Bamboo Society of India- The Indian **Bamboo Movement**

Ar. Neelam Manjunath Chairperson, Bamboo Society of India, Karnataka Chapter Member, National Governing Council, Bamboo Society of India Proprietrix, Manasaram Architects, Bangalore, India, mansarch@gmail.com Managing Trustee, Center for Green Building Materials and Technology, Bangalore, India, cgbmtblr@gmail.com World Bamboo Ambassdor, World Bamboo Organisation

Dr. Hemant Bedekar

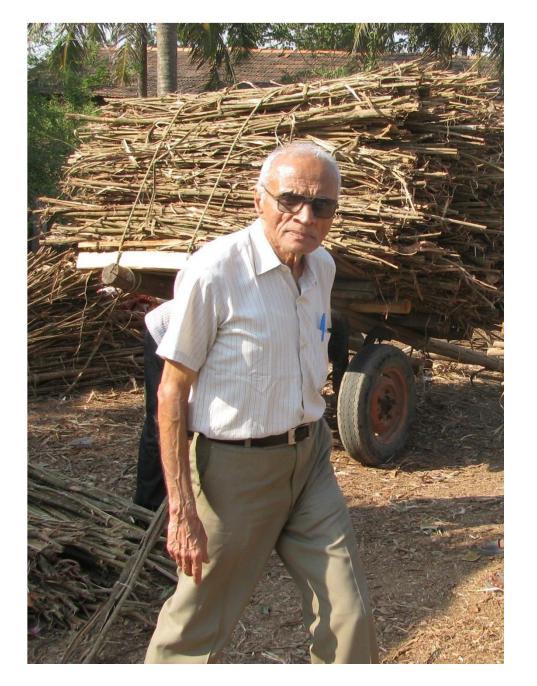
Executive Director, Bamboo Society of India, Maharashtra Chapter

INTRODUCTION

Bamboo Society of India (BSI) was formed in a period when for the first time a group of pioneers in the country foresaw 'Bamboo' in the context of its massive economic potential. In 1989, it was formally registered and certified under the Karnataka Societies, registration Act (1960). The society's registered headquarters is situated in Bangalore City, Karnataka. BSI was started as a small society with only 5 founding members :

- Sri. K. A. Bhoja Shetty, IFS, Principal Chief Conservator of Forests (Retd)
- Sri. A. Krishnaswamy, Chief Conservator of Forests(Retd)
- Late Shri. S.K.VARADA RAJ, IFS (Retd)
- Late Shri. H. RAJAGOPAL SHETTY, IFS (Retd)
- Late Sri. ADKOLI, IFS (Retd)

and 2 members . Today it has grown manifold and has over 1050 members living throughout the country and in 6 other nations across the world.



Mr. Adkoli Narayan Subrao (rtd. IFS) was born in Akola-Karnataka and was the director of BSI. He single handedly was responsible for providing a vision to promote holistic growth of the bamboo sector in India along with the other founding members. He was a member of many other esteemed organizations like Society of Water Development etc. and through them was responsible for spreading awareness and raising key issues of the bamboo sector.

