

## **INDIGENOUS KNOWLEDGE: ANCIENT TECHNOLOGY OF MAKING BAMBOO CRAFT**

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### **Abstract**

With an emphasis on traditional methods, cultural importance, and sustainable practices, this research attempts to investigate the old technology and indigenous knowledge related to bamboo craft-making. Indigenous artistry has historically relied heavily on bamboo, especially in portions of South America, Africa, and Asia. Bamboo is split, woven, carved, and laminated as part of the age-old craft-making process. By using these techniques, craftspeople were able to produce useful tools, furniture, and ornamental items while showcasing a deep comprehension of bamboo's special qualities—its strength, flexibility, and light weight. Simple equipment and manual skills that were handed down through the generations were essential to traditional bamboo crafts. Because the craftspeople used natural dyes and woven designs that reflected their cultural identity, the making process was closely linked to the local environment. Bamboo was frequently utilized to make furniture, utensils, baskets, mats, and even scaffolding and other buildings. With little waste and maximum utility, the goal of this age-old bamboo craft technique was not only practical but also represented sustainable practices. The artistry showed how the community, environment, and the artisan could coexist together. These days, this information is being rediscovered and acknowledged for its usefulness in environmental preservation and sustainable design.

**Keywords:** Bamboo, Weaving, Artisanal Techniques, Sustainability, Craftsmanship, Ancient Technology.

## **Introduction**

For many indigenous tribes across the world, particularly in Asia, Africa, and Latin America, bamboo has been an essential part of their material culture. For ages, craftspeople have relied on this eco-friendly, multipurpose, and sustainable resource to maintain their livelihoods. The traditional techniques and abilities that have been handed down through the years to make tools, utensils, furniture, and ornamental objects are referred to as the old technology of manufacturing bamboo crafts. These techniques incorporate a comprehensive grasp of the environment, materials, and sustainable activities and have their roots in indigenous knowledge systems. Crafting with bamboo emphasizes the mutually beneficial link between people and the natural world, where knowledge of natural resources is transformed into useful and beautiful items (Sahoo, 2015).

Bamboo has long been acknowledged by indigenous people as a material with remarkable properties; its strength, adaptability, and quick growth make it a perfect choice for a variety of uses. Over time, traditional bamboo craft methods like weaving, splitting, carving, and laminating have improved, allowing craftspeople to create anything from intricate scaffolding and even musical instruments to baskets, mats, furniture, and household goods. The local culture is closely linked to the crafting process, with particular weaving patterns and motifs frequently serving as symbols of identity and customs (Kumar, 2018).



**Bangalore, India's K. R. Market has woven bamboo baskets for sale**

(By Rajesh dangi at English Wikipedia, CC BY 2.5,

<https://commons.wikimedia.org/w/index.php?curid=19747748>)



**Handspun carbonized bamboo fiber**

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Furthermore, the principles of sustainability and little waste are inextricably linked to bamboo craftsmanship. Every portion of the bamboo plant is customarily used by artisans, demonstrating a resource-conservation mindset. Ancient bamboo crafting techniques are a significant illustration of how indigenous knowledge systems have influenced environmentally friendly activities as the globe shifts more and more toward sustainable design.

## **Objective**

With an emphasis on traditional methods, cultural importance, and sustainable practices, this research attempts to investigate the old technology and indigenous knowledge related to bamboo craft-making. Indigenous artistry has historically relied heavily on bamboo, especially in portions of South America, Africa, and Asia. Bamboo is split, woven, carved, and laminated as part of the age-old craft-making process.

## **Literature Review**

The cultural practices and experiences of local groups, which have been cultivated over generations via contact with the environment, constitute the foundation of indigenous knowledge systems (**Gadgil et al., 1993**). This expertise spans a number of fields, such as medicine, crafts, and agriculture. Indigenous groups have unique methods for making bamboo crafts that show sustainability and resource conservation (**Sahoo, 2015**). With craftspeople utilizing bamboo's qualities for a variety of practical and ornamental uses, these customs demonstrate the peaceful coexistence of humans and nature (Kumar, 2018). The relevance of this information to eco-friendly activities and sustainable development is becoming more widely acknowledged.

The age-old technology of bamboo crafts is a reflection of generations' worth of indigenous expertise. Bamboo is a renewable and adaptable material that has been used to create a variety of items, from simple tools to elaborate artwork. The use of basic, hand-operated tools, which eliminates the need for contemporary equipment, is a defining feature of traditional bamboo making techniques.

