

Chapter I

INTRODUCTION





INTRODUCTION

1.1 COUNTRY PROFILE

India is a vast and populated country with yearly per capita income of INR 1,12,835 and yearly per capita net national income of INR 1,03,870. Approximately, 22% of the population is below poverty line. About 66.50% stays in villages with an estimated urbanization rate of 2.28% annum⁻¹ for 2015-20. With a population of more than 1.2B and geographical area of 32,87,469 km² (Census, 2011), India has a per capita forest cover of 0.064 ha and a population density of 382 km⁻². It is the 7th largest country with 2.4% of world's geographic area and 1.8% of its forests against 17.5% of the world's population. It is estimated that around 66.50% of people live in rural areas resulting in agrarian economy. A majority of them are landless. Land holdings are skewed in distribution with about 62% of households owning less than 1 ha. On the other hand, 18% of households hold almost 63% of operational lands.

Out of the total geographical area, around 12 Mha is under the occupation of China and Pakistan and 11 Mha is under permanent snow or is inaccessible. Also, around 42 Mha has been used for development purposes in the form of roads, railway tracks, etc. Around 70 Mha of area is under forest land use, leaving around 184 Mha for cultivation. It is estimated that around 140 Mha of land is presently under active cultivation (net sown area).

Table 1.1.1. Land use in India (2014-15)

Use	Area (Mha)	Share (%) of geographical area
Geographical area	328.73	100.00
Reported area (excluding area under occupation, snow and inaccessible)	307.82	93.64
Forests	71.80	21.84
Not cultivable	43.88	13.35
Permanent pastures and other grazing lands	10.26	3.12
Total cropped area	198.36	60.34
Culturable wastelands	12.47	3.79
Current fallow	15.09	4.59
Other fallow	11.09	3.37
Net sown area	140.13	42.63

Source: MoSPI, GoI, 2018 (data is provisional except geographical area).



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Although the main climate in India is tropical in nature, there is a vast diversity ranging from cold deserts to arid to wet areas. There are four broad classifications based on topography, namely, the Himalayan mountains in the north (cold deserts and fertile valleys), the Indo-Gangetic plains (the flat, fertile and most densely populated region in the basin formed by three river systems – Indus, Ganges and Brahmaputra), the Thar desert in the west (Rajasthan and lower Punjab and Haryana and Rann of Kutch region of Gujarat) and Southern Peninsular region (Deccan) flanked by the Eastern and Western Ghats, the coastal plains and islands.

An estimated 833 M people live in rural areas and are dependent on forest resources. There are around 350 to 400 M people dependent on forests for their various needs (MoEF&CC, 2009) living in an estimated 0.152 M villages located in and around forests, commonly known as forest villages (located inside forests) and forest fringe villages (located around forests). Most of the population of these villages is heavily dependent on forests or forest based resources such as fuel-wood, fodder and other minor forest products, both for subsistence. This puts a heavy pressure on forests apart from the fact that land is required for development activities like construction of power projects, highways, etc. The vulnerability of forests is also due to pressures of mining (including minerals, stones and sand), agriculture (shifting agriculture, Forest Right Act), collection of NTFPs, unrecorded removal of various forest products, etc. A large part of this population is tribal and vulnerable to policies, decisions and now climate change as well. Forests also provide fodder. According to the 19th Livestock Census, 2012 (MoA, 2012), the total livestock population has decreased by about 3.33% from the previous survey held in 2007. Around 40% of the total livestock depends upon forests for fodder by way of direct grazing or harvesting. Fuel wood collection also puts a lot of pressure on forests by the forest dependent communities. These two combined together are supposed to be the major causes of forest degradation.

1.2 BRIEF HISTORICAL DEVELOPMENT OF THE FORESTRY SECTOR

Due to favourable climatic and edaphic conditions, India was bestowed with a rich forest resource that extended over almost the entire country. Forests were viewed as a resource for consumption which led to clearing of forested areas for cultivation, food, shelter and pastures. Along with this, valuable timber trees were removed from the forests to provide timber for various uses. It was due to the fact that the owners of forests were interested in collecting the revenue only. In early 1800s, during the establishment of the British rule in India, the forests suffered great damage due to large scale felling of trees to fulfil the demand of timber for construction (railways, canals, etc.) with teak resources in the western part of the country being depleted by the navy. With passing time, the powers of the day realized that forests were not an inexhaustible resource and require conservation. It led to introduction of systematic working and application of regeneration measures. As an initial move, a Conservator of Forests was appointed in 1806 in Madras. However, the position was only to organize timber

exploitation and supplies from the West Coast (Anon., 1961). Tree felling operations were extended to the entire country and covered both, public and private forests. No steps were taken to conserve and regenerate the forests. The first step in replenishing forests was taken in 1842 when Mr. Conolly, the Collector of Malabar took action in raising teak plantations near Nilambur to replenish the forests that were ravaged due to careless and over exploitation. Simultaneously, efforts were also being done by Dr. Dietrich Brandis, the Superintendent of Forests in Pegu, Burma (now Myanmar) since 1856, to prepare the first Working Plan for management of forests of Pegu. One of the features of the work of Brandis was to introduce Linear Valuation Survey to estimate the growing stock of forests class-wise and, then, the rate of growth of teak by extensive ring counting. These methods ushered in the era of scientific forestry in India. In 1864, Brandis was appointed as the first Inspector General of Forests (IGF) of India. He, then, initiated preparation of Working Plans in selected forests of value. The initial progress was very slow due to shortage of trained staff and heavy work load of survey, settlement, demarcation, fire protection, etc. Till 1884, only 282 m² of forests could be brought under sanctioned working plans. There was no progress in the Presidencies of Bombay and Madras (Anon., 1961).

The preparation of working plans and management of government owned forests were centralized with the IGF in 1884. This measure provided a fillip to the activities related to preparation of working plans in the entire country. In 1899, United Provinces (a part now known as Uttar Pradesh) became the first state to constitute a working plan division and an area of 8,700 km² was under the working plan which was around 75% of the total forest area of the province. Other provinces like Central Provinces, Bihar, Bengal and Punjab also followed suit and progressed well. Bombay and Madras presidencies controlled the preparation of working plans locally covering 6,400 and 321 km², respectively. The area under working plans increased with time and the plans were standardized and prepared more systematically. The plans were brief, simple and forest areas were not divided into compartments, and stock mapping was not usually done. It continued till out break of the First World War, i.e., 1914. The war caused large scale



Sir Dietrich Brandis, KCIE, FRS
31 March, 1824 to 28 May, 1907
Founder of scientific forestry in India



unsystematic felling of timber which continued till 1919. However, the scenario changed immediately after as there was a fresh and large scale recruitment of Imperial Forest Service (IFS) officers to prepare working plans. Good maps on a suitable scale were obtained from Survey of India laying special emphasis on survey of forest areas. These maps provided a basis for dividing the working plans areas into blocks and compartments apart from making detailed stock maps. Maps (including stock maps) provided the working plan officers detailed information about areas, silvicultural characteristics of species, etc. In addition, the research output from the Imperial Forest Research Institute (IFRI), established in 1906, also provided information on growth and yield statistics for various important tree species. The working plans prepared after 1919 were high in quality. However, in 1935, due to some administrative changes mainly non-recruitment of IFS officers, the central control was lost on the preparation of working plans. Further, setback to the preparations of working plans was caused by World War II from 1939 to 1945. After it, the working plans that had expired could not be revived. In order to meet the demand of timber for the war, tree felling continued unregulated without any regard to the working plans (Anon., 1961).