The Vision

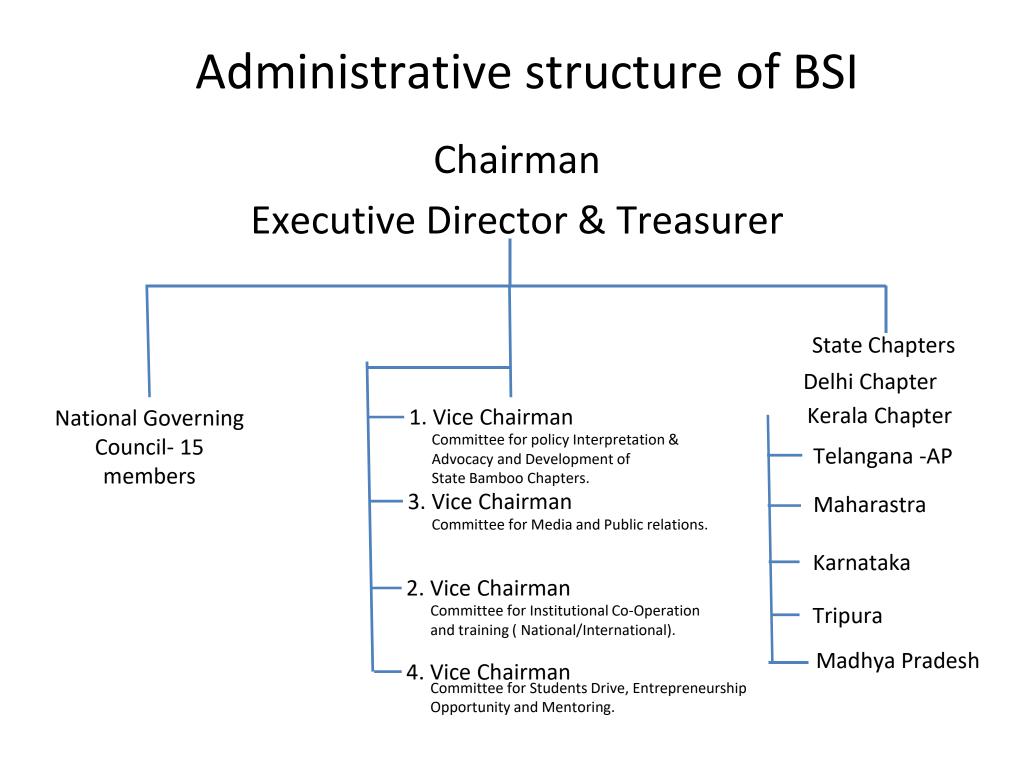
It was with a vision of promoting the holistic growth of bamboo sector in India that BSI was formed, by stalwarts like Late Shri. N. S. Adkoli (IFS), Late Shri. K. A. Bhoja Shetty (IFS), Late Shri A. Krishnaswamy, and taken forward by Dr. D. N. Tiwari (IFS), Shri. A. C Laxman (IFS), Late Shri Hiremath, IFS and many such thought leaders of the country. They worked with scientists and people from across the world, and conducted and attended numerous national and international seminars and conferences on bamboo. They also successfully undertook study tours, researches etc to revitalize the bamboo sector and take it forward.

Shri. D. N Tiwari (IFS), one of the founding members furthered the society's aspirations by playing the role of the main architect in the formation of India's first Bamboo Mission – NMBA- National Mission for Bamboo Applications. It is a government body promoting bamboo and it's applications at the national level and had state chapters. It would be no exaggeration to label them as among the fore runners of bamboo revolution not just in India but at a global level.

OBJECTIVES OF THE SOCIETY

Following their indelible footsteps today, BSI is endeavoring towards tapping the unrealized potential of the bamboo sector

- The society encourages and sponsors scientific study and research on bamboo.
- It constantly acquires data and disseminates it, on all aspects pertaining to the development of bamboo.
- BSI organizes conferences, seminars, workshops and exhibitions pertaining to bamboo
- and is constantly involved in organizing training to farmers in the field of management, utilization and marketing of bamboos.
- It serves as consultant to National and International organisations on bamboo development.
- Undertakes implementation of bamboo development projects on behalf of public or private bodies
- Most importantly it works as an advocacy group policy development for the bamboo sector
- Any other activity for promotion of bamboo



FOUNDER MEMBERS OF BSI

- Sri. K. A. Bhoja Shetty, IFS, Principal Chief Conservator of Forests (Retd)
- Sri. A. Krishnaswamy, Chief Conservator of Forests (Retd)
- Shri.S.K.VARADA RAJ, IFS (Retd)
- Shri. H. RAJAGOPAL SHETTY, IFS (Retd)
- Sri. ADKOLI, IFS (Retd)
- Sri. B. K. C. Rjan
- Shri. S. G. NEGINHAL, IFS (Retd)
- Alva's Educational Foundation
- NMAM Institute of Technology
- Sahyadri Foundation Sayadri Campus
- Ratnakar Shetty
- Sudeesh Karunakaran
- Sri. V. Ramakrishnan
- M/s. Tata Coffee Limited
- Sri. Neelkanth Dnyaneshwar Aher

