

VOL - 1/2011

UJA YARWNG

BAMBOO ROOTS



Leadership in Bamboo Sector: Opportunities and Challenges

Institute of Leadership Development (ILD), Jaipur, Rajasthan
From 31st January' 2011 to 4th February' 2011



NMBA
National
Mission on
Bamboo
Applications

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TWIPRA BAMBOO & CANE HANDICRAFTS

C/O-DILIP D/BARMA, COLONEL CHOWMUHANI, KRISHNANAGAR,

AGARTALA, WEST TWIPRA, PIN-799001. INDIA.



Forward message



Hi Bamboo Collaborator,

Twipra (Tripura) is most of the important land of bamboo sector and North Eastern India part. So, we are first all natural comment for bamboo development use in India. Our Indian National father: M.K. Gandhi said “*You must be the change; you wish to see in the World*”. But Bamboo collaborators person always think or work or republic or realistically of world for “Dream on Bamboo, Bamboo is Green life”.

Mc. Samir Jamatia
Twipra Bamboo & Cane Handicrafts
Agartala, West Tripura-1, India

Forward message



Dear Bamboo Friends,

My experience to all bamboo friends

Er. Pradip Kumar Tripura
Twipra Bamboo & Cane Handicrafts
Agartala, West Tripura-1, India

PROGRAMME AGENDA

Date/ Day	Inauguration Session	Time
31 st January, 2011 Day -1	Registration at the reception, Lamp lighting Ceremony at reception place setting the room “ Perfection”	10:30 - 11:00 A.M
	Technical Session	
	Magic of Bamboo (PPT) by: Dr. Raju Sharma, Ex-IAS, Director, ILD, Jaipur, Rajasathan	11:00 A.M 01:00 P.M
	Lunch Break	01:00 - 02:15
	Overview and detail o Bamboo Industry (PPT) by: Mr. Ajay Kumar, Mission Coordinator, NMBA, New Delhi, India	02:15 P.M 03:00 P.M
	Tea Break	03:00 -30:30 P.M
	Experience Sharing by: Mr. Sanjeev Karpe, KONBAC	03:30 - 05:00 P.M
1 st February, 2011 Day – 2	Challenges & Opportunities in Bamboo Industry by: Dr. Raju Sharma, Ex-IAS, Director, ILD	10:00 A.M 10:45 A.M
	Tea Break	10:45 - 11:15 A.M.
	Presentation & Panel Discussion Facilitated by : Dr. Raju Sharma, Ex-IAS, Director, ILD	11:15 A.M 12:45 P.M
	Lunch Break	12:45 -01:45 P.M
	**Excursion to Amer fort	02:00 P.M
2 nd to 3 rd February, 2011 Day – 3 and 4	Workshop on: <ul style="list-style-type: none"> ✓ Setting up a new enterprise ✓ Motivation ✓ Dealing with niche product / niche market : Bamboo as the best Green Material Facilitated by Mr. Manu Gour, Itrain ltd, New Delhi, India 	09:30 A.M 05: 30 P.M 06:00 P.M
	**Evening Trip to Chowki dani	Tea 11:00 -11:15 Lunch 01:00 -02:15 Tea 03:45 -04:00
4 th February, 2011 Day – 5	Panel Discussion / summing up by Dr. Raju Sharma, Ex-IAS, Director, ILD	10: 00 - 01:00 P.M
	Lunch Break	01:00 -02:15 P.M
	Feedback Session	02:15-03:15 P.M



Lamp lighting Ceremony at reception place:

Dr. Raju Sharma, Ex-IAS, Director, ILD Jaipur, Rajasthan, India

Er. Ajoy Kumar, Mission Coordinator, National Mission on Bamboo Applications, TIFAC, Ministry of S & T, Govt. of India

And all participants

Introduction Programme at ILD, Jaipur

by Smt. Paramjit Sethi, ILD

1. Dr. Raju Sharma, Ex-IAS, Director, ILD Jaipur, Rajasthan, India

2. About of Institute of Leadership Development



The Institute of Leadership Development is a non-profit registered society promoted by the IFCI, a leading Financial Institution in India (A Govt. of India Undertaking). The Institute is located at Jaipur and its intimate catchment area is the capital city of Jaipur and the State of Rajasthan.

The ILD is promoted and funded by the IFCI, a leading Indian Financial Institution (A Govt of India Undertaking). The campus, comprising a land area of nearly 33 acres, has ample and comfortable facilities to house around 30 participants in a well appointed hostel, there are lecture, training and seminar rooms with all the modern teaching aids, a library, gym and surroundings that encourage vitality of both body and spirit.

