

# Teak investment programmes: an Indian perspective

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*Unethical practices and inflated claims put into question the future of schemes for investment in teak plantations in India.*



A large-scale teak plantation established on hills in West Bengal, India

the claims made by promoters of teak investment programmes are inconsistent with the silvicultural and economic research on teak. These unethical practices and inflated claims put into question the future of teak investment programmes in India.

This article examines the growing importance of investment in tree plantations in India; the involvement of forest-based industries in raising plantations to meet their raw material requirements; and the myths and realities surrounding teak investment programmes.

## EARLY TREE PLANTATIONS IN INDIA

The need for forest plantation was realized as early as the mid-nineteenth century. The first attempt at organized plantation in India was a teak plantation established in 1842 at Nilambur in Kerala, southern India, with the purpose of enriching the forests (Bapat and Phulari, 1995). Chatu Menon, well known as the father of Indian teak plantations, raised more than a million teak plants between 1842 and 1862 (Parameswarappa, 1995). Establishment of plantations in other parts of the country followed. Tree planting activities were expanded with the introduction of the taungya system for teak plantation – a method of establishing a forest crop in temporary association with agricultural crops, first evolved in Myanmar in the 1850s as a mode of replanting teak trees (Negi, 1986). Organized plantations on a large scale were attempted only after 1948, and until 1951 plantation was not a regular and extensive activity (Tewari, 1992).

## GOVERNMENT INVESTMENT IN TREE PLANTATIONS

Investments in the forestry sector have always been very low in India relative to the large amount of revenue gener-

Investment in tree plantations, which was always relatively low in India, has recently grown in importance. Forest-based industries, recognizing that the existing forests cannot continue to meet their raw material requirements, are expected to play a significant part in increasing investments in plantation programmes in the coming years. Private investment in teak plantations has arisen as a response to the growing demand for housing- and furniture-grade timbers, of which teak is the most valued. India is one of the largest producers of teak in the world, but the supply does not meet national demand.

Since 1991, plantation companies in India have been promoting schemes offering investors teak trees at a nominal cost with an expectation of spectacular returns after as little as 20 years. Such tree plantations could certainly contribute to the supply of timber and other tree products and could help to increase tree cover in the country. However, some unscrupulous companies, inadequately regulated, have exploited investors by promising impossible returns, closing their companies or failing to plant trees at all. Many of

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ated from the forests. In the successive five-year plans adopted by the country since 1951, government funding for the forestry sector did not exceed 1 percent of total public-sector expenditure until the seventh plan (1985 to 1990). The low levels of investment in the forestry sector (including afforestation and logging) in the past resulted in low production as well as in low investment in plantation and afforestation programmes. Emphasis was put on extracting maximum revenues from the forests, and little was done to restore degraded forests.

After India's independence in 1947, planned tree plantation schemes began with the commencement of the first five-year plan (1951 to 1956). At first, planting was undertaken mainly in government-owned forests, and little importance was given to plantations on private land. Laws against cutting and marketing of trees from both public and private lands, introduced to mitigate an alarming loss of tree cover, had the opposite effect: farmers, fearing that they would not be able to sell trees, began to plant fewer trees (Kerr, 1997).

In 1976, the report of the National Commission on Agriculture called for investment in social forestry, including farm forestry, to meet the fuelwood and small timber needs of rural people (Government of India, 1976). During the sixth five-year plan (1980 to 1985), tree plantation programmes gained considerable momentum. Expenditure on tree plantations increased dramatically, from 1 073 million rupees (Rs) (US\$153 million) during the fifth plan (1974 to 1979) to Rs 9 260 million (US\$780 million) during the sixth plan (1980 to 1985) (Indian Council of Forestry Research and Education, 1999). Most of the farm forestry programmes on private lands provided subsidies to farmers (Balooni, 1991).

More recently, with increased concern for environmentally sustainable development, investment in tree planting in India has been given more importance, as witnessed by the National Forest Policy of 1988 which envisages an increase in forest cover (currently about 19.5 percent) to at least one-third of the total geographical area of the country. During the period 1990 to 1996, tree plantations were established on almost 6 million ha of public lands, including forest lands, and more than 7 000 million seedlings were distributed for planting on private lands (Indian Council of Forestry Research and Education, 1999).