STATEMENT OF ALL STATE CHAPTERS

SL. NO	STATE CHAPTERS	TOTAL MEMBERS	Chairman	
1.	Bamboo Society Of India, HQ	345	Dr. K. Sundar Naik, IFS	
	Overseas Member	16	HQ	
2.	Andhra Pradesh & Telangana Chapter	143	Sri. R. K. Mehta	
3.	New Delhi Chapter	32	Dr A K Bhattacharya, IFS (R)	
4.	Maharashtra Chapter	277	Sri. Sunil Vishwasrao Joshi	
5.	Tripura Chapter	0	Dr. Pawan K Kaushik	
6.	Madhya Pradesh Chapter	6	Sri. Subhash Bhatia	
7.	Kerala Chapter	44	Dr. K. V. Mohammed Kunhi	
8.	Karnataka Chapter	168	Ar. Neelam Manjunath	
9.	Total	1031		

The society aims to promote bamboo sector across India through these state chapters, they are continuously working towards achieving the objectives of BSI.

Overseas Members

- The Southern California Chapter of The American Bamboo Society
- The American Bamboo Society- Pacific North West Chapter
- Mr Karl Bareis, The International Bamboo Association, International Coordinator, California
- The Bamboo Society, EBS Great, The Librar, Royal Botanic Gardens-Kew, Great Britain
- Mr Abid Latif Mohamed, Forest Research Institute, Malyasia (FRIM)
- Mr Kant Sashi, University of Toranto
- Pacific North West Bamboo, USA
- International Development Research Center (IDRC), Singapore
- Bamboo Informatie Centrum , Netherland
- Coastarican Institute of Technology, Cartago- Costa Rica
- And many more

Few of the Recent Programs by BSI

- International bamboo conclave 2014
- Bamboo Cultural Fest 2016
- World Bamboo Day 2017
- World Bamboo Day 2018

Activities





Study tour undertaken to study the scope of commercial investments in raising bamboo plantations in Karnataka from 28th to 30th march, 2011

International Bamboo Conclave 2014



















World Bamboo Day 2014

●●●● Airtel 4G

11:01 PM pics4news.com **1** ∦ 99% **==**• +

aily News Events 18th September 2014





Bamboo Cultural Fest'16



Bamboo Cultural Fest Inaugration'16



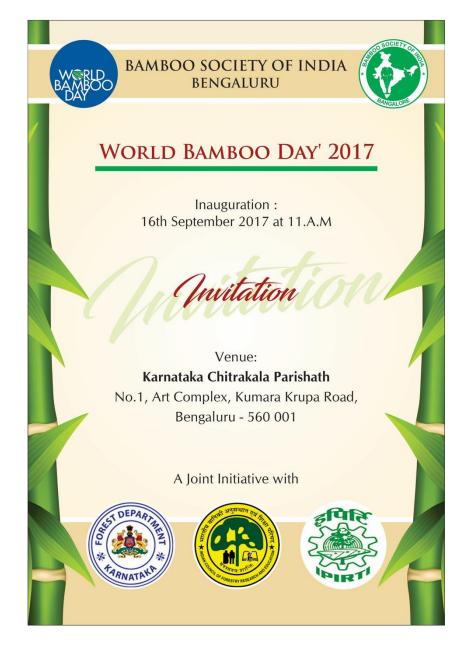






World Bamboo Day 2017





World Bamboo Day'17



World Bamboo Day 2018











A forest official tests a bamboo bicycle at a World Bamboo Day event on Tuesday. DH PHOTO/JANARDHAN BK









State Chapters

AP and Telangana Chapter



World Bamboo Day'18

Planting of Bamboo







BSI Maharashtra Chapter







Architects urged to plan for more use of bamboo

TNN | Oct 15, 2018, 03:51 IST



Over 35 practicing and faculty architects of IIA this week joined Bamboo Society of India (BSI), Maharashtra C... Read More

applications in its ongoing project.

Site Visit'18

🖾 🖶 A- A+

Nagpur: The Bamboo Research Training Centre (BRTC) at Chichpalli in Chandrapur district has urged the Indian Institute of Architects (IIA), Nagpur Chapter, to fill vacuum in bamboo architecture.