Splitting is a popular technique in traditional bamboo crafts, when bamboo stalks are sliced into small strips for shaping or weaving. After that, these strips are either carved into tools and sculptures or woven into baskets, mats, and other domestic objects. Bamboo is also laminated in many cultures, with thin layers joined to create stronger furniture or architectural constructions **(Kumar, 2018)**.

In order to improve the visual attractiveness of items, natural dyes are also used in the age-old bamboo craft method. Bamboo surfaces are dyed using these dyes, which are frequently made from native plants, to create vivid hues. In certain areas, long-lasting, ornamental designs with symbolic and practical significance are made using braiding and knotting processes **(Sahoo, 2015)**.

Bamboo is a perfect material for making because of its inherent qualities, which include its strength, flexibility, and light weight. A thorough grasp of these qualities served as the foundation for the traditional bamboo making techniques, which enabled craftspeople to produce useful and sustainable items. These methods were essential to the lifestyles of indigenous tribes and still have an impact on contemporary sustainable design and architectural practices since they demonstrate a peaceful coexistence of humans and environment **(Sahoo, 2015; Kumar, 2018)**.

### **Ancient Technology of making bamboo craft**

For thousands of years, bamboo has been an essential component of human cultures' growth. In many regions of the world, its exceptional strength, durability, and adaptability have made it a mainstay of traditional workmanship. Indigenous knowledge systems provide the foundation of the age-old craft-making technique of bamboo, which has developed over millennia as different civilizations have created unique techniques for working with and using bamboo. These methods demonstrate a profound awareness of the material and the biological context and are strongly linked to the settings in which they were used.

Making crafts out of bamboo has a long history, especially in Asia, where bamboo has been a staple of daily life. Bamboo was utilized in China as early as 3000 BCE for a number of functions, including the production of tools, baskets, and even early types of paper, according to archeological findings (Kumar, 2018). Similarly, long before recorded history existed, bamboo was utilized in India to make furniture, carpets, and utensils. Indigenous understanding of bamboo's strength, flexibility, and light weight enabled craftspeople to produce elaborate, intricately designed things as well as everyday useful goods (Sahoo, 2015)



**A big basket and artist Lucy Telles in Yosemite National Park, 1**

**By Unknown author, Public Domain,**

**<https://commons.wikimedia.org/w/index.php?curid=19997097>**

Splitting, weaving, carving, and laminating are the main methods used in the age-old craft of bamboo. One of the earliest techniques is splitting, which involves cutting bamboo stems into small strips for carving or weaving. These strips may frequently be twisted into a variety of forms without breaking because of their flexibility. Bamboo was woven into baskets, mats, house walls, and clothing items in several ancient societies (Kumar, 2018). For instance, woven bamboo has long been used in China to make storage containers and furniture, and in India, it is a common material for baskets, fans, and other ornamental objects (Sahoo, 2015).

Bamboo has also been carved into elaborate designs for a variety of uses, ranging from practical equipment like knives and utensils to religious items like idols and ceremonial instruments. Bamboo is an extremely strong material that may splinter quickly if not treated with care, therefore carving it demands a good grasp of its grain and structure (Ghosh, 2017). Ancient bamboo crafts also employed the laminating process, which involves binding thin

bamboo strips together to create bigger, more robust constructions. This method worked especially well for making construction materials and furnishings. Laminated bamboo may be a dependable material for scaffolding and other structural applications since it is frequently stronger and more resilient than a single stalk (Kumar, 2018).

The cultural and spiritual lives of indigenous groups are intricately linked to the history of bamboo crafts. Bamboo was used to make tools and other products in many old communities, but it also had cultural and spiritual significance. For instance, bamboo is a sign of fortitude in the face of hardship in China and Japan, where it has long been connected to adaptability, purity, and tenacity. Bamboo is frequently utilized in religious ceremonies in India, and its significance is demonstrated by the way it is frequently portrayed in art and architecture (Ghosh, 2017).

Furthermore, bamboo making was frequently a communal activity rather than just an individual one. It contributed to local economies by giving craftspeople, particularly those in rural regions, a means of subsistence. Bamboo, for example, was used to build entire towns and temples in Southeast Asia, and these customs have persisted until the present day in countries like Thailand and Vietnam (Sahoo, 2015).

