

The Role of Bamboo and Cane Development Institute (BCDI) in Upgrading and Disseminating Bamboo Handicrafts

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Abstract

The bamboo crafts occupies important role in the economy of North East Region of India and is also one of the largest employment provider in region. The demand for these eco friendly crafts is huge both in the domestic as well as in the international markets. However despite huge production base the products are not sold well due to lack of skill, technology and product development as per the growing consumer preference. With an objective to fill up the gap in the area of design and product development along with the holistic approach towards the development of bamboo sector Development Commissioner (Handicrafts), Ministry of Textiles, Govt. of India established Bamboo and Cane Development Institute (BCDI) in 1974 at Agartala, Tripura. The Institute is one of its own working in Bamboo Handicraft sector and continuously budding out skilled artisans. Institute is providing strategic services including Education, Sales promotion, Designing, Product Development and Training for handicrafts made out bamboo. BCDI is working for improvement in the competitiveness by upgrading the skill, design and technology of production targeted to bamboo. Capacity development with customized approach through intrinsic training modules is also in place. Present paper discuss the various activity carried out by BCDI and role of Institutional support to promote bamboo sector.

Keywords: Technology, capacity development, Design, livelihood, Marketing, skilling.

Background

Bamboo handicrafts sector of India reflects the rich ethnic, cultural and geographical diversity of the country. The sector has been a major source of employment especially to rural population, tribals, women and weaker sections of the society, a major source of foreign exchange earnings and a curator of our rich cultural heritage. The Indian handicrafts industry is highly labour-intensive cottage based, decentralized industry, spread all over the country in both rural and urban areas. The sector is economically important from the point of view of low capital investment and high ratio of value

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addition. . A key strategy for the development of the sector is to adopt an Institutional approach. Since from its inception, BCDI is conducting six month training for fine Bamboo and Cane Handicrafts. Every year two batches were trained and a total 73 batches have being completed in which 2158 trainees participated and acquired skill.

National Centre for Design & Product Development (NCDPD), a society by DC (Handicrafts) has been entrusted with the responsibility of running and management of BCDI since 2010 with an objective to professionalize the efforts in an effective manner.

Objectives of BCDI

To build and create technology driven design & product oriented excellence in the cane & bamboo sector of North East and provide sustainable forward & backward linkages by creating marketing opportunities. This includes “Providing strategic services including Education, Sales promotion, Designing, Product Development and training for handicrafts made out of Bamboo, Cane and Allied natural fibre material”.

Activities at a glance

Skill development programme: The institute is providing different modular skill development programme. All the trainings are residential so that participants get a formal training with necessary infrastructure and facilities. During this programme the participant gets exposure with various hands and power operated tools, bamboo processing machines and also gets aware regarding technology, design and product development. Presently 4 training modules are available i.e.

- **Bamboo turning products:** Bamboo turning has had a definite place in the commercial world. It is used in various forms in making flower vase, utility items and many other useful and beautiful articles in common use. It appeals to pupils more than any other type of manual work, as it embodies both the play and work elements. It is very interesting and fascinating and, in the hands of a skilled instructor, is readily correlated with other work. Bamboo turning gives a pupil preliminary experience necessary in pattern making and machine shop work (Figure 1). Trainees come to know about handling different types of chisels for making different cuts and profiles. To start self production the craft needs a simple wood turning machine along with turning tool kit.
- **Bamboo Jewellery products:** Jewellery craft is a high value added product range in which raw material cost is very less at the same time requires a high skill. It is observed that all the artisans do not have same skill, patience and finishing level and eventually it is hard to get quality

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product range. On the basis of skill and raw material requirement we have designed and redefined bamboo jewellery under different categories i.e. weaved jewellery; coiling jewellery; Jig Jewellery and Jingla Jewellery. Use of moulds and vegetable dyes was promoted for uniform and eco friendly product range. Further one of a constraint in bamboo handicraft is high cost of transportation which is quite permissible for Jewellery products (Figure 2).

- **Bamboo Furniture:** Skill development for bamboo furniture making is an important trade for rural development. Skilled inputs greatly increase the value of the raw material – activities like Straightening, Bending, Scrapping, Marking, Cutting, Sizing, proper Joining and good Finishes end up with a quality product. Knowledge and use of Jigs and moulds by skilled artisans are for uniform production is promoted. Use of hand operated power tools further scale up the production and increases the finish. Training on furniture products are focused on stackability, knock down or foldable furniture (Figure 3).
- **Bamboo basketry:** Basketry is the craft of making objects from flat bamboo slivers. Baskets are made by twisting slivers together in different ways. In this module participants learn how to make thin bamboo slivers using simple hand tool. Further they learn different weaving patterns and product development (Figure 4).

