




STATE BAMBOO MISSION GUJARAT

ACTION PLAN



ACTION PLAN



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RESOURCE AUGMENTATION

STRATEGY	ACTIVITY	ACTION POINT	AGENCY
BAMBOO SPECIES AND AGE-WISE RESOURCE ASSESSMENT	Inventory of Bamboo stock in forest Areas	Species-wise GIS mapping of bamboo	FSI and forest department
	Inventory of bamboo stock in non-forest areas	Particularly Inventory of private bamboo stock with community/ individual owner	Forestry institutions, IIT & NGO's
	Assessment of Utility of available bamboo	Utility of available bamboo to be determined based on species and age-wise resource assessment	Expert consultant individual / institution on bamboo utilization
	Bio-regional analysis of available species	Bio-regional study on different agro-climatic zones of Gujarat vis-a-vis bamboo resource including carbon content and soil content	Forestry institutions, IIT/NGO's/TERI
PRESERVATION OF INDIGENOUS BAMBOO SPECIES AND ECOTYPES (IN SITU)	Intensive rehabilitation of degraded bamboo forests	Rehabilitation of degraded bamboo forests	Forest department
STRENGTHENING EXISTING BAMBOO RESOURCE AND INFRASTRUCTURE	Strengthening existing bamboo nurseries	Existing nurseries will be strengthened through infrastructure, new inputs and innovations	Forest department
INTRODUCTION OF NEW BAMBOO SPECIES AND ECOTYPES	Introduction of Bamboo Varieties with commercially superior and desirable attributes for large-scale cultivation to augment existing varieties of bamboo in the state	Study of commercially desirable bamboo species to be introduced	Forestry Institutions/expert consultants
		Establishing nurseries of new bamboo species	Forest Department, JFMC, panchayat, individuals & NGO's
	Defining correct management practices for bamboo forests	Research and documentation on scientific management practices in the bamboo sector with focus on Gujarat's situation and species	Expert consultant on bamboo management practices
	Transferring correct management practices to the field	Developing a bilingual manual on best bamboo management practices	Forestry institutions and expert consultants
MANAGEMENT OF BAMBOO FORESTS AND PLANTATIONS	Capacity building of resource people from forest department, cooperatives groups, individuals, including artisans and farmers, on proper management techniques	Forest department with the help of expert forestry institutions	
		TFRI, IFRI	
	Monitoring and evaluating the management of bamboo forests and plantations	Sample study on assessment of the impact of harvesting practices on the regeneration of bamboo forests	TFRI, IFRI
	Monitoring and evaluating the management of bamboo forests and plantations through remote sensing	TFRI/Forest department IT wing	

RESOURCE AUGMENTATION

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PRESERVATION AND BUILDING UP STOCK OF BAMBOO GERMPASM	Establishing a bamboosetum for different agro-climatic zones for ex situ preservation of bamboo germplasm	Sourcing of different bamboo species for the bamboosetum and establishing the infrastructure and nursery for the same	Forestry institutions
	Creation of planting stock	Setting up a hi-tech tissue culture lab	Expert organization such as Growmore Biotech Ltd, Hosur, Tamil nadu & Ramkrishna mission, Kolkata
	Hardening of planting stock	Establishment of hi-tech nurseries in selected districts where CFCC are located	Forest Department in consultation with expert organization
	Bamboo plantation	Plantation of bamboo in forest area	Forest department
	Exploring the potential of bamboo of private lands	Assessment of bamboo on private lands	Forestry institutions
	Nurseries	Effective PPPs to raise nurseries on private land	Forest department, plantation/bamboo-based/private industries, NGOs, CBOs, SHGs, etc
	Plantations	Effective PPPs to raise hi-tech plantations on private land	Forest department, plantation/bamboo-based/private industries, NGOs, CBOs, SHGs, etc
	Incentivizing bamboo plantations and nurseries	Promoting bamboo plantations through awards and inclusion/promotion of bamboo in existing government schemes	Forest department, CSR
	Instituationalizing bamboo extensions for non-forest land	Bamboo Extension Outreach Programme (BEOP) for the extensive bamboo clumps on private lands	Forest department, NGOs, CBOs, SHGs, etc
	Predicting bamboo Flowering	Collating records from around the world on flowering patterns of species prevalent and introduced in Gujarat in order to predict future flowering	Forest department and forestry institutions
	Minimizing unutilized dead bamboo stock after gregarious flowering	Fulllest possible utilization of bamboo after flowering shall be encouraged and promoted	Forest department
	Regeneration of flowered bamboo clumps	Putting in place a programme to aid regeneration of flowered bamboos in forests and plantations	Forest department
	Establishing a bamboo producer's company with appropriate affiliations with bamboo-based industries, viz. Paper, handicrafts and its proper linkages with the local, national and global market	A pilot project for the Bamboo Producer's Company will be established. On successful implementation, it will be repeated in other selected districts	Professional managers from development institutes

