 for all the eight N.E. States with ‘Bamboo for Tourism’ as a theme in collaboration with BMTPC.
17. Participated at NE EXPO organized by DONER and PANELEXPO organized by FIPPI at New Delhi.
18. CBTC also held the 2<sup>nd</sup> International BAMFEST 2005 in the month of May 2005 in Shillong with very specific purpose of generating awareness and remove the shyness for investment in the bamboo sector as well as customers acceptance of bamboo based products, especially for wood substitute’s products.
19. A no. of bamboo based demonstration structures built in Assam
20. Beautification of Gandhi Mandap at Guwahati using innovative Bamboo Structures
21. Executing the building works of six bamboo-based cottages for tourists on behalf of the Assam Tourism Development Corporation at Kaziranga
22. Integrated Action Plans are being drawn up, in collaboration with various Agencies concerned, to tackle the bamboo flowering in NE States, particularly in Mizoram.
23. Signing of an MoU with the Building Materials and Technology Promotion Council (BMTPC) for an integrated approach towards building a resilient bamboo economy
24. MoU executed with the Uttaranchal Fiber and Bamboo Development Board (UFBDB) for promotion of Bamboo Handicrafts
25. MoU executed with the Centre for Bamboo Initiative (CBFI) of the National Institute of Design (NID) for promoting Design Intervention
26. 8 nos. of Bamboo Mat production centres are being implemented along with BMTPC in the states of Assam, Meghalaya, Tripura and Mizoram.
27. Training for Policy makers and key Government officials of Nagaland Bamboo Development Agency, Bodoland Territorial Council(BTC), North Cachar Hills District Autonomous Council, Planning Commission (E&F), Government of India organized in China in collaboration with China National Bamboo Research Centre, Hangzhou.
28. Training imparted to a team of crafts-persons from Bhutan