Before India gained independence from the British rule, the ownership of forests lay with the public, princely states and individuals. The working plans were made for only those forests which were owned by the public (central and provincial governments and presidencies). Around 74% of 34.76 M ha of the total forest area under the British India was covered by working plans up to 1947. The working plans helped in managing forests under the British at the local and divisional levels. The information on total forest resource present in the country was lacking except for the forest area under the British control.

After India gained independence in 1947, major working plans in most of the states were taken up for revision. They were further improved as the technique of partial enumeration was standardized and additional statistics on growth and yield were collected. The stock maps were prepared with greater details. After integration of states and abolition of proprietary rights in forests of feudal states, particularly Kashmir, Madhya Bharat, Mysore, Saurashtra, and Vindhya Pradesh, forest area increased significantly. The recorded forest area increased from 34.76 to 71.80 M ha in 1950-51 and then to 74.80 M ha in 1970-71. The forest areas under the feudal states were managed and worked upon by primitive ways and had no sound working plans. In order to put them under scientific management, preliminary works like survey, demarcation, mapping and giving legal status to these forests was carried out. The provincial governments were faced with two important responsibilities, namely, revising the existing working plans and preparation of new working plans for the 'newly acquired' forests. Over a period of 9 years from 1949 to 1957, an additional forest area of 5.52 Mha was brought under working plans. The process of notifying additional forests under the category of recorded forest area continued and more and more forest areas were brought under the working plans. Preparation of working plans remains under the control of the state governments. However, the working plan code has been notified by the central government.

1.3 FOREST POLICIES

Forest policy formulation was initiated in India in 1894 with the first Forest Policy being promulgated with the objective of maintenance of adequate forests for custodial and timber oriented management. This translated into maximizing the revenue collection and meeting the need of timber by the stakeholders, including the British. Also, the two world wars resulted in over exploitation of forests for timber. This led to forest degradation, which was not pronounced at that time and, therefore, remained unnoticed.

After India became independent, large forest areas were acquired from the *zamindars* and princely states. In addition to this, some political initiatives were also taken. The forest policy of independent India was formulated in 1952. This policy laid emphasis on extending the forests beyond the traditional

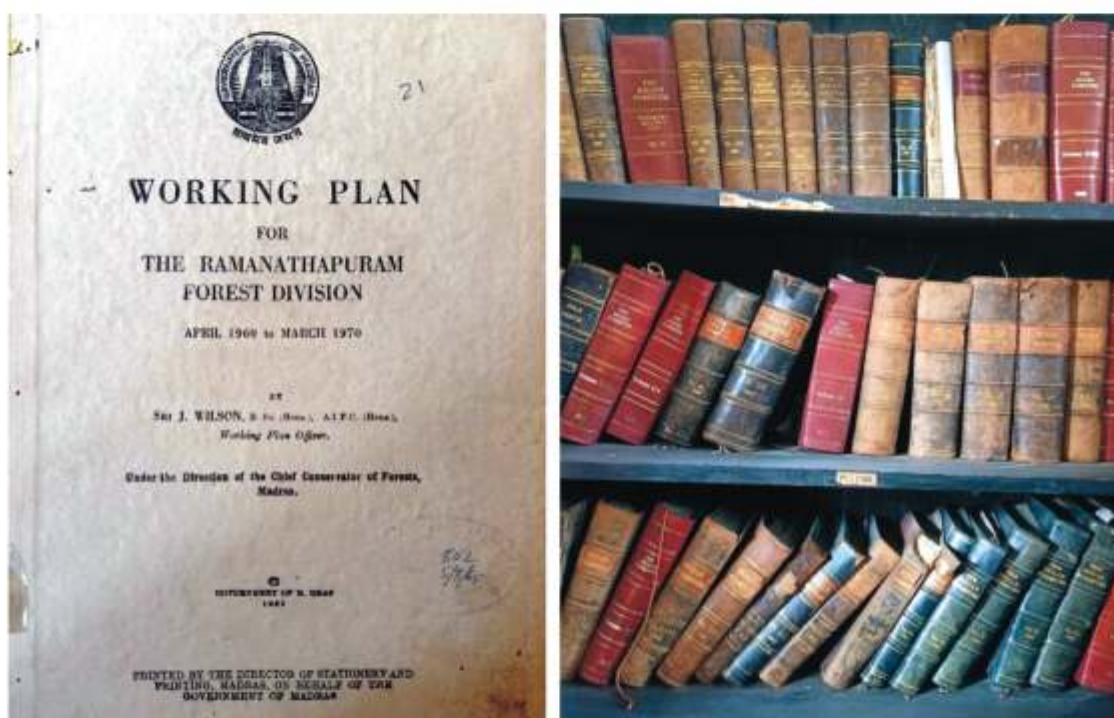
forest areas resulting in providing momentum to farm and agro-forestry. The policy of 1952 also resulted in the 'green movement' in the country by aspiring for 33% of the total geographical area of the country under forest or tree cover. According to this policy, 60% of the land in the hills and 20% in the plains were to be brought under the trees and forests, with much of the focus still being on sustainable timber production to meet the requirements of defence, communication and industry. There was not much emphasis on management of non-timber forest products (NTFPs) and other non-commercial species. The policy also provided control on all the remaining forests under private ownership, containing shifting cultivation and creation of forest villages. It also recognized the multiple functions of forests and laid importance on their protection and contribution in management of watersheds, conservation of wildlife and their role in improving soil fertility.

In a major step towards conservation of natural forests, the National Commission on Agriculture, in its interim report (1972), emphasized on man-made forests for production forestry. It also recommended establishing forest development corporations (FDCs) for enhancing investment through financial institutions and raising large scale plantations through social forestry and other such means. Another important step was to shift 'forests' from the state list to concurrent list by 42nd Amendment of the Constitution in 1976. The "Forest Conservation Act 1980" was then enacted to control the diversion of forest land for non-forestry purposes making it mandatory for the states to seek approval of the central government before diverting forest land for non-forestry purposes with a provision of compensatory afforestation. A new ministry, Ministry of Environment and Forests was then created and the subject of forestry and wildlife was shifted from Ministry of Agriculture to this new ministry in 1985 to ensure focussed attention on the issues related to forestry, wildlife and environment.

Forest conservation was of a major concern due to biotic and industrial pressures on forests of India. The Forest Policy was felt to be revised in the late 1980s and a revision was issued in the form of Forest Policy 1988. This policy laid prime emphasis on environmental stability and forest conservation while meeting the demand for domestic requirement of fuel-wood, fodder, minor forest products and construction timber for rural and tribal population. It also brought in the participation of rural and tribal population in forest protection and conservation pushing the economic benefits before the ecological and environmental benefits. According to the policy, as far as possible, forest based industries should raise the raw material themselves for meeting the requirements. This should preferably be done by establishing a direct relationship with individuals who can grow the raw material. The national goal of having a minimum forest and tree cover of 33% of the total geographic area of the country was also maintained by the policy. In hills and mountainous regions, two-thirds of the area was envisaged to be under forest and tree cover to minimize and prevent soil erosion, land degradation and to provide stability to the fragile eco-systems. The policy aims at conserving the natural heritage of the country by preserving natural forests along with their diverse flora and fauna, and genetic resources.

