

# Bamboo Mission: A Tool for Economic Prosperity

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**N**o story of the 'North East India' can be complete without the story of its inherent resilient power. The agricultural management and the traditional systems of cultivation practices form the principal facet of that resilience strength. Agriculture is certainly the mainstay of the people in the region – be it in hills or in valleys. The major positive feature of cultivation in the region is that the traditional practices are well adapted to the environmental conditions and the traditional knowledge of indigenous communities growing rice, cereals and other agricultural crops. In the ultimate – these have enabled the people in these states – fondly called seven sisters – to maintain the requisite ecological balance.

Native people – including Tribals – have been maintaining traditional agricultural practices, agro-biodiversity and indigenous knowledge banks. Generally, farmers practice jhum or shifting agricultural system with other sedentary agricultural practices. The utilization of bio-resources by tribes and other communities is based on the indigenous and traditional knowledge that help in sustainable use.

The local farmers have been using locally adapted major and minor crops in their agricultural systems that help them to survive under risk

prone and hard conditions. The yield and energy efficiency of different agricultural systems depends on the type of crops cultivated. Obviously, as one illustration – the refrain from traditional farmers in the region has been that the more efficient agricultural benefits were found where rice is cultivated with maize or millet.

Various ethnic communities, in general, follow two major types of agricultural practices such as Shifting cultivation and burn agriculture, and secondly the Terrace cultivation. The Terrace cropping is practised in valleys and foothills while the Shifting methodology is practised in and around forests. Here it goes without saying that the Shifting cultivation also popular in the northeast as Jhum cultivation is a primitive practice where vegetative and forest cover on land slopes of hills is cleared by drying and burning it before the onset of monsoon and cropping on it thereafter. Originally, the Jhum cycle worked well. However, with the increase in human population and increasing pressure on land, the Jhum cycle reduced progressively causing the problem of land degradation and even threat to the ecology of the region.

### Innovation is the Key

However, the tribal farmers in the northeast can use ingenuity and skill. As a result, they can make optimum use of locally available resources. One

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such methodology is Bench Terrace Irrigation practice. Here, stones and gunny bags are used in an ingenious manner in the maintenance of terraces and to stop soil erosion problems. The hill streams are tapped and the water is channelled to accommodate a series of terraces. In this system, water flows continuously from the upper to lower terraces. This method of irrigation has been found much result-oriented in a non-fertile land – especially for raising rice crops. One key positive aspect of this practice – as told by experts is that the excess runoff from the upper portion of the slope is actually 'nutrient rich'. Predominantly used for rice cultivation, in the bench terrace, agriculture practice crops like maize, bean and potato are planted on upper slopes. Hence, for obvious reasons, the crop requiring more water such as rice and jute are grown on lower slopes.

Farmers in the northeast – especially in states like Nagaland, Meghalaya and Manipur – have for decades understood the importance of 'economic returns' when it comes to hard labour related to agricultural practices. Therefore, the 'Tree-based farming practice' too has been encouraged among the indigenous people – where trees are "integrated extensively" in the crop production practice. The focus is also laid on agro-climatic conditions. Under this, local experts say, tree species are raised for food, fibre, medicine and other minor agricultural produce.

The land is used for vegetables, fruits, forest tree species, plantation crops and agricultural crops and it has been found that priorities of multipurpose tree and shrubs in traditional farming practices have been ascertained based on uses and economic returns.

When it comes to sustainable practice and economic reforms, for ages, the northeastern people have been depending on Bamboos.

It goes without stating that Bamboo is virtually an essential component of the forest ecosystem, which is a



dominant feature of the landscape in the northeastern region. Traditional living and lifestyle of tribal and even plain dwellers are, in effect, immensely "dependent" on bamboo for its variety of uses. It will not be wrong to say that the bamboo has much to offer by way of contributing to the socio-economic advancement of the modern society. The eco-friendly Bamboo crop has immense potential in improving rural

economy, industrial development and a sound economic base for the region on a sustained basis.

### Green Gold

The Union Budget of 2018-19 rightly calls Bamboo the 'green gold'.

'Bamboo' is essentially a type of grass, but its classification as a tree

### National Bamboo Mission Strategy Focus

- Efforts are being made for taking updated technology closer to bamboo growers. Demonstrations are made of planting of different species of bamboo by using different fertilizers and chemicals.
- Encouraging setting up of Bamboo Technology Parks.
- Help create outlets for both wholesale and retail markets
- In rural pockets, bamboo bazaar would be set up.
- Provide guidance for Post harvest storage and treatment facilities
- A few innovative interventions-like Agarbatti sticks for Jail inmates: This project has been initiated at Central Jail under Aizawl District in Mizoram.
- Strategies being evolved to build sustainable bamboo based livelihoods based on a cluster based approach.
- Develop an institutional structure owned and managed by grassroots producers and their federations.
- To make northeast the hub of bamboo based sustainable micro, small and medium industries in the country steps are taken to enable structured growth in the sector by strong institution building and market linkage.
- Sustained long term and short term measures to build the bamboo sector as a major livelihood provider and provide employment opportunities.



for about a century had prevented the northeast natives to make optimum use of the same commercially. North East India, in effect, grows about 68 per cent of India's bamboo – a substantial rich genetic resource. Estimates say India has 30 per cent of the world's bamboo resources but contributes only four percent share of the global market. The issue is low productivity and here comes the significance of the Bamboo Mission launched by the Government of India. It is a centrally sponsored scheme with 100 per cent funding from the Government of India and in the coordination with states, it seeks to achieve certain objectives like promoting bamboo and bamboo-based handicrafts and generate employment opportunities for skilled and unskilled people especially unemployed youth.

