

Restructured National Bamboo Mission

Erstwhile NBM launched in 2006
Restructured and Re-Launched in 2018



Natural Resources Management Division
Department of Agriculture & Farmers' Welfare
Ministry of Agriculture & Farmers' Welfare

- The National Bamboo Mission initially launched by GoI in 2006
- It was subsumed under the 'Mission for Development of Horticulture' in 2014 and continued till 2016.
- Since 2006-07, 3,61,791 ha of land have been covered with bamboo plantations, out of which 2,36,700 ha are under forest area and 1,25,091 ha under non-forest area (All India data).
- During 2018-19, the Mission has been restructured to include market, value addition, product development, skill & R& D components and being implemented under the 'National Mission for Sustainable Agriculture (NMSA)'
- (r) NMB emphasise to bring the bamboo resources into the market value chain to reduce import and improve livelihood & business opportunities.
- During the year 2018, the Indian Forest Act 1927 was amended to exempt bamboo grown outside forest from the definition of tree.
- Any bamboo grown in private or homestead land no longer requires a felling permission or transit permission from any State Forest Department
- The restructured NBM is a Centrally Sponsored Scheme with a funding pattern 60:40 between Centre and State Govt. for all States excepting NE & Hilly states, where it is 90:10 and 100% in case of Union Territories/ R&D institutes/ Bamboo Technology support Groups (BTSGs) and National Level Agencies.

- **The Scheme is being implemented in 23 States and UT of J&K.**
- Since the launch of restructured NBM until 30.11.2021, Rs.324.08 Cr was released to the States including BTSGs.
- 23456 ha non-forest area has been planted with bamboo. 367 Nos. of Bamboo Nurseries, 72 Nos. bamboo treatment and preservation (in nos.), 375 Nos. Product Development and Processing units, 95 Nos. Infrastructures for Bamboo Market ,1801Nos. of development of tools, equipment and machinery were achieved. 11798 persons were trained. 219 Nos. of Workshop/ seminar/ trade fairs/ exhibition activities and 236 Nos. of R& D activities were carried out.
- Bamboo waste management units, Handicrafts/ Cottage industry, Furniture making, fabric/ jewellery making, bamboo shoots processing, incense stick making, common facility centre, Bamboo board /mat/corrugated sheets /floor tiles making, Bio-Energy extraction components are established under NBM for product development and value addition.

Important Industries related to Bamboo Sector

- Agarbatti – sticks & raw batti
- Engineered bamboo and construction – boards, tiles, doors, ply etc.
- Food - Bamboo shoots, vinegar
- Food contact articles - straw pipes, cutlery, bottles, etc. – good replacement for plastics
- Fiber and fabric for textiles
- Handicrafts
- Herbal/ Medicine
- Paper industry
- Ethanol for fossil fuel blending, bio-gas gassification
- Other product for waste' utilization – charcoal, activated carbon, briquettes, cutlery, chopsticks, skewers, tooth picks, powder, home décor, office utility, etc.

Industry Driven Approach of NBM

- Identified ten industrially important species for plantation on non-forest land :

Bambusa tulda , *B. bambos* , *B. balcooa*, *B. cacharensis*, *B. polymorpha*,
B. nutans, *Dendrocalamus asper*, *D. hamiltonii*, *Thyrostachys oliverii*,
Melocanna baccifera

- Cluster based approach
- Promotion of bamboo FPOs
- Zero wastage concept
- Capacity Building
- Formalization of the skill set of artisans
- Upgradation of tools and machineries

Summary of Physical Achievement (as on Nov 2021)

Sr. No.	Components		2018-19	2019-20	2020-21	2021-22	Total
1	Propagation and Cultivation	Nursery (in nos.)	275	63	29	00	367
		Plantation (in ha)	8069	10262	5125	00	23456
2	Promotion of bamboo treatment and preservation (in nos.)		51	16	5	00	72
3	Product Development and Processing (in nos.)		224	60	91	00	375
4	Promotion and Development of Infrastructure for Bamboo Market (in nos.)		56	30	9	00	95
5	Development of tools, equipment & machinery (in nos.)		18	510	1273	00	1801
6	Skill Development and awareness campaign	Capacity Building Training (in no. of persons)	6115	3652	2031	00	11798
		Workshop/ seminar/ trade fairs/ exhibition (in nos.)	143	65	11	00	219
7	Research & Development (in nos.)		152	76	8	00	236