With changes in demographic composition and socio-economic conditions of the forest dependent communities, the traditional approach of the administration of forests had to change. Till the early 1970s, the forests were administered using traditional approach and little or no interaction with the local population. The local and tribal population living in forest fringe villages and forest villages were meeting their requirement for sustenance from forests and also from working as labour with the department but never participated in management of forests. The changes in demography because of increase in their population, education, etc. resulted in increase in their needs and, consequently, in conflict with the forest administration. As a result of the National Forest Policy 1988, the Ministry of Environment and Forests issued detailed guidelines in 1990 for involving people in conservation and management of forests, particularly degraded forests, through village level organizations. The system is now known as

Joint Forest Management (JFM), though it may have different nomenclature in few states, the essence remaining the same. This system is implemented with the help of committed voluntary agencies and NGOs. The procedure of sharing the usufructs and involvement of local village communities is also well in place. The state forest departments (SFDs) are not entitled to share of usufructs. The JFM programme was strengthened and most states issued appropriate orders and circulars on the basis of guidelines issued by the Ministry of Environment, Forest and Climate Change (MoEF&CC) in February 2000 and December 2002.



1.4 SET-UP OF STATE FOREST DEPARTMENTS

Each state and union territory of the country has a forest department that is entrusted with the responsibility of looking after the forests of the state. Broadly, the administrative units in the state forest departments (SFDs) are categorized into three nomenclatures, namely, the territorial, functional and wildlife units. As the names suggest, territorial units are those that are concerned with the management of territories and take up functions like protection, conservation, basic administration, implementation of rules and regulations related to forests, etc. in an area notified by the government. The functional units are established to carry out specially designated functions like working plans or any other special functions as decided from time to time, whereas, the wildlife units take care of the wildlife and implementation of rules and laws related to its conservation.

A circle is the apex of the territorial units which is further divided into divisions and ranges. The ranges are further divided into beats and compartments. These territorial units not necessarily coincide with the revenue department boundaries. The circle is headed by a Conservator of Forests. Each circle has some divisions headed by a Deputy Conservator of Forests. The ranges are headed by Forest Range Officer, popularly known as a ranger and beats by Beat Officers. There is also a unit called blocks in some states. The nomenclature may vary from state to state, however circles, divisions, ranges and beats are

common to all the states. Since beats are the basic unit of forest management, they are unlikely to change drastically. All the SFDs do not have a system of blocks, and ranges are divided directly into beats.

In total, there are 1,356 territorial and functional divisions in the forest departments of states and UTs under 394 circles. There are 6,670 ranges. During last reporting (FSRI 2010), there were an approximately 12,000 blocks and 45,000 beats. The details of the number of circles, divisions, ranges and beats for both territorial and functional units (including wildlife) are given in Table 1.4.1.

Table 1.4.1 Administrative (both territorial and functional) units

State/UT	Circle	Division	Range
Andhra Pradesh	24	69	250
Arunachal Pradesh	7	44	112
Assam	12	71	290
Bihar	8	28	99
Chhattisgarh	10	45	352
Delhi	1	3	9
Goa	4	11	27
Gujarat	16	57	423
Haryana	12	43	132
Himachal Pradesh	12	45	198
Jammu and Kashmir	10	55	206
Jharkhand	24	51	201
Karnataka	20	68	472
Kerala	8	36	104
Madhya Pradesh	31	89	471
Maharashtra	15	68	507
Manipur	8	24	70
Meghalaya	2	3	20
Mizoram	5	20	69
Nagaland	2	9	41
Odisha	9	56	295
Punjab	4	16	75
Rajasthan	16	59	400
Sikkim	12	26	73
Tamil Nadu	21	52	218
Telangana	15	68	219
Tripura	2	23	114
Uttar Pradesh	24	93	442
Uttarakhand	33	49	261
West Bengal	19	53	497
Andaman and Nicobar Islands	5	14	18
Chandigarh	1	2	4
Dadra and Nagar Haveli	1	2	3
Daman and Diu	1	2	1
Lakshadweep	0	1	0
Puducherry	0	1	0
Total	394	1,356	6,673

Source: Egreenwatch, MoEF&CC, GoI; <http://egreenwatch.nic.in/> (accessed on 29-08-2019).

Figure 1.4.1 representing the division-circle and range-division ratio of the ten states having maximum number of circles. This comparison was aimed to work out the variations in the distributions of the divisions within circles and ranges within the divisions. In general, the division-circle ratio shows less variation in comparison with the range-division ratios. Maximum division-circle ratio was recorded in Uttar Pradesh while minimum in Uttarakhand. On the other hand, highest value of range-division ratio was in West Bengal and minimum in Andhra Pradesh.

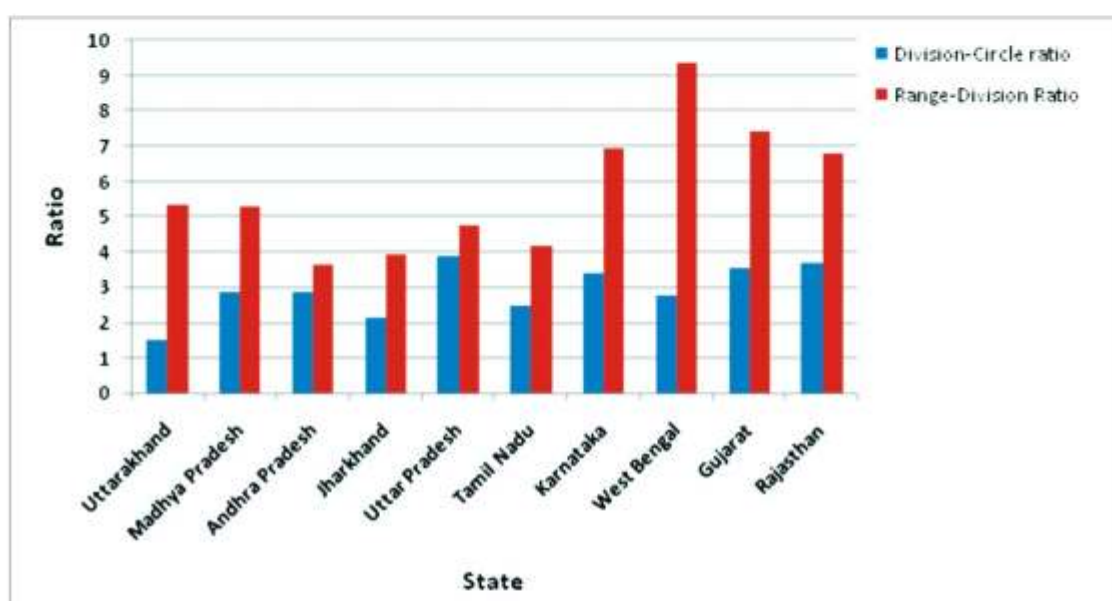


Fig 1.4.1. Ten ordered states showing ratios of Division, Circle and Range, Division.

1.5 MANAGEMENT OF TERRITORIAL FOREST DIVISIONS

– SANCTIONED WORKING PLANS

As discussed in Section 1.4, the concept of working plans was introduced in the forest sector of the country to manage them scientifically. These plans of operations, generally valid for a period of 10 years, are prepared at the division level after surveying, stock mapping, preparing inventories and mapping the existing status of each forest block in the division including blanks. The plan gives prescriptions for the future treatment of each area including operations like aided natural regeneration, cultural operations, plantations, tree felling, etc. The practice has been existing for around 150 years when scientific forestry was first introduced. The recent advances in technologies like Remote Sensing (RS) and GIS have reduced the preparation time of the plans from 2 to less than a year. The new working plan code was introduced by MoEF&CC in 2014 which gives guidelines for preparing the working plans in a uniform pattern throughout the country. Working Plans are prepared by working plan divisions in the SFDs on a regular basis. The plans adopt scientific techniques and advanced statistical tools for conducting surveys that form the basis of the plans.