Over 35 practicing and faculty architects of IIA this week joined Bamboo Society of India (BSI), Maharashtra Chapter, in an exploratory visit-cum-workshop to BRTC to study bamboo resource and its technical



Bamboo for Sustainable Development

An interactive and informative conference 23" & 24" February, 2017 (10 am to 5 pm) Maharshi Karve Shikshan Sanstha's, Dr. Nanawati College of Architecture Campus (BNCA), Off Karve Road, Pune.

Bamboo - no words can do justice to its grandeur! It is a crop economically beneficial not just to farmers and entrepreneurs, but also to the entire nation. Be it agriculture, construction, furniture, handicrafts, industrial use or trade, bamboo contributes to all these fields, generates employment opportunities and also helps preserve the environment.

Bamboo is a wonder grass which is grown in various parts of our country. Maharashtra is also blessed with many species of hamboos which can be used for various applications. In an endeavor to sensifize and give hands-on experience to people interested in knowing about this green gold, Bamboo Society of India, Maharashtra Chapter is proud to present an interactive & informative two-day conference on Bamboo for Sustainable Development'. This unique experience will make you aware of the finer aspects of barnbook products, structures, industry, cultivation, propagation, harvesting and government schemes, The conference will include lectures, panel discussions, demonstrations and bamboo expo.

Bamboo cultivators, businessmen, architects, interior designers, furniture makers & bamboo lovers are most welcome!

Join us as we take our first step towards sustainable development with Bamboo. Program outline

23" February, 2017 (Day 1): Bamboo Utilities - Products, structures and industry

Experts will share their views and experiences on various topics like bamboo construction, use of bamboo in furniture, other industrial usage like plyboard, agarbatti, energy generation and bamboo trading.

24" February, 2017 (Day 2): Bamboo Cultivation

Bamboo plantation techniques, bamboo in rural economics, bamboo oraft, need of training for bamboo business and setting up of rural enterprises.

A Souvenir on Bamboo plantation, application and business will be released on this occasion.

Bamboo Expo – A display of various applications, utilities, structures, plantation materials, treatment techniques, books and tools will be organized at the venue.

	Registrat	tion fees	
	Professionals	Students	BSI Members
Day 1 & 2	Rs. 1000	Rs. 500	Rs 750
Only Duy 2	Ra. 300	Rs. 200	Rx. 250



Organizing Committee

Arch. Suneel Joshi I Hernant Bedekar I Dr. Nachiket Thakur I Arch. Sayali Andhare





For Registration Contact Hemant Bedekar

: 9767200905 : hsbede@gmail.com Dr. Nachiket Thakur : 9890909299 : bamboovishwa@yahoo.com Arch. Sayali Andhare : 7769953723 : sayali.andhare@bnca.ac.in

BSI Maharashtra Chapter Conference '17



TEQIP- III Sponsored

Symposium on

Bamboo - Emerging Source of Energy for Industries

Date: 10 January 2019

Time: 2.30 p.m. onwards

Venue: Physics Assembly Hall







Organised by

Department of Mechanical Engineering Visvesvaraya National Institute of Technology, Nagpur

In Association With

Bamboo Society of India, Maharashtra Chapter and Vidarbha Industries Association, Nagpur