Tree planting programmes require large amounts of capital. Foreign funds for tree plantations have increased substantially in recent years through international donor agencies. However, there is no assurance that the Government of India's investments in tree plantations or the forestry sector as a whole will increase in the future, as the demand for investment is also being made by other sectors of the Indian economy in the present era of economic liberalization. Therefore, apart from government agencies, the private sector will also have to play a significant part in increasing investments in these programmes in the coming years. Such investment will help to resolve the shortage of raw material for processing industries and will also increase the country's forest cover.

#### **ROLE OF FOREST-BASED INDUSTRIES IN TREE PLANTATIONS**

Until recently, the private sector had shown little interest in investing money in tree planting even though industries involved in the manufacture of products such as paper, pulp, rayon and plywood were dependent on the forests to meet their raw material requirements. Forest-based industries enjoyed high

profitability because most of these industries were getting raw material from the forests at subsidized prices; this resulted in explosive growth in industrial capacity and non-sustainable use of forest stocks (Gadgil and Guha, 1992).

Forest-based industries have now realized that the existing forests will not be able to meet their growing demand for raw materials. In addition, the supply of timber is limited by restrictions or bans on harvesting in natural forests in some Indian states. Recognizing the need, many forest-based industries have initiated plantations on private lands, with the collaboration of farmers to whom they provide financial and technical assistance. Forest-based industries have also approached the government for leasing of degraded forest lands for plantations to meet their raw material requirements. The National Forest Policy of 1988 lays down that: "As far as possible, a forest-based industry should raise raw material needed for meeting its own requirement by establishing a direct relationship between the factory and the individuals who can grow the raw material". Many forest-based industries, e.g. Western India Match Company Ltd (WIMCO), ITC Bhadrachalam Paper Mills and Ballarpur Industries Ltd, have entered into arrangements with farmers to meet their raw material requirements by providing financial and technical assistance for initiating and maintaining plantations on private lands. The industry guarantees the farmers a minimum price, although farmers are free to sell their produce to anyone (Centre for Environmental Law, 1995). Many other forest-based industries are expected to follow this example.

In the early 1980s, WIMCO, to meet its raw material requirements, started a poplar raising programme on private farmlands in the states of Uttar Pradesh, Haryana and Punjab in collaboration

with the National Bank for Agriculture and Rural Development (NABARD). Although this was not yet a tree investment programme, as WIMCO did not collect any money from farmers, it was the beginning of the involvement of a business house in raising commercial plantation in collaboration with farmers (Banerjee and Balooni, 1997).

Forest-based industries requested long-term leases on forest land from the Government of India as early as the 1970s. But ecologists, environmentalists and non-governmental organizations (NGOs) have contested these applications on the grounds that granting such leases would have the following detrimental impacts (Centre for Environmental Law, 1995):

- establishing monocultures would reduce the diversity of the country's flora;
- many local forest dwellers would be deprived of their livelihoods through exclusion from the new plantation areas and loss of the range of naturally occurring plants used by them;
- farm forestry programmes on private lands would be affected through competition;

- similar demands would be made by the tea, rubber and spice industries.

The Government of India has yet to resolve the disagreement; efforts to obtain an understanding between the forest-based industries and opponents are ongoing.

#### COMMERCIAL TREE INVESTMENT PROGRAMMES

The large-scale tree planting programmes of the Government of India and forest-based industries were followed by commercial tree investment programmes in which several entrepreneurs encouraged people to invest in tree plantations. The first instances involved the raising of eucalypt species by plantation companies from 1981 to 1990 (Chaturvedi, 1995).

Entrepreneurs have entered into the business of raising trees with the goal of realizing great profits from the sale of tree produce. They have been motivated partly by the dramatic increases in the prices of timber and timber-based products over the past two decades as a result of rising demand. This growth in demand has been especially significant for housing- and furniture-grade timbers owing to increasing urbanization

and a current consumer boom (Bebarta, 1999). Thus, whereas Indian log and timber prices followed the general trend in price changes from 1950 to 1970, they increased by over 600 percent between 1975 and 1990, while general prices recorded a 164 percent increase (Bajaj, 1994). The price of teak logs increased by 970 percent from 1975 to 1990 (see Table).