The broad vision of ILD is to collaborate with thinking people and institutions engaged in a variety of pursuits and objectives: social, economic, business, cultural, educational and political with the conviction that the sectoral interests and paths may be variant, but the unifying principle is the same: the discovery and pursuit of a better way of life that paves the way for a better person, home, city, state and nation. We believe that the notion of leadership inheres this unifying ideal and encourages us to address and reflect upon such foundational themes and issues in an Inter- disciplinary framework.

ILD seeks nothing more than offering itself as a committed and engaging platform where many voices, ideas and actions can come together creating, in the process itself, a synergy that improves the sum of the effort and bonds us towards goal and actions that are for the good of all.

Magic of Bamboo (PPT)

Dr. Raju Sharma, Ex-IAS, Director, ILD, Jaipur, Rajasthan

BAMBOO: A MAGICAL RENEWABLE RESOURCE

- ✓ Foremost and fastest in Biomass production
- ✓ Most efficient in carbon sequestration
- ✓ Excellent for prevention of soil erosion & prevention of water run offs.
- ✓ The best natural engineering material
- ✓ A rich tradition of multiple uses wherein technology intervention & industrialization can add value substantially
- ✓ Energy efficient: requires 1/3rd of energy compared to timber, 1/8th of energy compared to cement and 1/50th of the energy for processing equivalent mild steel
- ✓ Direct benefits in income & employment in rural/backward regions, at all levels from plantation, artisan use, primary processing and downstream industrial activities.



Overview and details on Bamboo Industry (PPT)

Er. Ajay Kumar, Mission Coordinator, NMBA, New Delhi, India



Bamboo as Green Gold

Bamboo: a woody grass

- Grows widely & abundantly available
- Strong and versatile material, easy to use & work with
- A part of India's cultural, social & economic traditions

The bamboo sector: Technology leads the way

- New products, new ways of using bamboo
- Machinery, equipment and process technologies
- Usage of bamboo as an industrial material growing at 30% annually
- Creating employment and income

Experience Sharing (PPT)

Mr. Sanjeev Karpe, KONBAC



Konkan Bamboo and Cane Development Centre

A not for profit organization, established in June 2004. Registered under Sect. 25 of Companies Act setup & technically supported by INBAR.

Challenges and Opportunities in Bamboo Industries

Dr. Raju Sharma, Ex-IAS, Director, ILD

The case for Bamboo Industrialization

Bamboo is a unique, highly renewable resource with multiple uses

- Foremost and fastest in Biomass production
- Most efficient in carbon sequestration
- Excellent for prevention of soil erosion & prevention of water run offs.
- The best natural engineering material
- A rich tradition of multiple uses wherein technology intervention & industrialization can add value substantially
- Energy efficient: requires 1/3rd of energy compared to timber, 1/8th of energy compared to cement and 1/50th of the energy for processing equivalent mild steel
- Direct benefits in income & employment in rural/backward regions, at all levels from plantation, artisan use, primary processing and downstream industrial activities.

General Scenario

- Annual harvest - 13.5 million tonnes (approx) (on dry basis-5 million tonnes) from about 10 million hectares of forest/others; Demand double the annual harvest
- Productivity 1/4th to 1/6th of China/Taiwan
- In usage, an unusually large amount goes to paper industry. (Around 50%)
- Rough size of bamboo economy: Rs 2500 crores;
- Providing direct & indirect employment: 10 million
- 87% of bamboo resources in forests. Among states, the only exceptions are Orissa and Nagaland.
- Absence of managed or industrial plantations (on account of adverse regulatory practices).

NMBA and the process of industrialization

- Post 2004, new technologies and uses have come into practice that establishes the case of significant scaling up and rapid industrialization. And for further research, technology intervention and commercialization
- Industrial (bamboo based) units set up in 2004-2008

Sector	Type of industry	No	NMBA Investment	Turn over (Rs crores)
Wood Substitutes	Bamboo boards of all kinds incl. Composites & Bamboo Flooring & Boards	40	Rs 20.00 Cr	100.00
Housing	Board units & Fabricators	5		125.00
Preprocessing activities	- Mat Weaving centres/clusters - Sliver making	30	Rs 3.00 Cr	10.00
Utility products/Intermediates	- Furniture, - Stick making, - Venetian Blind	25	Rs.5.00 Cr	15.00
Energy	- Charcoal Kiln, - Activated Carbon, - Gasifiers	36	Rs.10.00 Cr	25.00 (incl Fossil Fuel Saving)

Food	- Bamboo Shoots (plus 34 nos. Community level processing units)	3	Rs.5.00 Cr	4.00
Reinforced Thermoplastics	- Bamboo reinforced	1	Rs.7.00 Cr	25.00
Bamboo Processing Machines	- Primary & Secondary	12	Rs.10.00 Cr	15.00