In the northeast, for generations – the natives and traditional bamboo growers have always used bamboo for overall rural-urban benefits. People have made adequate commercial use as bamboos can be grown on non-agricultural land with annual harvests.

Besides industrial benefits, the communities have been using bamboo shoots as nutritious food. This also has medicinal values. Among tribal bamboo

growers in states like Mizoram, Tripura and Nagaland – it is also well known that the bamboo also works for land protection; soil quality improvements including improved water holding capacity, higher water capture and recharge, benefiting agriculture and food security.

In November 2017, the government removed bamboo from the list of 'Trees' and thereby relaxed rules on bamboo felling, transit and processing. This eradicated 90-year-old restrictions and hence boosted free export of bamboo products, opening up new vistas of opportunities. In the meantime, state governments in Manipur and Arunachal Pradesh agreed to supply bamboo to the Assam-based Numaligarh Refinery's



upcoming bio-refinery. The economic activity has just begun.

Not content with these activities, the government also sought to undertake innovative strategies so that the bamboo sector is pushed as a 'permanent source of revenue generation' to bamboo growers. In many states, various indigenous groups owning bamboo groves would be benefitted.

In budget 2018-19, Union Finance Minister allocated Rs 1290 crore to "restructure" the National Bamboo Mission with a "holistic approach".

In states like Tripura, an official estimate suggests that Bamboo sector can be developed as a major livelihood provider and provide dependable and respectable employment opportunities to at least 20,000 bamboo growers.

In terms of multiple products and by-products one can have from Bamboo in the region, it will be worth looking at the lists below.

They include Bamboo Pickle, Bamboo Vinegar, Flower Vase, Basket, Agarbatti Stick, Mobile Cover, Toothpick, Pen Stand, Furniture, Ornament, edible Bamboo Shoot, Coffin, Broom, Tea Coaster, Key Chain, Photo Frames, Hanger, Ash Tray, Ladder and even Water Bottle Cover.

Local artisans with their traditional skill turn out beautiful bamboo hats made of cane and some wild leaves.



Despite the fact that the hat and other products have huge export potentials, the market has not been exploited. Encouraging more participation of private players and corporate houses would prove much beneficial to the northeast.

It is interesting to note that bamboo is also found useful to farmers for preparing bins to be used for storehouse purposes.

Bamboo containers of different

sizes, woven tightly and plastered with mud on the inner side are used for storing paddy mainly for consumption and sometimes also for seed purpose. Storing paddy for seed purpose is usually done in a specialized bamboo container commonly called Thiar in Meghalaya. This container is loosely woven with bamboo split into strips. The container is thickly padded inside using rice straw. Similarly, the wooden bin indigenously made by the Khasi tribes of Meghalaya is called Duli. It is a double-layered

bamboo basket, plastered on both the sides with cow dung and mud and this bin has been found to be most effective as a storage structure for storing grains.

Again, in parts of the region, maize is stored in un-husked condition. Sometimes a conical bamboo box is also fixed upside down in the poles to keep the rats away.

Finally, in the ultimate analysis, it is essential to underline that northeastern region's farm activities are also known for organic cultivation. On January 18, 2016, the Prime Minister declared Sikkim as the Organic State of India. In the subsequent period, a Central Sector Scheme namely, Mission Organic Value Chain Development for North Eastern Region was launched for promoting organic farming in the region. In fact, a financial outlay of Rs 400 crore was marked for the period 2015 to 2018. The Government of India also laid attention on increasing the area under organic farming in the country under a programme called the Paramparagat Krishi Vikas Yojana. □

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### North East Special Infrastructure Development Scheme

In December 2017, Government of India approved North East Special Infrastructure Development Scheme (NESIDS) with an outlay of Rs.1600.00 crore for the period of 2017-18 to 2019-20.

The funds under the scheme, will be distributed among eight North Eastern States on the basis of well-defined criteria on certain parameters e.g. Area, Population, Human Development Index, Road density, etc.

The scheme, inter alia, aims to cover the social sectors namely health and education in North Eastern Region.

This was stated by the Union Minister of State (Independent Charge) of the Ministry of Development of North Eastern Region (DoNER), Dr. Jitendra Singh in a written reply to a question in the Lok Sabha on March 14, 2018.



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