VNIT Symposium'18

STUDENT'S TRAINING - 2018



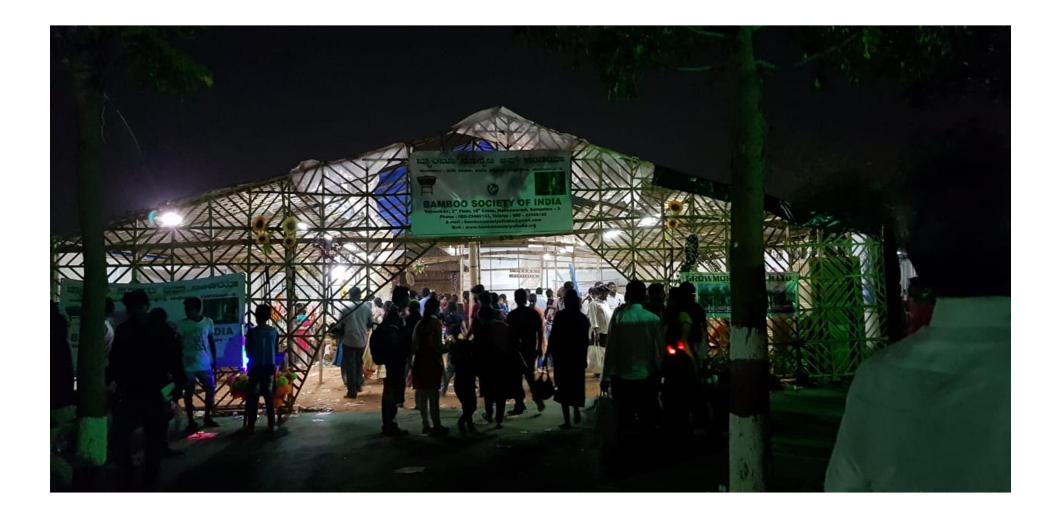
FARMER'S TRAINING-2018

HIGHLIGHTS

- Representation of BSI in 27 districts of Maharastra out of 35 districts
- 225 members within 2 years of establishment
- Training program for students of architecture, Interior design are proposed within next 6 months
- Farmer gathering for awareness of bamboo cultivation are proposed within next 4 months before plantation season.

Karnataka Chapter





Krishi Mela 2018



Participation in Lake Rejuvenation

Tripura Chapter



Construction of Low Cost, Earthquake Resilient Bamboo Houses Using Treated Bamboos

Nuruj Jaman Islam and Pawan K Kaushik

Tripura and North-eastern part of India comes under Zone V of earth quake susceptible zone. It is difficult for the marginalized population in hilly areas of Tripura to afford pucca house to them. High degree of earthquake susceptibility in hilly region makes the high cost pucca houses unfeasible and risky for the low income groups of hill communities. North-eastern part of India is blessed with ample Bamboo resources. Tensile strength of 28000 pounds per square inch makes Bamboo one of the strongest building materials. The strong mechanical properties of bamboo enable it to withstand heavy loads of concrete during building construction. Cement 7656 Sand 7600 Nut-bolt 2329 Paint an 1000 G1. wire

To serve the dual purpose of promoting earthquake resilient Bamboo house and community microenterprise development through supply of treated Bamboos using VPI Treatment Plant to extend its durability FRC-LE came up with an ambitious project sponsored by National Mission on Himalayan Studies (NMHS). Keeping in view the limited budget provisions in mind, FRC-LE came up with a low-cost, earthquake resilient and eco-friendly Bamboo house design which serves the interest of marginalised hill people of Tripura.

Construction of bamboo buildings through a participatory approach at both the project sites (Machmara and Barkathal) are in progress by imparting trainings on different aspects on bamboo treatment and house constructions to the local target groups. Fig: Making of Bamboo truss and panel for wall

construction Cost involved in Construction of each Bamboo House (400 sq ft) Items of Expenditure

Cost Bamboo (Treated) Barak (Bambusa balcooa) 2000 Muli (Melocana baccifera) 6900 Kanakkaich (Thyrsostachys oliveri) 3600 Roof tin and ridging 17141 Bricks 15765

7656 Sand 2850 Stone Chips 7600 Nut-bolts, J- Hooks 2320 Paint and burnish 1000 Sand Paper 100 GL wire 240 Clamps 1530 Master Trainers/Labourers 7000 Other Misc. construction expenses 4289 Total 80000 Approx. 25 man-days were contributed by the participating communities during training etc. Advantages of Bamboo houses: Earthquake resilient: Bamboo has higher tensile strength than many alloys of steel Higher compressive strength to concrete mixtures. Higher strength to weight ratio gives it a light weight but heavy strength. Symmetrical layout in scientifically design bamboo house structure evenly distributes the load. The whole structure acts as a single entity as walls are interconnected. Low cost and eco-friendly: The cost of construction of FRC-LE designed Bamboo house comes to Rs. 80000/- only. Raw materials are easily available. Bamboo houses are eco-friendly and has a soothing microclimate inside. Bamboo house are low cost designs which can be afforded by the low income groups of people in Hill regions Treated Bamboos makes the structure more durable which may be maintained for even 50 years. (The Author is Forest

Research Centre for Livelihood Extension, Agartala)



The Green Technology Club-BSI

BSI calls engg students to start bamboo clubs

tnn | Sep 17, 2018, 03:06 IST



🖂 🛱 A- A+

Nagpur: To give a boost to <u>bamboo</u> industry, the Bamboo Society of India (BSI), Maharashtra chapter, has invited all engineering and architecture students start bamboo technology clubs.