Many indigenous societies still use bamboo making skills that have been refined over ages. These traditional methods are still used today by sustainable design groups, who acknowledge bamboo as a more environmentally benign substitute for wood and plastic. Modern furniture design, architecture, and even fashion are still influenced by the age-old bamboo craft technique (Kumar, 2018).

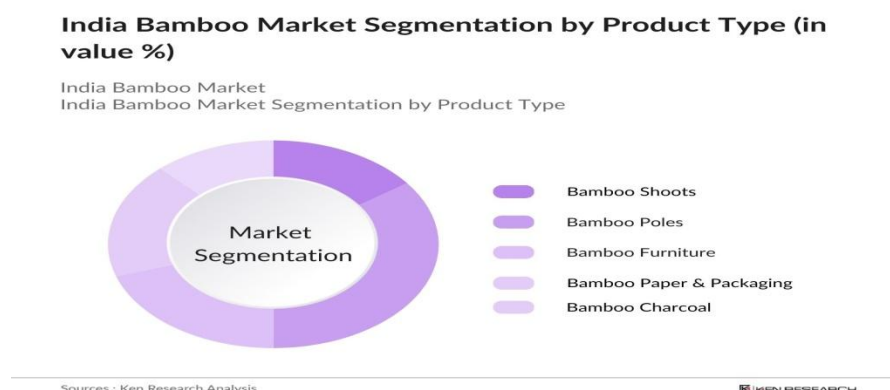
Bamboo's adaptability, low weight, and renewable nature make it the perfect material for contemporary ecological design and construction. A wonderful combination of sustainability, usefulness, and artistic expression may be found in the age-old technology of bamboo making. Ancient craftspeople produced useful and culturally significant items using methods including splitting, weaving, carving, and laminating. The art of bamboo crafting has been handed down through the years and is a great resource for modern ecological practices.

### **Indian Government Scheme and Bamboo Craft**

Additionally, the Indian government offers many programs to support handicraft makers, many of whom focus on products made from bamboo. For craftsmen, programs such as the Ministry of Textiles' Scheme for Promotion of Handicrafts and the Handicrafts craftsmen

Comprehensive Welfare Scheme offer access to raw materials, financial assistance, and technical training. These programs seek to improve product design, increase revenue possibilities, and assist craftspeople in producing marketable bamboo products. One such program is the National Handicrafts Development Programme (NHDP), which promotes traditional crafts including bamboo weaving, basketry, and furniture manufacturing in order to assist craftsmen (Chandran, 2019).

The Indian government has aggressively marketed bamboo as an eco-friendly, sustainable substitute for plastic and wood in response to growing concerns about environmental sustainability. A number of programs have been created to raise awareness of bamboo's use in environmentally friendly goods and sustainable building. Bamboo is being utilized more and more to create eco-friendly furnishings, décor, and constructions. Innovative approaches of integrating bamboo into the mainstream building sector are being investigated by government-supported institutions like the Indian Council of Forestry Research and Education (ICFRE). The use of bamboo in urban development projects is being promoted by research into bamboo-based composite materials, such as bamboo-reinforced concrete and bamboo panels, as substitutes for conventional materials (Rathore, 2020).



**(India Bamboo Market Outlook to 2028, Asia Author(s): Sanjeev, Product Code: KROD7937)**

The government has set up a number of marketing channels for craftspeople in an effort to better promote bamboo crafts. The Ministry of Textiles' Development Commissioner (Handicrafts) frequently hosts trade shows and exhibits to highlight bamboo goods created by craftspeople across India. By giving the craftspeople access to wider domestic and foreign markets, these programs increase the demand for their goods and provide them greater financial prospects. The Indian government has implemented a number of programs to encourage the



production, processing, and industrialization of bamboo because it acknowledges the value of this resource for the environment and the economy.



(India Bamboo Market Outlook to 2028, Asia Author(s): Sanjeev, Product Code: KROD7937)

The government wants to offer the bamboo industry all-encompassing assistance through the National Bamboo Mission, Bamboo Development Programs, and welfare programs for craftsmen. These programs support the bamboo industry's sustainable growth in addition to improving the financial standing of craftspeople. Bamboo crafts have the potential to significantly influence India's future economic landscape while upholding its traditional handicraft legacy provided innovation, sustainability, and market accessibility are given sustained attention.