NMBA: XI th Plan Outlay & Sectoral Division			
Budget Outlay:	Rs 180 crores	<u>Sectoral Allocation:</u>	
Internal resources generation :	Rs 120 crores	Technology Assessment	Rs 38 crores
Total:	Rs 300 crores	Consolidation of Technologies	Rs 120 crores
		Development of Technologies	Rs 130 crores
		Management costs	Rs 12 crores
		Total	Rs 300 crores

Snapshot of proposed/likely deliverables by NMBA during XI Plan	
No. of units on new technologies	50
NMBA investment	Rs 130 crores
Private investment	Rs 390 crores
<u>Consolidation of proven technologies</u>	
No. of units to be set up	100
NMBA investment	Rs 120 crores
Private investment	Rs 360 crores
<u>Assessment of technologies</u>	
1. Bamboo bio-fuels (through flash pyrolysis)	
2. Bamboo vinegar/oil (a bio-fertilizer and pharmaceutical use)	
3. Nano technology for hygiene products	
4. Likely incremental employment to be generated in the XI plan period – 60 million mandays	
5. Anticipated Bamboo consumption on account of enhanced activities– 1.8 million tonnes per year	

Pipeline Projects & New Initiatives
The following projects are in pipeline and would be implemented during the next financial year:
<ul style="list-style-type: none"> • Gasifier- to be linked to Grid • Bamboo Timber • Toothpick sticks • Bamboo furniture • Whole bamboo housing structures • Bamboo compreg for auto/rail sector • Activated carbon • PP/PE reinforced bamboo thermoplastic

New Technology Areas for Research & Development during XIth Plan

- **Bamboo Plastic Composite (BPC)** – alternate to wood plastic composite used in Infrastructure, land scaping, automotive sector & housing sector
- **Resin Development** – development of environment friendly resin with emission norms meeting International Standards
- **Flash Pyrolysis** – Bamboo is being tried as an alternate route for ethanol through flash pyrolysis
- **Bamboo Oil** – as route to bio fertilizer & pharmacological use
- **Bamboo Timber**
- **Nano technology** – route using bamboo –for healthcare products
- **Utility product development** – e.g. solar garden light, solar cooker, computer etc.

Lessons learnt & the way forward: S W O T

<p><u>Strengths</u></p> <ul style="list-style-type: none"> ✓ Successful demonstration & induction of new technologies & processes ✓ Good base of data, knowledge & domain expertise ✓ A working network approach incurring low transaction costs 	<p><u>Weaknesses</u></p> <ul style="list-style-type: none"> ✓ A limited time mission. The nature of the sector, its size & variety requires a permanent institutional support mechanism. ✓ Scale of budget moderate; in real size economy effect can only be demonstrative.
<p><u>Opportunities</u></p> <ul style="list-style-type: none"> ✓ Substantial, elastic demand for a variety of products ✓ Green alternative in all fields with significant positive externalities ✓ Multi use products; reduction in wastage ✓ New technology areas ✓ Extra Fiscal/Financial support on account of green advantage 	<p><u>Threats</u></p> <ul style="list-style-type: none"> ✓ Traditional marketing channels are difficult to penetrate ✓ Availability & pricing of bamboo; bamboo harvesting practices ✓ Inappropriate regulatory regime for harvest and transit of bamboo ✓ Economics of scale & price comparison with wood based & plastic materials ✓ No state schemes to promote bamboo based development

Recommendations:

- **Forest regulatory policies of centre and states to clearly establish that:**
>harvest and transit of bamboos in non forest lands is subject to no restrictions whatsoever.
- **A marked promotion and support for ‘managed’ or industrial plantations (20 Hectares and more)**
- **Working plans for forest produce to ensure that:**
>at least 60% of forest bamboo is earmarked for non paper mill use
>proper harvesting technologies are employed
- Bamboo plastic composites & bamboo fibre reinforced thermoplastics have a great future. Need to be supported boldly.
- A strategy to support ‘multi use’ products. For example, board units to supply boards for furniture & utility products (machine made)
- A National Programme to supply & establish bamboo housing and bamboo public utilities (schools, health centres, shelters etc). The programme should aim to erect 15 lakh sq ft of structures in two years. Outlay: Rs 75.00 crores over two years.
- Bamboo Park (hub) for bamboo industries development
- A dedicated fund for composite loans for bamboo industrial units
- A National Programme for Training of 10,000 skilled work-forces for Bamboo Industrial Applications over 2 years.
- A case for a ‘Permanent Body’ to promote all aspects of bamboo: Council or Board

**Presentation & Panel Discussion by: Samir Jamatia, Agartala, Tripura
Facilitated by: Dr. Raju Sharma, Ex-IAS, Director, ILD**

BAMBOO SOCIAL STORY

Bamboo = Birth + Marriage + Death
= life

Explain details:

- B= Bland
- A= Agreement
- M= Management
- B= Brow
- O= Overlie
- O= Order

Many kind of words “**BAMBOO**”?