INFORMATION REPOSITORIES & DISSEMINATION

COLLATING INFORMATION ON BAMBOO STAKEHOLDERS	Database of bamboo stakeholders, including artisans and entrepreneurs	Creation of an online, state-level district-wise firectory of stakeholders, including registered bamboo artisans and entrepreneurs	Gujarat Forest Department IT
ONLINE PLATFORM TO FACILITATE DIALOGUE BETWEEN DIFFERENT BAMBOO STAKEHDLERS	Development of an extensive, multipurpose, user-friendly bamboo Web portal	Development of an extensive, multipurpose, user-friendly bamboo web portal, which will cater to the needs of all stakeholders, including rural artisans	Gujarat Forest Department IT
INFORMATION REPOSITORY ON BAMBOO	Creation of a scientific knowledge bank on all information available on bamboo, including species, availability, usage, products, market, etc.	Create a bamboo archive	Forest Department

CAPACITY BUILDING

STRATEGY	ACTIVITY	ACTION POINT	AGENCY
BUILDING A CADRE OF HIGHLY SKILLED BAMBOO ARTISANS AND WORKERS	Skill building of traditional and non-traditional bamboo artisans and workers	Basic training programmes will be carried out to build capacities of traditional and non-traditional bamboo producers and workers Advanced training programmes will be carried out to build capacities of traditional and non-traditional bamboo producers and workers	Technical design institutions such as NID, SPA, IPIRTI, CGBMT, various NGO's government departments including forest department, rural development, tribal Technical design institutions such as NID, SPA, IPIRTI, CGBMT, various NGO's government departments including forest department, rural development, tribal
BUILDING A CADRE OF POTENTIAL BAMBOO ENTREPRENEURS	Entrepreneurship training for potential bamboo entrepreneurs Nurturing entrepreneurship through financial support services	Linking up potential entrepreneurs with entrepreneurship development schemes Producers and entrepreneurs will be supported in availing finance in the form of soft loans, micro-finance, etc., to enable them to function at full productivity	Entrepreneurship development institutes and NGOs having expertise in bamboo sector Forest department to facilitate with NABARD and other micro-finance, development banks and government schemes
BUILDING A CADRE OF ARTISANS THAT HAVE BEEN FORMALLY EDUCATED IN BAMBOO TECHNOLOGY	Education in bamboo technology	Provision of modular courses in bamboo technology for traditional bamboo artisans	Educational institutions specializing in bamboo technology education
ENHANCING EXISTING GOVERNMENT CAPACITY IN THE AREA OF BAMBOO	Building capacity of field functionaries of forest and other line departments	Field functionaries will be capacity built by on field training (quarterly training programmes of one week each)	Concerned forest officials from different specializations and experts
ENHANCING EXISTING SOCIAL SECTOR CAPACITY IN THE AREA OF BAMBOO	Building capacity of NGOs and other social institutions in the bamboo sector	NGOs and other social institutions in the bamboo sector will be capacity built by exposure visits and training programmes to help them perform a better role in facilitating bamboo-based development process	Forest department through expert consultants
ENHANCING EXISTING TECHNICAL SECTOR CAPACITY IN THE AREA OF BAMBOO	Building capacity of technical institutions in the bamboo sector	Technical institutions positioned to facilitate the bamboo sector will be capacity built by exposure visits	Forest department through expert consultants