The appeal comes on the eve of World Bamboo Day on September 18, which will be celebrated by <u>BCI</u> with next generation engineers by BCI, Maharashtra chapter and students of Priyadarshini College of Engineering (PCE).



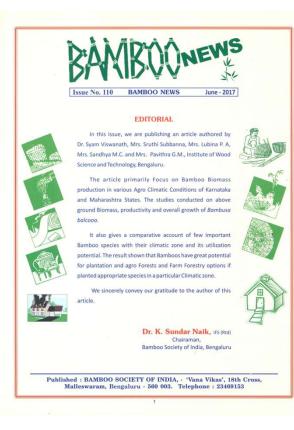
Publications



The Bamboo Cultural Fest this weekend at the Institute of Wood Science and Technology will feature expert talks, video screenings, pioneers' works and budding designers, apart from a fashion show. A look by RANJANI GOVIND

et's make Bangalore the first city to launch bamboo nationally and be a part of this global change, says Neelam Manjunath, Managing Trustee, Centre for Green Building Materials & Technology, Bengaluru. Several institutes in Bengaluru working towards the propagation of bamboo are coming

together to celebrate a Bamboo Cultural Fest to commemorate World Bamboo Day (September 18) at the Institute of Wood Science and Technology (IWST), Malleswaram, on September 24 & 25. It is a joint initiative of IWST, the Centre for Green Building Materials and Technology (CGBMT), Manasaram Architects, Bamboo Society of India (BSI), RR College of Architecture, and IPIRTI.







Bamboo can largely replace wood and steel in construction and there is a need to highlight its features. This is what the International Bamboo Conclave and Expo will strive to do, says architect

Neelam Manjunath in an interview

India is the second largest producer of bamboo in the world, next to China. There are 1,750 species grown in the world, as one-fifth of the world population uses bamboo as a construction material today. In India though, bamboo penetration into the construction industry is yet to be realised. Experts say that one has to understand bamboo for its 100 per cent green character, with selfmotivated appreciation after perceiving the dynamic characteristics and chemical composition of the material.

Stalwarts of BSI

- Late Dr Adkoli
- Dr D N Tiwari- Utthan foundation, World Bamboo Pioneer
- A C Laxman- called the Bamboo Man
- Indian Plywood Industrial Research and Training Institute, Bangalore
- Indian Wood Science Institute, Bangalore,
- Pointec ltd
- Dr N Bharathi
- Ar Neelam Manjunath- CGBMT, Manasaram Architects
- Ar Sunil Joshi- Vedha Foundation
- R K Mehta- Bamboo Enterpreneur
- Sanjeev Karpe -Native Konback
- Dr Ajoy Bhattacharya Green Highways Authority
- Shri Subhash Bhatia
- Shri Sagar Mutha- Mutha Industries
- Prof Nirmala Chotham
- Prof Madho Bist
- Dr Syam Vishwanath- Dir KFRI
- ITC
- And many more

 All in all BSI has representatives in almost all the sectors of development of Bamboo ! It has been silently connecting the dots for 30 years for a holistic development of bamboo sector pan India.

The Road Ahead

Today, Bamboo Society of India is fast a growing organisation and consists of students, artisans, activists, NGOs, growers, farmers, entrepreneurs, enterprises, artisan federations, researchers, botanists, nursery and plantation owners, architects, product designers, engineers, MSME's, technocrats, teachers, doctorates, master craftsmen, women, trainers, professors, professionals, design institutions, enthusiasts, bamboo lovers etc.

Every year BSI celebrates World Bamboo Day with great enthusiasm and involvement. It is through these events that BSI is striving to spread and reach out to larger groups of people and investors about the understated potential of bamboo in a country like ours where everyday economic development and possibilities are being looked out for.