International Training Programme: The Institute is also providing specialized skill development/ craft exchange programme for the participants from other countries. The objective of such interactive training is to sharpen the skills of the international participants. Participants from African Countries like Zimbabwe and Ethiopia get exposure on bamboo basketry and furniture making craft. Participants from Bhutan get a modular training on bamboo furniture products (Figure 5,6 and 7).

One year PG Diploma Course on Bamboo Cultivation and Resource Utilization:

Looking up the present scenario a trained manpower is required for the bamboo sector, where they have a holistic knowledge on bamboo and its application i.e. from production to consumption. For this Tripura University and BCDI jointly agreed to undertake the program for one year Post Graduate Diploma Course in Bamboo Cultivation and Resource Utilization (BCRU). Both the organizations works together for making the course industry and job oriented that will lead towards model courses for bamboo sector. The course curriculum broadly classified under following headings:

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- Bamboo diversity and resources
- Bamboo propagation and conservation
- Bamboo management and utilization
- Bamboo technology
- Bamboo design and product development

This is a unique course which targets from bamboo production to consumption level. Students get exposure to the traditional skills as well as to the latest machine and technology in the bamboo field.

Design and Technical Development Projects: This time bound design project activity is aimed to provide new and innovative designs and improve the technical skills of the artisans thereby produce market acceptable products. Beneficiaries of this workshop are the artisans/craftsmen engaged in Bamboo crafts. The project is executed at cluster/ rural areas and the test marketing of the developed prototypes is conducted at various fair and exhibitions. The duration of the workshop is two months and five months. The product categories on which the designers provide designs are house ware, tableware, bath, accessories, home accessories and decorative items (Figure 8).

R&D Activity: Looking to the enormous potential in bamboo handicrafts for the development of North Eastern Region and apparently slow growth of the sector required an investigation into the methods prevalent in the bamboo crafts of North East region. So as to evolve a strategy for aggressive development towards creating an area of excellence in Bamboo crafts in the region, Institute is continuously working in the field of

- **Treatment and Seasoning for Bamboo:** Standardizing chemical treatment of bamboo and its extension to the end user is very important and Institute is continuously giving input in this field. Further splitting is also a big problem in whole bamboo craft
- **Coloring and dying Techniques:** experimentation of using locally available vegetation for organic colouring is promoted by the institute. Different recipes for natural dying have been standardized.
- **Standardization of Finishing Techniques:** finishing of final product is the most important step in product development activity. Use of eco friendly finishing material has been introduced.

Bamboo Technology Centre (BTC): A state of the art technology centre is being set up at BCDI, Agartala to provide the necessary technical information and practical hands on training to the Artisans and craftspersons engaged in Bamboo Sector (Figure 9,10). The centre provides:

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- Improved Tools & Equipment for product development activity
- Seasoning & Chemical Treatment for longevity
- Bamboo board manufacturing facility
- Prototype development facilities etc.

Bambusetum: Institute has a bambusetum which have a collection of 13 different tropical bamboo species (Figure 11)

- Constitute the primary source for diversification of economically important bamboo species for raw material production.
- Serves as demonstration area for training, education, research and extension activities.
- Educate the artisans, visitors and students regarding different bamboos, their characters, properties and identification etc.
- Constitute a protected area for endangered bamboos.
- Evolve into a centre for bamboo information and extension.
- Constitute a facility for scientific and technical experimentation on different bamboo species.

Market linkage by participation in national and international shows: For market linkage BCDI managed by NCDPD participated at various national and international shows organized by Export Promotion Council of Handicrafts (EPCH) an apex organization for promotion of handicrafts and is credited with organizing Asia's largest Handicrafts & Gifts Show. The Institute also facilitates entrepreneur to participate in various National and International fair and exhibitions (Figure 12).

In house publication: 'The Enquirer' quarterly news letter for information regarding technology, design and product development and also the updates of the Institute. 'Design Excellence' is a compilation of various designs for cane and bamboo product lines. "Know Your Bamboo" a simple book in three languages i.e. English, Hindi and Bengali. It contains information regarding bamboo diversity, propagation, management, seasoning and methods of treatments.

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Figure 1



Figure 2



Figure 3



Figure 4



Figure 5



Figure 6

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Figure 7



Figure 8



Figure 9



Figure 10



Figure 11



Figure 12

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Figure 1: Trainee learning chisel holding and turning skill.

Figure 2: Use of moulds for making weaved bamboo jewellery.

Figure 3: Skill development in furniture making.

Figure 4: Participants learning Basketry Skill.

Figure 5: Participants from Ethiopia learning furniture making

Figure 6: Bhutanese learning bending skills in furniture making.

Figure 7: Participants from Zimbabwe learning weaving skills.

Figure 8: Developed prototypes for basketry craft in Design Workshop.

Figure 9: Board manufacturing facility at Bamboo Technology Centre of BCDI

Figure 10: Prototypes developed from bamboo glue board

Figure 11: Bambusetum: a collection of different bamboo species.

Figure 12: Products exhibited in Buyer Sellers Meet at Guwahati.