PRODUCTION STREAMLINING

PROVIDING BAMBOO PRODUCERS WITH PHYSICAL INFRASTRUCTURE FOR MECHANIZED PRODUCTION	Strengthening existing Common Facility Centre (CFC) and supplementing this so that at the end of five years, each bamboo division has a CFC	Division-level CFCs to provide bamboo producers with physical infrastructure for mechanical production set-up	Forest Department
MAKING PRODUCTION QUANTITY AND QUALITY EFFICIENT AND PRODUCTIVE	Training on production streamlining and productivity	Production streamlining and productivity inputs will be given to producer groups at different levels, from micro-enterprises to industries	Expert Bamboo production consultants and line balancing expert institutions
ENSURING PRODUCTION QUALITY	Certification for bamboo products and PCSs Utilization of high quality, treated bamboo	Undertaking certification for the sustainable management of the resource, process, system, chain of custody and products Setting up of a treatment plant along with recruitment of development managers for maintenance, monitoring and follow up	Authorized international certification agency Forest Department
CLEANER PRODUCTION AND TECHNOLOGY	Cleaning up existing bamboo production chains	Studying process chains of different technologies and introducing changes to clean them up	TERI, Expert bamboo sustainability and technology consultants and/or reputed design institutes

MARKETING

STRATEGY	ACTIVITY	ACTION POINT	AGENCY
POSITIONING BAMBOO AS A SUSTAINABLE MATERIAL	Marketing Campaign to create massive awareness on bamboo as a sustainable material	Aggressive marketing policy to create massive and consistent awareness about bamboo as an eco-friendly timber-replacement material will be put in place through including seminars and workshops	Forest Department and also in conjunction with Through relevant institutions
		Bamboo pavilions will be established in major cities of Gujarat	Forest department with expert consultants
PROVIDING A MARKETING PLATFORM FOR ARTISANS AND ENTREPRENEURS	Organizing bamboo marts (haats)	Bamboo marts (haats) will be organized	Forest Department
	Establishing permanent bamboo outlets	Establishing bamboo emporia	Forest Department
CREATING A SUSTAINABLE BRAND FOR BAMBOO PRODUCTS FROM GUJARAT	Putting in place a branding and labeling scheme for Gujarat's sustainable bamboo products	A branding programme for bamboo products from Gujarat will be put in place, which will include a holistic sustainability labeling scheme and communication through a specific Gujarat bamboo brand, in line with existing sustainability branding schemes	Expert sustainability branding consultants and/or reputed institutes

DESIGN & PRODUCT DEVELOPMENT

UTILIZING GUJARAT'S TRADITIONAL BAMBOO AS AN INPUT INTO DESIGN AND PRODUCT DEVELOPMENT	Study of Gujarat's traditional bamboo craft	Gujarat's traditional bamboo craft will be documented as a reference-study material, in the form of a publication that will include critical overviews, including the crafts people, craft, product range, tools and machinery, resources and previous efforts made by the state for bamboo-based development/entrepreneurship	Expert bamboo design consultants and/or reputed design institutes
	Creating a physical repository of Gujarat's traditional bamboo craft through a permanent exhibit/museum	A museum to exhibit Gujarat's traditional bamboo craft, including resource, tools, technology, product range and information on artisan group will be created	Expert bamboo design consultants and/or reputed design institutes
	Design of innovative products that are based on Gujarat's traditional bamboo craft	Traditional product range will be used as a starting point for innovative bamboo products that dovetail with existing market requirements	Expert bamboo design consultants and/or reputed design institutes
UTILIZING GUJARAT'S BAMBOO SPECIES AS AN INPUT INTO DESIGN AND PRODUCT DEVELOPMENT	Design and development of new products based on existing bamboo species	Innovative bamboo products will be designed based on the potential application of Gujarat's bamboo species	Expert bamboo design consultants and/or reputed design institutes
INTRODUCING INDUSTRIAL VALUE-ADDED PRODUCTS	Exploring potential industrial applications of bamboo for species prevalent in Gujarat	Study on potential industrial applications of bamboo species available in Gujarat	Expert bamboo design consultants and/or reputed design institutes
		Setting up manufacturing units to produce industrial material	Expert bamboo design consultants and/or reputed design and technology institutes
ENCOURAGING INNOVATIVE DESIGNS USING BAMBOO	Design competitions at professional and student level	Conduct national/international level competitions for bamboo design	Reputed design and technology institutes