Private plantation schemes are now being offered by around 3 600 companies all over India (Aiyar, 1998). Generally, the plantation companies issue the investors investment certificates as legal tender for future claims.

#### TEAK INVESTMENT PROGRAMMES

Among housing- and furniture-grade timbers in India, teak wood constitutes the premium class. India has over 9.77 million ha under natural teak forest (Bapat and Phulari, 1995), but severe restrictions on the harvesting of teak from natural forests, introduced in 1997, have limited the domestic supply. Even though India is one of the biggest producers of teak in the world, a large amount of timber is imported to meet the internal demand of the plywood and veneer industry (Bebarta, 1999). Teak

Workers loading  
teak logs,  
Maharashtra, India



plantations have become important to help fill the gap between demand and supply of teak wood. The country has more than 500 000 ha of teak plantations, and there is a large ongoing programme to plant almost 50 000 ha annually (Khullar, 1995).

Perhaps the first attempt to promote private investment in teak plantations began in 1991, when Sanghi Plantations, based in Hyderabad in southern India, introduced a scheme offering investors teak trees at a nominal cost of Rs 1 000 with a return of Rs 50 000 after 20 years<sup>1</sup> (Prasad, 1992; Press Trust of India, 1992). Others among the first companies to enter the teak business were Sterling Tree Magnum (India) Limited, Cochin (Srivinasan, 1993) and Anubhav Plantations, Madras (Rajappa, 1994). Teak plantations mushroomed in southern India; 40 such companies were registered in Madras and eight in Bangalore from January to September 1992 (Kakkar, 1994).

Plantations have been established in all the states in southern and central India and in Maharashtra, Gujarat, Uttar Pradesh, Haryana, Orissa and West Bengal, and possibly in other states; the area established under teak plantation schemes has not been estimated.

Many teak plantations under the investment schemes have been established on cultivable wastelands, of which India has around 104 million ha. These lands lie unused primarily because of the unavailability of irrigation water. Title to land in this category is easily transferable to the buyers (Manjeshwar, 1993).

Some schemes are for monoculture plantations, while some are for mixed plantations, e.g. teak mixed with

#### Yearly average price of teak logs for girth class of 120 to 150 cm in India

Year	Price per m <sup>3</sup> (Rs)
1970	646
1971	810
1972	963
1973	850
1974	1 390
1975	1 256
1976	1 511
1977	1 583
1978	2 809
1979	2 965
1980	2 965
1981	3 919
1982	4 603
1983	4 840
1984	6 862
1985	7 801
1986	8 359
1987	6 075
1988	not available
1989	9 964
1990	13 449

Source: Beberta (1999).

*Dalbergia latifolia* (rosewood) and *Swietenia macrophylla* (mahogany). Some are for teak mixed with horticultural species, e.g. *Mangifera indica* (mango), *Carica papaya* (papaya) and *Psidium guajava* (guava), although teak predominates.

To attract investors and to win their confidence, business enterprises have evolved various promotional strategies. Catchy plantation advertisements often appear in newspapers and magazines, promising high returns – Rs 50 000 or even Rs 100 000 in a couple of decades – against the purchase of trees at a nominal cost, varying from

Rs 495 to Rs 2 500 (Kinhil, 1995). For example, Sterling Tree Magnum (India) Limited offered investors an assured return of more than Rs 62 000 after 20 years against an investment of Rs 1 275 for one teak tree (Saxena, 1993).

It is likely that the desire for high returns was the main factor motivating people to invest in the teak plantation schemes. Many of the investors were from rural areas and small towns and lacked the opportunities or information to engage in other forms of investment such as the stock market. Some companies generated interest especially among middle-class families by offering very high returns on small-scale investment relative to the interest rate offered on long-term deposits by financial institutions and returns from the stock market.