Working plans/management plans or working schemes and getting them approved by the central government before taking up any felling of trees in forests were made mandatory by the Supreme Court of India in 1996 in order to enforce the Forest Conservation Act, 1980. The regional offices of the MoEF&CC located in different regions of the country are authorized to scrutinize and approve the working plans of the forest divisions submitted by the states.



Many SFDs have been following the system of working plans traditionally since the system was introduced. However, some states have a tough terrain and remote inaccessible areas, especially in the north eastern states, where the system is not implemented. As on March 2019, there are about 500 valid working plans and this number also changes with time as some plans expire, some are revised and some new ones are added. The details of the number of valid working plans are given in Table 1.5.1.

Table 1.5.1. Number of sanctioned working plans in the major states (as on March 2019)

State/UT	Number	Remarks
Andhra Pradesh	14	-
Andaman and Nicobar Islands	06	-
Arunachal Pradesh	05	-
Assam	Nil	Three nos. of Working Schemes are approved and valid. No current Working Plan for Assam as all approved Working Plans have expired. However, 12 nos. of PWPRs for various forest divisions of Assam stands approved, and draft Working Plans for the same are under preparation/submission.
Bihar	1	-
Chandigarh	1	-
Chhattisgarh	23	19 - Approved Working Plans. Four - Approved Management Plans.

State/UT	Number	Remarks
Delhi	Nil	-
Gujarat	19	-
Haryana	18	Three Working Plans are pending. PWPR in one is approved and rests two are awaited.
Himachal Pradesh	16	One Working Plan is under process at regional office (NCZ), Shimla.
Jharkhand	14	-
Karnataka	39	-
Kerala	20	-
Madhya Pradesh	55	-
Maharashtra	50	38 - Approved Working Plans. 12 - Approved Management Plans.
Manipur	7	All the territorial forest divisions of Manipur are having valid approved working plans.
Meghalaya	4	One Working Scheme received and under examination in regional office.
Mizoram	3	PWPR of six forest divisions received and sent back to state government with observations.
Nagaland	Nil	There are 12 nos. of working schemes which are valid. The State has not prepared and submitted any Working Plan as the land are vested mostly with the Village Communities/Village Councils, hence they prepared Working Schemes, village-wise for small areas.
Odisha	10	A total of 31 Working Schemes was valid upto 31.03.2019.
Punjab	08	Seven Working Plans are pending out of which six with state government and one with Government of India. PWPR in four Working Plans has been approved and rest two is still awaited. In addition to this, eight Management Plans have also been approved by the MoEF&CC.
Rajasthan	32	Out of 34 Working Plans, two are under preparation.

State/UT	Number	Remarks
Sikkim	4	All the territorial forest divisions of Sikkim are having valid approved working plans.
Tamil Nadu	29	-
Telangana	15	-
Tripura	09	All the territorial forest divisions of Tripura are having valid approved working plans.
Uttarakhand	21	Four forest divisions have been sanctioned Annual Working Scheme (up to 2018-19) by the regional office (NCZ), Dehradun. One Annual Working Scheme is under process.
Uttar Pradesh	65	Out of 81 Working Plans, rest are under preparation.
West Bengal	17	-
Total	505	

Source: MoEF&CC, GoI

1.6 FOREST DEVELOPMENT CORPORATIONS

After the recommendation in the Interim Report of the National Commission on Agriculture (NCA 1972) on 'production of man-made forests', many state governments in India established forest development corporations (FDCs) to work on commercial lines by raising industrial plantations of teak, eucalyptus, bamboo, etc., to (i) enhance the production of forest produce, (ii) restore the productivity of degraded forest areas, (iii) harvest and undertake trade of timber and NTFPs, (iv) own and run forest based industries, (v) provide support to farmers for marketing their forest product and (vi) provide consultancy in raising bio-aesthetic plantations, etc. Most of the FDCs were created during 1970s. These FDCs can mobilize bodies under the Companies Act, or any such similar Act, with a memorandum and articles of association of the company. The powers of managing the FDC are vested with a board of directors which are constituted by the state government. The board consists of official and non-official directors. Such corporations exist in 22 states (except in Assam, Manipur, Mizoram, Nagaland, Rajasthan and Sikkim) and in the UT of Andaman and Nicobar Island. The corporation created in Rajasthan in 1985 was subsequently closed. Most of the states have only one FDC but two states have more than one forest related corporation, for example, Karnataka (Karnataka FDC, Forest Industries Corporation and Cashew Development Corporation). In addition, there are two Federations, one in Madhya Pradesh, and the other in Chhattisgarh, for harvesting and marketing of NTFPs. These federations finally transfer the net profit to the primary societies of collection in the schedule areas.

The functioning of these corporations is different in each state. State-wise brief scenario of the status of FDCs is as follows:

- 1.6.1 Andhra Pradesh:** Andhra Pradesh FDC (APFDC), established in 1975, has an annual turnover of about INR 60 Cr. About 83,700 ha forest land has been leased to this corporation. Out of this, 65,177 ha plantations have been raised mostly with high productive eucalypts clones and bamboo, and in small areas with cashew, coffee, teak, medicinal plants and other miscellaneous species too. The balance area

of 18,492 ha eucalypts raised with seed origin plantations are gradually being replaced with clonal plantations. The corporation annually plants between 3,000 and 6,000 ha eucalypts and produces round-wood/pulpwood between 1,00,000 to 2,00,000 m³. It has raised around 2,413 ha of bamboo plantations and extracts around 7.5 to 9.0 lakh long bamboos for sale. Apart from this 3,000 to 5,000 t of bamboo is also sold to the paper industry. About 2,00,000 t of pulpwood is extracted annually from these plantations and sold to wood based industries. These plantations fetch average gross revenue of INR 58 Cr year⁻¹. The corporation has raised around 310 ha of teak plantations from 2011-12 to 2015-16. The details of these plantations are in Table 1.6.1.1.

Table 1.6.1.1. Annual teak plantations raised by APFDC

Year	2011-12	2012-13	2013-14	2014-15	2015-16	Total
Area (in ha)	5.00	67.79	104.77	83.18	50.00	310.74

Source: APFDC; <http://www.apfdcl.com/Pages/Activities/Teak.aspx>.

Apart from this, it has raised pepper plantations in 4,010 ha with almost 1.8 lakh pepper standards; bamboo plantations in 2,142.48 ha; eucalypts plantations in 30,478.42 ha; cashew plantations in 6,264.90 ha and coffee plantations in 4,010 ha. Coffee and pepper plantations share the space and have been clubbed into one. These plantations have generated the revenue for the corporation (Table 1.6.1.2.).

Table 1.6.1.2. Annual yield and revenue realised by plantations under APFDC

Crop	Year	2011-12	2012-13	2013-14	2014-15	2015-16
Pepper	Yield (t)	18.7	15.4	37.8	2.8	6.4
	Revenue (INR lakh)	66.9	47.3	277.0	17.1	13.5
Bamboo*	LB (no. in lakh)	5.7	6.4	6.4	7.3	8.2
	IC (t)	418.0	124.0	182.0	295.0	663.0
	Revenue (INR lakh)	105.8	261.8	355.5	617.1	396.1
Eucalyptus (pulpwood)	Yield (t)	1,04,197.3	1,20,739.8	1,68,970.7	No Sale	1,300.0
	Revenue (INR lakh)	3,091.5	4,250.0	1,047.1	0	7,322.5
Cashew	Yield (t)	135.6	197.5	183.8	131.5	160.3
	Revenue (INR lakh)	145.2	150.6	161.8	185.5	307.5
Coffee	Yield (t)	445.1	549.8	758.6	358.4	322.7
	Revenue (INR lakh)	929.5	829.4	1,575.7	740.7	502.8

Source: APFDC; <http://www.apfdcl.com/>; *: Figures for 2015-16 are up to July 2016. LB = Long bamboo; IC = Industrial cut.