- How many bamboo non-lovers and lovers?

*I know, this question is very difficult for Bamboo sector in India.

Slogan: “Dream on Bamboo, Bamboo is Green life”



You must
be the
change
you wish
to see in
the world:

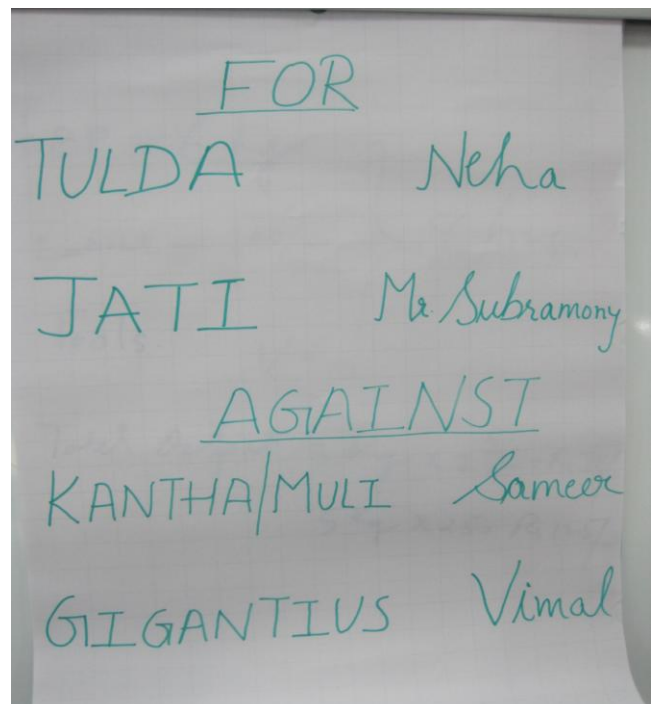


Mahatma Gandhi

Workshop by: Mr. Manu Gour, I Train Consultants Ltd, Gurgaon, India



- ✓ **Setting up a new enterprise**
- ✓ **Motivation**
- ✓ **Dealing with niche product / niche market : Bamboo as the best Green Material**



GROUP PICTURE



Bamboo Development Challenges Adopted

- The world population is now surpassing 6.5 billion.
- Population growth, combined with rapid economic expansion has increased food, fodder, fiber, energy and timber demands.
- Majority of the tropical populations depend on livelihoods derived from natural resources such as bamboo.
- The continued degradation and diminution of natural resources threaten socio, economic and environmental sustainability.
- Unsustainable development is resulting in -
 - Land degradation and desertification;
 - Biodiversity erosion;
 - Climate change;
 - Poverty, hunger and poor health.

Certificate Awarded



Participated in the National Conference on Cluster Development of Bamboo Products, Raipur, Chhattisgarh, India from 12th – 13th July' 2011 organized by National Bamboo Mission and Bhaskar Foundation (Dainik Bhaskar Group Initiative)

Guests	<p>Inaugurated By : Dr. Raman Singh, Hon'ble Chief Minister of Chhattisgarh, Govt. of India</p> <p>Chief Guest Sh. Arun Yadav, Hon'ble Minister of State Agriculture and Food Processing, Govt of India, New Delhi</p>
Topics	<p>An insight into Bamboo Sector-bamboo craft and industrial products.</p> <p>Capacity Building-Cultivation to Enterprise Development (Small and Community Based)</p> <p>Improved cultivation technique for high yielding and good quality.</p> <p>Issues of availability, price and viability.</p> <p>Bridging the Gap-Policy and Regulatory, Role of Forest Authorities, Joint Forest Management Committees, Panchayati Raj Institutions Artisans and Entrepreneurs.</p> <p>Domestic/International Business Opportunities perspectives of entrepreneurs, exporters and designers.</p> <p>Up gradation of CFCs in Chhattisgarh through CSR and PPP model.</p>
Participants Profile	<p>Policy Makers, Bamboo Growers, Manufacturers, Exporters, Designers, Artisans, Forest Officials, Machinery & Equipment Manufacturers, Development Agencies, Banks and Financing Institutions etc.</p>

Visited to the Prosperity Initiative (Bamboo) and Bamboo Industries, Hanoi and Ho chi Minh city, Vietnam from 21st – 26th July' 2011



Participated in the National Conference on Bamboo Plantation & Value Addition, Agartala, Tripura from 5th – 7th August' 2011 organized by National Bamboo Mission and Tripura Bamboo Mission.



Participated in the First Indian Forest Congress – 2011 held at NASC, Pusa Complex, New Delhi, India on from 22nd – 25th Nov, 2011.