### State Government Scheme and Bamboo Craft

Bamboo has long been used as a necessary material for a variety of crafts and industrial uses in India, a country with a rich cultural legacy and a long history of handicraft. State governments around India have launched a number of initiatives to support the bamboo craft industry in recognition of bamboo's potential for sustainability, economic expansion, and cultural preservation. In addition to encouraging innovation in bamboo-based sectors, these programs seek to give craftsmen access to markets, training, and financial support. Promoting bamboo handicraft is in line with India's overarching objectives of environmental sustainability, job creation, and inclusive growth.

### Bamboo Craft Promotion in Northeastern States

Bamboo making has a long history in the northeastern Indian states, especially Assam, Nagaland, Meghalaya, and Mizoram. Bamboo has been acknowledged by the Indian government and the state governments in these areas as a vital resource for both cultural preservation and economic growth.



1. **Assam State Bamboo Mission:** In order to establish a comprehensive bamboo industry inside the state, Assam established its State Bamboo Mission. By encouraging bamboo production, offering funding for processing facilities, and supporting skill-development initiatives, the program aids bamboo farmers and craftspeople. Additionally, it assists craftspeople in producing and selling bamboo goods such as baskets, mats, furniture, and décor (Kumar & Bhattacharjee, 2019). To promote bamboo farming and guarantee sustainable practices, the state mission collaborates with the National Bamboo Mission.
2. **Nagaland Bamboo Development Agency (NBDA):** The NBDA trains craftspeople in Nagaland to become proficient in contemporary bamboo processing methods. Bamboo is necessary for making both traditional and modern bamboo crafts, and this includes weaving and cutting bamboo. By connecting local craftspeople with both domestic and foreign markets, the organization also encourages export prospects for bamboo products made locally (Sahoo, 2015).
3. **Mizoram Bamboo Mission:** Mizoram boasts a flourishing bamboo craft industry because to its profusion of bamboo forests. In addition to providing financial incentives for bamboo-based enterprises, the Mizoram Bamboo Mission gives indigenous craftspeople access to national trade shows and exhibits. Additionally, the state has been attempting to establish a value chain for bamboo that connects market access, craft production, and farming (Dutta, 2018).

### **Bamboo Craft Schemes in Other States**

Other Indian states, in addition to the northeastern ones, have enacted legislation to support the bamboo industry and craft. These programs frequently seek to close the gap between contemporary industrial demands and traditional craftsmanship.

1. **Kerala Bamboo Development Board (KBDB):** The Bamboo Development Board was founded in Kerala to encourage the use of bamboo in a variety of industries, such as handicrafts, furniture manufacturing, and building. The board offers training programs for regional craftspeople as well as financial support for bamboo processing facilities. In order to provide craftsmen greater market awareness, the KBDB also hosts workshops and craft fairs (Ghosh, 2017).
2. **Uttarakhand Bamboo Mission:** The state of Uttarakhand, which has an abundance of bamboo resources, has also started programs to help the bamboo sector expand. Bamboo plantings, post-harvest management, and artist training are the main objectives of the Uttarakhand

Bamboo Mission. The manufacturing of bamboo-based goods including fence, furniture, and mats has increased as a result of this mission (Chandran, 2019).

3. Madhya Pradesh Bamboo Mission: Since the Madhya Pradesh Bamboo Mission was established, the state of Madhya Pradesh has witnessed a notable expansion in the bamboo industry. The objective is to support artists financially and technically in order to establish an eco-friendly sector based on bamboo. To market goods like bamboo furniture, handicrafts, and building materials, the state government collaborates with craftsmen (Kumar & Bhattacharjee, 2019).

### **Support for Bamboo Craftsmanship: Training and Skill Development**

The development of artisans' skills is a crucial part of state-level programs. To improve bamboo workers' technical skills, several state governments provide training courses. These courses address both contemporary processing techniques that can increase output and quality as well as traditional bamboo artisan techniques like weaving and carving. In order to increase the marketability of bamboo goods, the Ministry of Skill Development and Entrepreneurship has teamed up with state governments to provide training in both rural and urban regions.