Progress of Processing & Industrial Units approved under NBM (as on Nov 2021)

S.No.	Name of Unit	Achievement (Nos)
1	Bamboo treatment and seasoning plants	72
2	Processing units for value addition of Bamboo (in Nos.)	72
3	Management of Bamboo waste in primary processing units	31
4	Handicrafts/Cottage industry	81
5	Furniture making	43
6	Fabric/Jewellery making	11
7	Bamboo shoots processing	24
8	Incense stick making	81
9	Common facility centre (CFC)	23
10	Bamboo board /mat/corrugated sheets /floor tiles making	5
11	Bio-Energy extraction	3
12	Activated Carbon Product	1



Bamboo Clusters

- 22 Bamboo based clusters were formed out of which 9 Nos. are in North East States viz., Nagaland (3) , Assam (1) and Tripura (5), Uttarakhand (1), Gujarat (1), Maharashtra (6), Odisha (3), Karnataka (1), Madhya Pradesh (1), Mizoram (1).
- Ampri cluster of Kamrup (M) District started bamboo cultivation in FPC model involving 609 farmers in 585 ha during 2020-21
- Bamboo cultivation, promotion of both resource & enterprise comprising of treated bamboo poles, charcoal, round sticks furniture, handicrafts, home utility, construction, interior décor etc are being done by the clusters; mainly the womenfolk.

Farmers Producer Organisations

- Formation of 40 FPOs in bamboo sector have been approved by the DA & FW under the Scheme “Formation of 10000 FPOs in 5 years”. The implementing agencies are NAFED, NERAMAC and NABARD.
- Being implemented in Madhya Pradesh, Maharashtra, Assam & Odisha.
- 29 FPO were already registered in and the process for remaining in progress.

Externally Aided Projects (in pipeline).

- **“Development of Bamboo Value Chain in the North East”** -supported by Asian Development Bank : The PPR has been approved and posed to ADB by DEA. Expected to begin the project by next financial year.
- It is proposed to establish Integrated Bamboo Parks (IBP- Assam, Nagaland & Tripura) and Aggregation/ Primary Processing Centre (APPC) in the NE States.
- The out lay is Rs. 800 Cr (approx) for 3 years in which 50% is counter part funding from DA & FW.
- The project is an output of the NEEC Study of ADB assigned by the Deptt. Of Economic Affairs.
- The project includes Studies on bamboo value chain to chart development plan, sustainable supply of feed stock for bamboo parks, Increase efficiency in primary processing, Improve backward and forward linkages for benefit of farmer producers, entrepreneurs and industry, Setting of product oriented specifications & standards, Infusion of international best practices with Indian systems to improving outcome, Need analysis & skills for potential markets etc.
- The locations identified for the IBP & APPC are:
 - Tripura: Kumarghat, Dhalai,Sairang, Ramthar,
 - Assam: SilcharPanikhaiti (or nearby Chandrapur), Chaygaon, Nagaon, Golaghat, Diphu
 - Nagaland: Dimapur, Kohima
 - Manipur: Imphal, Noneh
 - Meghalaya: Rongram, Nongpoh
 - Mizoram: Lengpui, Aizwal, Lunglei,Lawngtlai, Mamit

Externally Aided Projects (in pipeline).