There is no doubt that these tree plantations have potential to augment the supply of timber and other tree products in the future and can help to increase tree cover in the country. The Centre for Environmental Law (1995) has remarked that “the recent upsurge in the number of companies offering teak plantations to the urban rich is the only example where urban private capital is getting invested in rural areas; generally the flight of capital has so far been from the rural to the urban sector”. However, in most of the literature on teak plantation schemes, hardly any reference is made to the socio-economic impact of these schemes on the rural people and rural economy (Balooni, 2000).

As commercial tree plantations are a recent development, the various aspects of the functioning of the companies and schemes have not been thoroughly investigated. According to Kinhal (1995), there are no reliable growth data available for teak trees grown under field conditions in a com-

<sup>1</sup> US\$1 = about Rs 44 (February 2000).

mercial venture. The estimations and assumptions made in these plantation schemes can only be compared with the available data on teak plantations raised by forest departments in India on forest lands (Rawat, 1995).

At first, the companies involved in commercial plantations did not come under the purview of the Monopolies Restrictive Trade Practices Commission or the Department of Company Affairs of the Government of India. As a result, some unscrupulous companies were able to enter the industry, engaging in unethical practices and exploiting investors. For example, there is no longer any trace of Jubilee Plantation of Madhya Pradesh or Green Everest of Hyderabad, two companies that collected money from the public with unfulfilled promises (Subramaniam, 1994). Many plantation companies are promoted by individuals such as chartered accountants, company secretaries and financial analysts, with no major business or industrial group appearing to be behind them (Saxena, 1993).

The Indian Ministry of Finance has recently clarified that plantation companies come under the ambit of the Securities and Exchange Board of India, which has debarred companies from accepting fresh investments until they have registered with the board and obtained a credit rating. However, this action was too late for many credulous investors who have already been beguiled by plantation companies. Of the 34 plantation companies that applied for a credit rating by the country's four major rating agencies, 33 received a Grade V rating, which means that investments in these companies are risky and that they are likely to default on their pay-out commitments (Aiyar, 1998). Although it is not known how many of the rated plantations were teak plantations, the statistics give an idea of the

seriousness of the problem. Moreover, millions of rupees mobilized from a large number of investors are expected to be tied up for a few decades, since these private placements will not be quoted on the stock markets (Punnathara, 1992).

The failure of many tree plantations has confirmed the doubts and fuelled the fears of investors. The misdeeds of this in-vogue business have been reported from time to time in newspapers and magazines. Many of the promoters who have collected tens of millions of rupees from the public have closed their companies, while others have yet to acquire a single hectare of land or plant a sapling. For example, the Bombay-based company Desert Gold India Irrigation Ltd, which collected about Rs 130 million from the public in 1992, promising a return of Rs 51 000 in 20 years for every investment of Rs 1 000, did not plant a single sapling (Paul, 1993). While launching the scheme, the company advertised that they had acquired 250 acres (101 ha) of land for teak plantation. However, investigations revealed that no land had been bought in the company's name. Jain (1998) reported that the proprietor and other senior officials of SPG Green Gold Plantation Ltd, Delhi went underground after collecting millions of rupees from investors. Newspaper articles have alleged that in several instances money collected from the public has been diverted to other businesses. According to Aiyar (1998), in a petition in Delhi High Court, the Forum of Investors of Agro Forestry Companies urged that the Securities and Exchange Board be asked to prepare a comprehensive package to salvage Rs 25 000 million invested in plantation companies.

In 1994, a small group of companies including Parasrampur, Anubhav Plantations, Sterling Tree Magnum (In-

dia), NP Agro, Prince Plantations and Khaitan Agro approached India's Inspector-General of Forests under the banner of the All-India Teak Planters Association to formulate a code of conduct which would be made binding for all firms entering the teak plantation business (Subramaniam, 1994). These companies feared that if unscrupulous operators were allowed entry, the image of their business would be tarnished. Recently, many of these companies have joined hands to form the Association of AgriPlantation Companies of India to safeguard their interests in view of the wide criticism of plantation schemes (Aiyar, 1998).