- 1.6.2 Andaman and Nicobar Island:** Forest Plantation and Development Corporation, a Government of India undertaking, was established in 1977 mainly to harvest timber, to manage the inaccessible forest and to undertake cultivation of red oil palm, rubber, spices, etc. The Corporation has three projects, viz., forestry project in Little and North Andaman Island, red oil palm project in Little Andaman Island and rubber project in Katchal Island. The annual timber harvesting had reached its peak to 49,000 m³ during 1990s. With the change in policy to conserving natural forests and biodiversity and due to judicial intervention, the harvesting of timber as well as extension of red oil palm plantation has been stopped since 2002; and leased forest area returned to the forest department. The present turnover (about INR 8 Cr) is mainly from red oil palm (1,560 ha) and rubber plantations (600 ha), and it is not enough to meet even the salary of the staff. The corporation has now been wound up.
- 1.6.3 Arunachal Pradesh:** Arunachal Pradesh Forest Development Corporation (ArPFDC) was established in 1977 mainly to harvest and market timber in the leased forest area by the forest department in Tirap and Changlang districts of the state as well as to establish a few wood based industries. Plantations of rubber, tea and coffee were also raised in a few hundred ha area. The harvesting of the timber reached to 49,000 m³. The felling operations were stopped in 1996 and two wood based industries were closed by the order of Supreme Court because of excessive felling of trees without working plans. There has been almost no activity since then and most of the staff has been gradually retrenched as there are not enough funds to pay the salary to the staff.
- 1.6.4 Bihar:** Bihar Forest Development Corporation (BFDC) was established in 1975 mainly for harvesting and marketing of NTFPs of which tendu leaf was a major product. After the bifurcation of the state in 2000, the harvesting and marketing of NTFPs was transferred to the Village Panchayats in 2004. BFDC is almost non functional since then.
- 1.6.5 Chhattisgarh:** Though FDC was created in 1976. After bifurcation of the state from Madhya Pradesh in 2000, it was re-established in 2001 and the annual turnover is about INR 45 Cr at present. About 1,97,000 ha forest land has been leased to the Corporation. Raising of commercially important species like teak and bamboo and their harvest and trade as well environmental plantations in industrial areas on turnkey basis (deposit work) are the major activities. In the leased area, teak is planted between 2,000 and 3,000 ha annually and total area under teak, at present, is about 85,000 ha. About 8,000 ha have been covered under environmental plantations.
- The State Minor Forest Produce (Trading and Development) Co-operative Federation functioning in the erstwhile Madhya Pradesh was split after the constitution of Chhattisgarh state, notified in October 2000. It is functioning on the same lines as in Madhya Pradesh. At present, there are about 10,000 collection centres spreading over the length and breadth of the state and has approximately 9.78 lakh forest produce gatherers. Since 2008, 80% of profit is given as wages and incentives to the collectors of tendu leaves, 15% of profit is kept for collection, sale, storing in godowns and value addition of non-nationalised minor forest produce and 5% of profit for the temporary reimbursement of losses of societies.
- 1.6.6 Gujarat:** The Gujarat Forest Development Corporation (GFDC), created in 1976, has an annual turnover of about INR 30 Cr. Broadly, there are 6 activities (i) manufacturing of furniture mainly for government institutions called *Vanil Udyog* (ii) harvesting and marketing of NTFPs of non-scheduled as well as scheduled area (major area) and sharing 100% net profit of scheduled area with *panchayat* (for about 5-6 years harvest and trading was done by *panchayat* until 2004 but the system did not work) (iii) raising

commercial plantations mainly clonal eucalypts in 5,000 ha forest land allocated to GFDC (iv) collection and trading of charcoal manufactured by local people and *panchayat* (v) raising plantations for public sector undertakings on contract basis and (vi) making herbal products from medicinal plants under the scheme *Dhanvantri*. At present, *Vanil Udyog* and NTFPs form the bulk of the commercial activity.

- 1.6.7 Haryana:** Haryana Forest Development Corporation (HFDC) was established in December 1989 under the Companies Act, 1956. HFDC was created mainly to assure reasonable support price to farmers for their standing trees and other forest produce, to raise nurseries and plantations, to promote tree plantation on non-forest lands and to establish forest based industries. At present, the annual turnover is of the order of INR 37 Cr. The Corporation is also harvesting trees and marketing timber from earmarked areas of forest lands since 1995-96 and in lieu pays royalty to forest department. The farmers can also sell their standing trees to it and generally, eucalypts and poplar are grown under agro-forestry and are marketed at a support price fixed by the government from time to time. The harvesting of timber has increased in recent years due to widening of highways and is about 70,000 m³ annually.
- 1.6.8 Himachal Pradesh:** Himachal Pradesh Forest Development Corporation (HPFDC) was established in 1974. The turnover, at present, is about INR 150 Cr with approximate profit of INR 15 Cr. Initially, the working of resin and turpentine factories at Nahan and Bilaspur were taken over and, subsequently, resin extraction operation. The total installed capacity of the resin factories is 1,11,000 q year⁻¹, i.e., Nahan 37,000 q and Bilaspur 74,000 q of raw resin. In 1983, timber harvesting and marketing including bamboo became the major activity of the corporation. Felling of schedule species from private areas was also included in 1982. The current annual timber harvest ranges between 2,50,000 to 3,00,000 m³. The corporation also undertakes harvest and marketing of *Katha* and fuel-wood. Of the total turnover, about 60% is from timber, 40% from resin and turpentine oil and rest from others. There are 5 depots with the corporation for sale of timber, Corporation is diversifying its activities towards ecotourism also.
- 1.6.9 Jammu and Kashmir:** The state FDC, a statutory body, was established under the Jammu and Kashmir State Forest Corporation Act, 1978 by merging the erstwhile Government Lumbering Undertaking (GLU) which used to carry out extraction and sale of timber in the state. The main objective of corporation is to undertake removal and disposal of trees and exploitation of forest resources entrusted to it by the Government of Jammu and Kashmir. The current activity is confined to removal of dead and dying trees which on an average is 50,000 m³ annually. The annual turnover is about INR 60 Cr with net profit of about INR 2 Cr.
- 1.6.10 Jharkhand:** The FDC was re-established in 2002 after bifurcation of Bihar. The earlier activities of the FDC were to harvest NTFPs. During 2007, harvesting of all NTFPs except tendu leaf was handed over to *Gram Sabha*. Current turnover, mostly from tendu leaf trade, is about INR 45 Cr.
- 1.6.11 Karnataka:** The Karnataka Forest Development Corporation (KFDC) was established in 1971 with the objective to raise plantations of commercially viable species (bamboo, pulpwood, rubber and teak). Plantations of acacia, bamboo, casuarina, eucalypts, tamarind and teak have been raised on 44,792 ha forest land received on lease. In addition, forest land of 4,443 ha under rubber plantation is maintained and rubber latex is processed in its two factories. The pulpwood and rubber latex are sold to industries. The Corporation, at present, is having an annual income of INR 82.5 Cr. The products sold by the corporation include bamboo, eucalypts poles, wood and trees, firewood, rubber and rubber trees, agricultural products and tamarind. The details of revenue realised from the sale is given in Table 1.6.11.1.