- **Japan- India North East Bamboo Development Initiative-** TCP with JICA, Japan Govt. :- The PPR has been approved and posed to Govt of Japan by DEA.
- The proposal is an output of the discussions held under the aegis of Act East Policy.
- Kick-off Meeting has been done and preliminary survey initiated by technical consultant of JICA and it is expected to be completed in December, 2021.
- NID Jorhat, RFRI Jorhat, NEIRST, NECBDC & NECTAR are proposed to be participated from Indian side.
- The goal of the TCP is to make North East India as hub of innovation and design for branded bamboo-based products and one stop region for knowhow, R&D, sourcing, retail etc.
- The activities includes:-
 - Productisation and branding through innovation in product and process using appropriate tools & technology , skilling of local artisans and entrepreneurs, involving premier institutions of the region and Japan
 - Logistics for establishing value chain between markets and farmers
 - Entrepreneurship development of communities
 - Natural Resource Management and sustainable production including raising of sufficient Quality Planting Material
- The objectives include innovation & Design especially for handicrafts & jewellery, Fibre research, product development, skill development & Capacity building

Incentives for the promotion of bamboo sector under NBM

- Multi pronged strategy with the inclusion of Govt & private sectors ;
 - (1) promotion and facilitation for bamboo cultivation,
 - (2) primary processing facilities,
 - (3) value addition & product development
 - (4) Micro-medium & small entrepreneurships
 - (5) waste-to wealth approach,
 - (6) market infra & facilitation,
 - (7) Skill development,
 - (8) campaigns/ seminars/ workshops etc.
 - Credit linked back ended subsidy with a pattern of subsidy: own contribution: loan as 50:10:40
 - Additional assistance of 10% given to the private sector of North Eastern States.
- Apart from the financial assistance by NBM, the primary processing & Marketing of bamboo has been included to be assisted by Agricultural Infrastructure Fund (AIF) and bamboo based FPOs are being formed under the scheme of FPO formation by DA & FW. (29 FPOs out of approved 40 has been formed in Assam, Maharashtra, Madhya Pradesh & Odisha)

Policy & Facilitative Interventions

- The National Bamboo Mission conducted an in-house study and a study was assigned to IIFT 'Case Analysis of Bamboo Aggarbatti :- Domestic manufacturing versus Imports'
- As the result of the study, the import policy has been changed to restricted from free category for the bamboo incense sticks & raw agarbatti sticks by the DGFT.
- Customs duty on bamboo imports by agarbatti manufacturers hiked from 10 per cent to 25 per cent with immediate effect to encourage use of domestic bamboo for AtmaNirbhar Bharat. NBM States have been urged to take this as an opportunity to revive the domestic units.
- A dedicated marketing page bamboo for bamboo has been launched in the GeM platform June, 2021. This serves as a platform to bamboo grower as well as bamboo product manufactures across the country for specialized marketing model of multifaceted bamboo products for purchase by governmental and private consumers.
- MIS module for accredited Nursery, Plantation and agarbatti stick production has been introduced in the NBM NMSA portal for easy access and real-time monitoring of the progress.
- CPWD has taken steps to promote bamboo wood products that can be used in construction industry by incorporating 9 nos. bamboo wood products related items (viz. Bamboo Wood Flooring, Skirting, Cladding, Paneled Door, Roofing, False Ceiling etc.) in Delhi Schedule of Rates 2019 under Sub Head: 26 New Technologies of items.
- The Indian Institute of Packaging (IIP) is engaged in Design and Development of Bamboo Crates for Packaging, Storage and Transportation of Fruits and Vegetables in collaboration with North East Cane and Bamboo Development Council (NECBDC). IIP furnished the concept and prototypes of four different types and another 3 smaller size crates are under development.

Pattern of assistance

SI. NO.	Activity	Cost norms (Rs. in lakh)	Subsidy
B	Promotion of bamboo treatment and preservation		
1	Establishment of bamboo treatment and seasoning plants	20	100% Govt., 50% Pvt.
2	Establishment of carbonisation plants	30	only for private @ 50%
3	Establishment of livelihood business incubators	100	100% Govt. & 50% Private + 10% NE
C	Product Development and Processing		
1	Establishment of processing units for value addition of Bamboo (in Nos.)	30	100% Govt. 50% Pvt. (+ 10% for NE states)
2	Management of Bamboo waste in primary processing units	25	-do-
3	Handicrafts/Cottage industry	15	- do -
4	Furniture making	25	- do -
5	Fabric/Jewellery making	15	- do -
6	Bamboo shoots processing	20	- do -
7	Incense stick making	25	- do -