STRENGTHENING POLICY & INSTITUTIONAL LINKAGES

STRATEGY	ACTIVITY	ACTION POINT	AGENCY
FACILITATE BAMBOO-BASED DEVELOPMENT IN GUJARAT	Formulation of state bamboo developemtn policy	Formulation of a state development policy, which will include a framework of incentives and subsidies, to encourage the establishment of bamboo industries and enterprises	Expert Consultant
	Constitution of a state-level steering committee	Constitution of a state-level steering committee for bamboo-based development, under the chairmanship of the Chief Secretary	State Government
	Constiution of a interdepartmental committee	Establishemnt of an interdepartmental committee for negotiations with international organizations for bamboo project proposals	State Government
	Collaborations with state-level departments	Collaborations will be pursued with state departments of panchayat and rural development; commerce, industries and employment; cottage and village industries; agriculture; tribal; etc.	State Government
	Collaborations with national Institutions	Collaborations will be pursued with national institutions relevant to the bamboo sector	Forest Department
POLICY TO MAXIMIZE BAMBOO USE IN GOVERNMENT INFRASTRUCTURE	Facilitating government directive for maximizing use of bamboo in government infrastructure	Government directive for maximizing the use of bamboo in Government infrastructure, like furniture for scholls, RHs, lhs; buildings for schools, Indira Awaas Yojana, etc.	State Government
POLICY TO FACILITATE TRANSPORTATION OF BAMBOO AND BAMBOO PRODUCTS	Facilitating government directive for transportation of bamboo products		State Government
POLICY TO FACILITATE BAMBOO PRODUCTION ON PRIVATE LANOS	Facilitating government directive for production of bamboo on private lands	Government directive for promoting bamboo production on private lands	State Government
POLICY TO FACILITATE BAMBOO LANDSCAPING IN COMMERCIAL AND GOVERNMENT PROJECTS	Facilitating government directive for use of bamboo in landscaping in urban areas	Government directive for use of bamboo in landscaping in commercial and government projects	State Government

PILOT PROJECTS

SHOWCASING BAMBOO AS AN INTEGRATED LIFESTYLE SOLUTION	Establishing a state-of-the-art bamboo township	Establishing a state-of-the-art bamboo township, which will include different zones for housing, markets, galleries, restaurants, furniture marts and entertainment zones using bamboos as the primary material	Forest department in consultation with expert organizations and consultants
CREATING A PHYSICAL CENTRE TO ACT AS A REPOSITORY AND TO CREATE AWARENESS ON POTENTIALS OF BAMBOO INCLUDING TECHNOLOGY AND PRODUCTS	Establishing a Bamboo Centre of Excellence, which would include a Bamboo Resource Centre	Developing a state-level Centre of Excellence for Bamboo in Bhopal, which will have advanced traingin centre fro all stakeholders, common facility centre for artisans, a bamboo research centre, a demonstration plot (with all possible varieties of bamboo depot (with treatment plants) and a high-tech bamboo nursery	Forest department in consultation with expert organizations and consultants



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