#### **TEAK RETURNS - MYTHS AND REALITIES**

Loud claims of teak planters promising spectacular returns to investors do not tally with research on teak by silviculturists in terms of either the quality of the wood or the expected monetary benefits (Chaturvedi, 1995; Kinhal, 1995; Parameswarappa, 1995).

Prime-quality teak, found in Myanmar and the Indian states of Karnataka and Kerala, is obtained after at least 50 to 60 years under ideal conditions. A teak company's projection of an average volume of 1.06 m<sup>3</sup> per tree at 20 years at a stocking rate of 927 stems per hectare (reported by Chaturvedi, 1995) is 16 times more than the volume obtained at 20 years in the most productive plantations in India. A teak tree with a volume of 1.06 m<sup>3</sup> would have a diameter of about 50 cm, which is obtained in prime-quality teak at about 45 years. At this age the usual number of trees per hectare is about 100, compared with the company's projection of 927 trees per hectare at 20 years. The total projected volume, 982.6 m<sup>3</sup> per hectare, implies an extremely unrealistic mean annual increment (MAI) of 49.1 m<sup>3</sup> per hectare

Kinhal (1995) analysed that in the Konni Forest Division in Kerala, the MAI attained on a rotation of 70 years was 2.46 m<sup>3</sup> per hectare.

Srinivasan (1993) reported that an attempt to grow teak trees in a high-density plantation on merely 1 400 ha failed in the Andaman Islands, as have similar attempts by the forest departments in the Indian state of Tamil Nadu.

Plantations have long gestation periods, highly speculative rates of return and some amount of risk given the vagaries of nature. Nor is survival of trees to maturity sufficient to ensure profitability; close attention to marketing is also essential. Companies that promise to attend to this area may not live up to their promises when the time comes to harvest the teak.

However, some studies paint a positive picture of teak investment schemes. For example, Mehta (1995) found the commercial teak plantations of Vanashree Plantation, launched by Orient Resorts (India) Private Ltd in 1992 in the state of Gujarat, financially viable. This plantation is situated on the border of a naturally growing teak zone. An area of 31.5 ha was planted with 52 751 seedlings allotted to investors, who have invested in total Rs 480 000. The financial analysis carried out by Mehta (1995) revealed that the net present value (NPV) is Rs 6 857, the internal rate of return (IRR) is 30 to 35 percent and the benefit-to-cost ratio (BCR) is 9.6. However, he found that the company's rewards would be far higher than those of investors at the end of the scheme, as the company will retain the land purchased with investors' money. Moreover, teak is a good coppice species and after final harvesting, Vanashree Plantation will benefit by having saved initial expenditure for subsequent plantation schemes.

## CONCLUSIONS

Since some plantation companies have created scepticism, the future of teak investment programmes in India is not clear. The conflicting projections on teak growth have had serious repercussions for private companies involved in teak plantation, which is after all an enterprise still in its infancy. There is certainly a paucity of reliable literature on the functioning of the private plantation companies in India.

The Government of India is trying to verify the viability of teak plantation companies on both financial and technical grounds. The Forest Research Institute of India has already undertaken an action in this direction by joining hands with some of the plantation companies to undertake research work (J.K.

Rawat, personal communication, 1999). Moreover, the Government of India has already brought the plantation companies under the ambit of the Securities and Exchange Board of India. This giant step will aid in monitoring, regulating and controlling the plantation companies to satisfy investors. Efforts should also be made to collect information on defaulting plantation companies, to help distinguish worthy companies from those likely to fail.

In view of the increasing gap between supply and demand of timber in a burgeoning economy with an increasing population, it is time to consider tree investment programmes as a serious enterprise in India. Kinhal (1995) suggests that the Government of India must encourage such investments by offer-



*Research work is necessary to verify the viability of teak plantation companies; here, Indian Forest Service officers measure six-year-old teak trees in a plantation survey*

ing incentives in the form of subsidized lending, disaster insurance and tax exemptions to fulfil the forest policy mandates of the country. This can only work if the country's existing forest policies are modified to ensure that plantation investment programmes are carefully regulated. ♦



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