Table 1.6.11.1. Revenue from sale of products by KFDC

S. no.	Year	Amount (INR lakh)
1.	2010-11	6,494.5
2.	2011-12	6,093.3
3.	2012-13	7,891.3
4.	2013-14	12,999.4
5.	2014-15	13,027.1
6.	2015-16	10,698.0
7.	2016-17	8,346.3

Source: KFDC.

The Karnataka State Forest Industries Corporation (KSFIC) was established in the year 1973 under the Companies Act, 1956 with an authorized capital of INR 2.0 Cr. Its main objectives are to harvest forest produce for supplying to pulpwood and rayon industries, processing of wood and manufacture of furniture and wood based construction material. The activities of the corporation are divided into three major heads – production, sale and logging. The current activities include making of block boards, furniture, doors and windows, fuel-wood supply to public and salvage timber from forest and harvest of pulpwood, sandalwood white chips powder, poles, etc. The production and sale of forest based products by KSFIC from 2010-11 to 2017-18 is given in Table 1.6.11.2 and year-wise turnover is shown in Fig 1.6.11.1. The turnover has been consistent till 2015-16 and, thereafter, there was a substantial jump.

Table 1.6.11.2. Production and sale of forest based products by KSFIC

Product	Product- ion/sale	Year							
		2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
Block board(sft)	Production	34,418	42,711	65,627	25,204	7,540	5,849	22,086	22,549
	Sale	36,944	36,185	67,437	27,849	5,436	6,574	10,015	16,308
Flush Door(sft)	Production	59,608	82,714	74,815	81,596	69,126	61,922	60,500	65,454
	Sale	71,272	82,386	74,508	79,692	70,484	61,422	61,102	65,458
Sandal-wood chips white powder (t)	Production	18	652	4,499	4,006	4.07	4.19	5.19	5.77
	Sale	8	-	4	4	4	0.452	3.06	3

Source: KSFIC; http://ksfic.in/financials_last10_years.html (accessed on July 15, 2019).

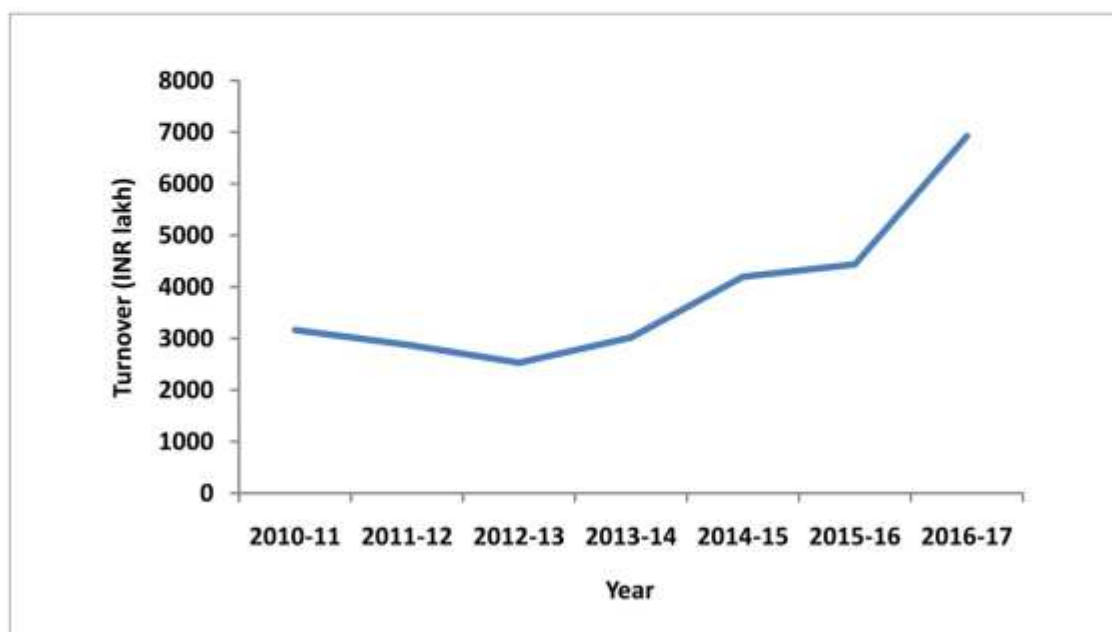


Fig. 1.6.11.1. Trends in turnover of KSFIC

Karnataka Cashew Development Corporation was started in 1978 under the Companies' Act 1956, with the main objective of taking over the existing cashew plantation for intensive development and to raise new cashew plantation to attain increased productivity. The corporation has maintained 12,738.5 ha of older cashew plantations transferred towards equity and another 12,919.6 ha of cashew plantation on lease from forest department. The corporation planted about 9,030 ha within older plantations with high yielding variety grafts during 1992-2008 but still the yield from plantations is poor. The total income in 2016-17 was around INR 6.8 Cr and the net loss to the corporation was about INR 3.3 Cr with accumulated losses being INR 1.7 Cr.

- 1.6.12 Kerala:** The Kerala Forest Development Corporation (KeFDC) was established in 1975 in Kottayam with specific purpose to raise industrial plantations, cashew, coffee, spices, tea, etc. besides process and trade. The corporation has established plantations for pulpwood (acacia, eucalypts etc.) in 6,119 ha, teak and pulpwood in 1,413 ha, coffee in 205 ha, cashew in 327 ha and tea in 100 ha. At present, the annual turnover is about INR 20 Cr, about 70% of which comes from wood crop items. 477 ha of coffee plantations were also transferred from the forest department. Apart from this, natural and plantations of around 82 ha are also supported by the corporation in Thiruvananthapuram and Pamba. It also takes care of activities under eco-tourism in the state.
- 1.6.13 Madhya Pradesh:** Madhya Pradesh Forest Development Corporation (MPFDC) was established in 1975 with the main objective to replace low value and inferior forests with high value multi-utility species. Commercial planting of teak and bamboo is the main activity. Current annual turnover is more than INR 110 Cr with net profit of about INR 10 Cr. The leased area to the corporation has gradually increased over the years. The current leased area is 4,25,000 ha and till 2017, teak plantation in 2,89,870 ha have been raised under various schemes like 12th and 13th Finance Commission, CAMPA and High-tech Teak Plantations. Bamboo has been planted in 27,788 ha. Plantations of mixed species have been raised in 3,189 ha. 56,624 ha of plantations have been raised in drought prone areas. 33,830 ha of

pastures have been developed in these areas. Compensatory afforestation of 4,287 ha has also been done till 2017. 13,179 ha of degraded bamboo forests have been rehabilitated. Average annual harvesting of timber from the leased area is about 1,00,000 m³.

In order to give benefits to forest dwellers in collection and trade of forest produce, the Madhya Pradesh State Minor Forest Produce (Trading and Development) Co-operative Federation (MPMFPCF) was formed in 1984. This Federation coordinates the collection and processing of tendu leaves, sal seed and Kullu gum through Primary Forest Produce Co-operative Societies at district level and organizes disposal of these produce. In addition, other non-nationalised NTFPs are also being collected and traded by these Co-operative Societies. It also processes and markets herbal products and honey. However, after 73rd Amendment of the Constitution in 1996 providing devolution of power to the Panchayati Raj Institutions, the net income from the trade of NTFP is being transferred to the Primary Forest Produce Societies which in-turn distribute 60% of the profits to the primary collectors. 20% of the profit is kept for the development of NWFP and the rest for infrastructure development. The federation has paid an amount of INR 1,124.47 Cr as incentive wages to the tendu leaves pluckers from 1989 to 2014.