Initiatives that emphasize bamboo-based textiles and environmentally friendly materials have also been developed by the Central Silk Board and Craft Development Councils in states such as Karnataka and West Bengal (Sahoo, 2015). In the bamboo craft industry, this has created new opportunities for creative items and environmentally friendly design.

### **Market Access and Export Promotion**

Additionally, state governments have tried to increase bamboo crafts people's access to markets. Artists are given the chance to present their work to wider audiences through trade shows, state-sponsored exhibits, and online venues. Another crucial component of the government's plan to introduce Indian bamboo crafts to foreign markets is the implementation of export promotion programs. The export of premium bamboo goods is facilitated by the Bamboo Export Promotion Council, which collaborates with state authorities. Bamboo crafts are greatly promoted by state governments throughout India through a variety of programs that emphasize financial assistance for artists, market access, and skill development. In addition to promoting traditional handicraft, these programs help India's larger objectives of environmentally benign economic growth and sustainable development. India is establishing itself as a worldwide leader in the bamboo sector by implementing extensive bamboo

regulations and initiatives that preserve its cultural legacy while opening up new business prospects.

### **Modern Technology and bamboo craft**

The bamboo craft industry has changed because of the combination of modern technology with traditional bamboo crafting techniques. This has increased both production and innovation | Bamboo has been used for centuries to make functional and decorative items, but modern technologies have made these processes more modern | वर्तमान machinery and tools enable more precise cutting, shaping, and finishing, which allows bamboo crafting to be done faster and more efficiently while maintaining high quality | Intricate bamboo designs are now being carved using technologies like computer numerical control (CNC) machines, which offer a level of detail that was previously impossible (Kumar & Bhattacharjee, 2019) |

Bamboo composites and laminated products have also opened new applications | These inventive materials combine bamboo with other sustainable materials to make long-term, environmentally friendly alternatives for building, furniture, and flooring. (Ghosh, 2017) Manufacturers and artisans are able to blend traditional craftsmanship with contemporary aesthetics by experimenting with new forms and structures with contemporary design software.

These changes have allowed bamboo craft to grow into a modern, high-tech industry while simultaneously maintaining its roots in traditional knowledge and sustainable practices | Bamboo will still be relevant in today's environmentally conscious world thanks to this fusion of old and new.

### **Analysis**

Bamboo craft is a centuries-old art form in India that holds great cultural importance in many different locations. India is one of the biggest producers of bamboo in the world because of its strong links to indigenous tribes. Because of its durability, strength, and adaptability, bamboo is a popular material. Complex bamboo crafts, such as furniture, baskets, mats, and household items, are well-known across India, particularly in the northeastern regions of Assam, Nagaland, and Manipur.

Crafts made from bamboo are crucial for maintaining cultural heritage and boosting rural economies. Local craftspeople make useful and ornamental objects using age-old methods that

have frequently been handed down through the generations. Additionally, the craft is eco-friendly, providing a sustainable substitute for things made of wood and plastic. Bamboo crafts have become more well-known in both domestic and foreign markets as environmental concerns have grown in awareness, supporting the livelihoods of several rural craftspeople.

In order to assist craftsmen increase their output and revenue, recent government and non-governmental organization programs have concentrated on skill development, design innovation, and market access. The growing emphasis on sustainable and eco-friendly materials worldwide is predicted to increase demand for bamboo products (Kumar & Singh, 2020).

## **Conclusion**

India has a rich cultural legacy that includes the use of old bamboo artisan skills. In addition to being a beautiful and artistic expression, the methods used to create this craft honor local resources and traditional wisdom. Bamboo's structure, adaptability, and accessibility make it a valuable material for Indian crafts. Bamboo is widely used in many Indian states, particularly in Northeast, North, and Central India, for goods like fans, baskets, furniture, and construction materials. Special piercing, weaving, cutting, and dying procedures that have been handcrafted from generation to generation are all part of these traditional craft practices. Because bamboo is a resource that can be replenished quickly, this craft also contributes to the preservation of the social and cultural equilibrium. However, bamboo crafts also require creativity and design adjustments in response to current technological advancements and market demands. Bamboo crafts will gain recognition on a global scale and new opportunities for Indian artists will be created if these ancient methods are maintained and better design, training, and marketing are carried out. It is crucial to protect and develop the age-old bamboo craft methods that are an essential component of India's cultural legacy. This craft's integration with modern markets and designs will benefit the environment in addition to providing Indian artists with economic prospects.

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