Pattern of assistance (Contd)

8	Fabric/Fibre extraction	50	- do -
9	Common facility centre (CFC)	25	-do-
10	Bamboo board /mat/corrugated sheets /floor tiles making	200	100% Govt. 30% Pvt. (+ 10% for NE states)
11	Bio Energy extraction	200	do
12	Activated Carbon product	200	-do-
13	Ethanol Gassifier	500	do
D	Promotion and Development of Infrastructure for Bamboo Market		
1	Establishment of bamboo depots and godowns	50	100% Govt., 25% Pvt., 33% NE
2	Promotion of bamboo mandi (bamboo market place) and e-trading	100	100% Govt., 25% Pvt., 33% NE
3	Rural haat	20	100% Govt., 25% Pvt., 33% NE
4	Bamboo bazaar	15	100% Govt., 25% Pvt., 33% NE
E	Development of tools, equipment & machinery		
1	Technological enhancement of indigenous tools, equipment & machinery	Project Based	100% Govt. & 50% Private insti
2	Import of technological superior tools, equipment & machinery in Common Facility Centre	Project Based	100% Govt. & 50% Private insti

Pattern of assistance (Contd)

F	Skill Development and awareness campaign (upto 5% of allocation)		
i)	Training of farmers/ artisans	Project Based	100% Govt.
ii)	Training of field functionaries	Project Based	100% Govt.
iii)	International training/ visit for exposure of NBM staff/ field functionaries including farmers and entrepreneurs	Project Based	100% Govt.
iv)	Training of Entrepreneurs	Project Based	100% Govt.
v)	Organizing workshop/ seminars at International	Project Based	100% Govt.
vi)	Organizing workshop/ seminars at National	Project Based	100% Govt.
vii)	Organizing workshop/ seminars at State	Project Based	100% Govt.
viii)	Organizing workshop/ seminars at District	Project Based	100% Govt.
ix)	Participation in domestic trade fairs	Project Based	100% Govt.
x)	Participation in international trade fairs	Project Based	100% Govt.
xi)	National/ International exhibition	Project Based	100% Govt.

Way Forward

- Tackling delays in fund flow at the State Governance level.
- To make strong scientific/ technical backdrop for bamboo sector lead by ICFRE, ICAR, CSIR etc.
- NBM is mandatorily focused for non-forest area and the cultivation is still not upto the commercial level . A sustainable harvesting plan may be prepared by all the State Forest Departments
- Survey for identification of waste land/ bamboo cultivable land
- Community mobilisation- Clusterisation of farmers & industry/ entrepreneurs, FPO formation
- Identification of potential areas and development of logistics infrastructure
- Bamboo brickets from leftover as supplementary fuel for cement industry
- Bio-ethanol production using bamboo: Assam & Arunachal Pradesh are in process of finalising MoU with Assam Bio Refinery Ltd (ABRL)
- The provision of Agri Infra Fund (AIF), FPO formation & M/o MSME may be utilised for bamboo sector by all the States.
- Mobilisation of Corporate Social Responsibility Fund (CSR) to raise bamboo plantations & livelihood empowerment.







FURNITURE AND UTILITY





BAMBOO PROCESSING UNIT AT TUIBONG, CHURACHANDPUR



COMMON FACILITY CENTRE AT BAMBOO CENTRE, LENGPUI





Inside factory building

**NUTECH FACTORY:
Bamboo board/ mat/corrugated sheets/floor tiles making**



Raw Agarbatti Cluster
Location : Thingsulthiah
Implementing Agency : BDA





BAMBOO ROAD DIVIDERS DEVELOPED FOR URBAN TRAFFIC



THE BAMBOO PAVILION

- BIGGEST MARKETING STRUCTURE IN INDIA MADE OF BAMBOO.
- HOUSES 150 STALLS
- MAIN ATTRACTION DURING THE STATE'S 'HORNBILL FESTIVAL'





**THANK
YOU**