Table 1.6.13.1. Details of tendu leaves trade by MPMFPCF

Year	Collection	Collection rate per S.B.	Collection wages	Quantity stored	Quantity disposed off	Sale price	Expenditure	Net receipt
2010	21.24	650	138.11	21.24	21.24	332.89	179.71	153.18
2011	17.06	650	110.85	17.06	17.06	310.06	154.1	155.96
2012	26.06	750	195.45	26.06	26.06	618.4	245.94	372.56
2013	19.92	950	189.28	19.92	19.92	394.81	247.04	147.77
2014	16.99	950	161.42	16.99	16.99	310.09	217.39	92.7
2015	16.05	950	152.47	16.05	16.05	329.27	183.19	-

Source: MPMFPCF; <http://www.mpfederation.org/Website/content/tendupatta.html>.

Quantity: In lakh standard bags (1 standard bag=50,000 leaves); Amount: INR Cr.

- 1.6.14 Maharashtra:** The Maharashtra Forest Development Corporation (MFDC), created in 1974, has an annual turnover of about INR 130 Cr. The broad objective is to raise plantations of species yielding high revenue in place of low value miscellaneous forests and generate employment. Some new activities like raising of forest plantations in private lands of Public Sector Undertaking (PSU) on turnkey basis and promotion of eco-tourism has been added. At present, FDC has 3,93,051 ha forest area on lease from the Maharashtra State Government. Teak is a flagship species and about 1,39,000 ha area is under plantations. Majority of these plantations (about 1,24,000 ha) were raised during the period 1969 to 1987. The annual rate of plantations from 2010 to 2015 has been 3,602 ha as compared to 1,200 to 1,600 ha in the previous reporting period. The details of plantations raised during 2010 to 2015 are given in Table 1.6.14.1.

Table 1.6.14.1. Teak and miscellaneous plantations raised by MFDC

Year	2010	2011	2012	2013	2014	2015
Teak plantation (ha)	1,529	1,841	1,927	1,491	1,427	1,258
Miscellaneous plantation (ha)	1,576	2,170	2,840	2,396	1,885	1,364
Total plantations (ha)	3,105	4,011	4,777	3,787	3,312	2,622

Source: MFDC; <http://www.fdcn.nic.in/Plantation-Afforestation.aspx>

- 1.6.15 Meghalaya:** Meghalaya Forest Development Corporation was established in 1975 under Companies Act 1956 with authorized share capital of INR 2 Cr mainly to harvest timber from government forests and to enter into timber trade. Two saw mills were opened. It worked under profit until 1991. Since area of government forest is very little (as 85% of the Meghalaya forests are with ADC) and focus has shifted on biodiversity conservation. The annual turnover is of the order of INR 2 Cr.
- 1.6.16 Odisha:** Odisha Forest Development Corporation came into being in 1990 by merging all forest corporations of the state which includes Odisha Forest Corporation (1962), its subsidiary Odisha Composite Board (1983), Similipahar Forest Development Corporation (1979) and Odisha Plantation Development Corporation Limited (1985). Annual turnover, at present, is about INR 75 Cr which excludes the sale proceeds of tendu leaf (approx. INR 300 Cr) as it is returned to forest department after deducting 10% commission. It presently undertakes (i) trade of salvage timber/firewood, (ii) trade of processed and *phal Kendu* leaves, (iii) collection and trade of sal seed directly or through raw material procurer (RMP), (iv) regulate the distribution of firewood, long bamboo and other small timber to local people, (v) monitor bamboo operation directly or through RMP, (vi) trade of cashewnut and rubber harvested through plantations and (vii) collection, processing and trade of honey and few NTFPs. Odisha is the 3rd largest producer of tendu (*bidi*) leaf next to Madhya Pradesh and Chhattisgarh. The annual production of tendu leaf in Odisha is around 4.5 to 5 lakh q produced in all the 30 districts of the state which is about 20% of the country's annual production. It is also involved in running 23 eco-tourism sites in the state.
- 1.6.17 Punjab:** The Punjab Forest Development Corporation (PFDC) was established in 1983 under the Companies Act, 1956 and, at present, the annual turnover is nearly INR 34 Cr. The main activity of the FDC is to harvest and market timber from forest marked by the forest department and pay royalty in turn. The current timber production is to the tune of 72,000 m³, 70% of which comes from tree felling due to widening of national highways. In addition, corporation also assists the farmers in production and marketing of their agro-forestry produce (mainly eucalypts and poplar). The corporation also runs saw mills and carpentry units and promotes use of eucalypts and poplars, and, nowadays, it is venturing into eco-tourism. The details of income through sales and other sources are given in Table 1.6.17.1.

Table 1.6.17.1. Annual income of PFDC

Year	2011-12	2012-13	2013-14	2014-15	2015-16
Income (INR Cr)	32.28	64.57	62.17	70.36	52.17

Source: PFDC.

- 1.6.18 Tamil Nadu:** Tamil Nadu Forest Plantation Corporation Limited was brought under the provisions of the Companies Act, 1956 and 1974 with the main objective to raise, maintain and harvest pulpwood and cashew to meet the needs of industries and to supply firewood to meet the fuelwood needs of the public. Forest land has been leased out by the forest department to the corporation. The field area of the corporation is divided into 6 zones with a total area of 71,540.5 ha. The main species grown are eucalypts and cashew. Teak, casuarinas, bamboo etc., are also grown in smaller extent.

Arasu Rubber Corporation is a Government of Tamil Nadu Company functioning under the Tamil Nadu Department of Environment and Forest since 20th August 1984. The Corporation maintains 4,280 ha of rubber plantations located within Kanyakumari district, the only suitable district for the growth of rubber in the state. The objective of the corporation is to safeguard the future of rubber plantation industry and to increase employment opportunities, particularly for surplus rubber plantation labourers, those repatriated from Sri Lanka. Around 2,000 t of natural rubber is produced every year including latex having ISI standard. The annual turnover is around INR 23 Cr.

Tamil Nadu Tea Plantation Corporation Limited was established in 1968, to rehabilitate Sri Lankan repatriates trained in the fine art of tea culture. The corporation raised tea plantation in an area of 4,432 ha and produces about 10,421 t of clonal tea in tea factories located within plantations.

- 1.6.19 Tripura:** Tripura Forest Development and Plantation Corporation Limited was established in the year 1976 under the Companies Act, 1956 and the present turnover is about INR 45 Cr with net profit of INR 16 Cr. The main objective of the corporation is to carry out business in rubber cultivation, its processing and promotion as well as of bamboo based industries and also to provide livelihood support to tribals. The corporation has raised about 11,000 ha rubber plantation of which about 4,000 ha are in productive state annually yielding about 3,000 t of raw/processed latex. A rubber timber processing unit manufactures rubber wood furniture and solid rubber wood board. The corporation has provided settlement to more than 2,700 tribal families who were practicing shifting cultivation, by providing each family one hectare of rubber plantation.
- 1.6.20 Uttar Pradesh:** Uttar Pradesh Forest Development Corporation (UPFDC) was established in 1974 under State's Local Bodies Act and not under Company's Act like other states FDCs. The annual turnover is of INR 300 Cr at present. Its main activity is to harvest and market the forest produce on a planned basis. The trees and other produce (bamboo and tendu leaf) marked by the forest department are harvested and marketed by the corporation after paying the royalty. At present, the average annual production of round timber by the corporation is about 3,00,000 m³. The production of timber has increased due to widening of roads resulting into felling of large number of mature trees standing along national highways. Forest Produce outturn and total revenue of UPFDC is shown in Table 1.6.20.1.

Table 1.6.20.1. Forest produce outturn and total revenue of UPFDC

Product	Year							
	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
Timber (m ³)	2,75,956	2,74,414	3,12,207	3,85,441	3,43,228	2,69,728	2,55,956	1,98,261
Fuelwood (m ³)	18,745	21,368	32,933	31,612	35,653	27,397	31,087	21,286
Bamboo (Kaudi)	80,814	68,132	82,484	62,851	35,080	47,373	60,604	15,714
Tendu patta (S.B.)	2,69,675	1,66,491	2,85,775	2,04,386	1,58,760	1,47,816	1,69,714	2,30,576
Bhabhar grass (t)	30	31	48	32	31	32	32	0
Revenue (INR Cr)	329.90	339.91	341.95	405.32	451.66	381.29	330.28	345.35

Source: UPFDC; http://www.upforestcorporation.co.in/production_sale_summary.aspx (Accessed on July 15, 2019).
SB: Standard Bag

- 1.6.21 Uttarakhand:** Till the creation as a separate state in November 2000 the activities of UPFDC were extended in Uttarakhand. After the creation of a separate state, Uttarakhand Forest Development Corporation (UKFDC) was established in 2001, and past activities have been continuing. The current turnover is about INR 300 Cr. The annual harvest of the timber is to the tune of 2,30,000 m³ contributing to about 75% commercial activity of the corporation. Eco-tourism has been taken as a new activity of the corporation. Year-wise details of the productions and sales of various products are shown in Table 1.6.21.1 and Table 1.6.21.2., respectively.

Table 1.6.21.1. Year-wise details of productions of UKFDC

Product	Year					
	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16*
Log (m ³)	2,01,913	2,40,412	2,21,868	2,05,318	2,67,615	3,36,090
Fire wood (m ³)	26,618	37,239	41,040	57,047	56,809	76,762
Root (m ³)	74,183	76,386	79,874	1,01,400	1,15,003	1,33,064
Bamboo (Kodi)	349	1,205	2,701	1,574	1,693	-
Bhabad grass (q)	2,906	605	230	310	20	10
Charcoal (m ³)	-	1,100	26	960	-	636

Product	Year					
	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16*
Chilka/ Gulia (m ³)	760	1,233	1,394	1,027	1,584	4,426
UK leaves (q)	-	129	48	337	3,300	1,854
Deodar chips	-	-	249	356	3	-
Bakkal (q)	-	-	-	553	301	320
Minor material (m ³)	76,83,142	1,10,44,700	56,26,807	1,23,94,168	75,45,672	71,44,423

Source: UKFDC; *Upto March 2016.

Table 1.6.21.2. Year-wise detail of sales (INR lakh) of UKFDC

Product	Year					
	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16*
Log	21,694.03	24,246.03	30,228.19	30,085.20	29,912.23	40,531.73
Fire wood	171.82	202.41	249.80	353.81	290.90	301.97
Root	553.71	554.11	775.55	897.86	794.48	968.95
Bamboo	0.14	0.08	11.88	3.78	0.25	0.14
Bhabad grass	3.79	0.39	0.14	0.18	0.01	0.01
Charcoal	5.33	4.73	6.44	7.00	6.23	1.20
Chunni/Bakhal	-	-	-	0.13	0.04	0.14
Chilka/ Gulia	100.66	145.09	168.11	190.16	252.19	288.30
Beth	-	-	-	-	4.96	7.58
UK leaves	-	0.07	0.02	-	1.90	1.06
Deodar chips	-	-	6.23	6.47	-	-
Minor material	8,296.07	11,959.26	8,191.63	27,646.28	18,308.02	30,897.48
Zari booty	206.32	314.92	274.91	200.58	368.28	636.19
Eco-tourism	2.41	0.97	5.82	3.74	0.63	3.06
Total	31,034.272	37,428.058	39,918.71	59,395.18	49,940.12	73,637.81

Source: UKFDC; *Upto March 2016.

- 1.6.22 West Bengal:** The West Bengal Forest Development Corporation came into existence in 1974 and has an annual turnover of around INR 100 Cr and net profit of about INR 5 Cr. The main activities of the corporation is harvesting and marketing of timber, poles, pulpwood and firewood on agency basis from all the territorial forest divisions of the state, to manage 40,000 ha of forest area on lease, running of four saw mills, treating and marketing of sawn timber, and market bio-fertilizers through a joint venture and collect, process and market *Sunderban* honey to the tune of 35-40 t annually. About 20,000 to 25,000 m³ round timber is sold every year. Citronella oil from Citronella grass of Java variety grown in the foot hills of North Bengal is also produced in the distilleries of the corporation.

1.7 AUTONOMOUS DISTRICT COUNCILS

Forest management in four states in the North East, namely, Assam, Meghalaya, Mizoram and Tripura, lies with the Autonomous District Councils (ADCs). Such forests are traditionally owned by the tribal communities and these areas fall in Schedule VI of the Indian Constitution. In Assam, Meghalaya and Mizoram there are three ADCs each, while in Tripura there is one ADC (Table 1.7.1).

Table 1.7.1. Forests managed by the ADCs

State	Name of the ADCs	Districts covered	Total Forest Area of the state (km ²)	Forest Area under ADC (km ²)	% Forest area under the ADC for the purpose of management
Assam	The North Cachar Hills	North Cachar	26,832	6,329	23.50
	The Karbi Anglong	Karbi Anglong			
	The Bodoland Territorial Areas	Kokrajhar, Chirang, Buxa, Udalgiri			
Meghalaya	The Khasi Hills	Khasi Hills	9,496	8,371	88.20
	The Jaintia Hills	Jaintia Hills			
	The Garo Hills	Garo Hills			
Mizoram	The Chakma	Lawngtlai	16,717	3,676	22.00
	The Lai				
	The Mara	Saiha			
Tripura	Tripura Tribal Areas District		6,294	Nil	0.00
Total			59,339	18,376	30.97

Source: Forest Sector Report India, 2010.

In Assam, the three ADCs are the North Cachar Hills, the Karbi Anglong and the Bodoland Territorial Area. The first two cover the district as named while the third one covers four districts, viz., Kokrajhar, Chirang, Buxa and Udalgiri. In Meghalaya, the provisions of the Schedule VI of the Indian Constitution extend to almost the entire state. The three ADCs in Meghalaya are Khasi, Jaintia and Garo Hills. The forest constitutes more than 75% of the total geographical area of the state. However, only 11.8% of the forests in the state is managed by the SFD. The three ADCs in Mizoram are the Chakma, the Mara and Lai.

Chakma and Lai ADCs span the Lawngtlai civil district, while the Mara ADC covers the Saiha district. 20% of the forests of the state fall under these ADCs.

The area in Meghalaya is loosely managed, while Mizoram consists of some good forests under the Mara and the Lai districts. In Tripura, no forest land is yet handed over to the ADC for management. Although, the total area under control of the Tripura Tribal Areas District ADC is 7,133 km², the forests are managed by the Tripura Forest Department. In all, around 31% of total forest area in these four states is managed by the ADCs with the maximum area in Meghalaya.



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