CHAPTER-II

BRIEF HISTORY OF COLONIAL FORESTRY IN INDIA
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Geographically, India is a land of tremendous diversity – from bare and snowy mountains in the North to tropical rain forests in the south, from arid desert in the west, to alluvial flood plain in the east. The culture of India has exhibited diverse modes of resource control, corresponding to different agro-climatic and vegetative zones.

Forests have been the traditional abode of man especially in India where the rishis and acharyas, the hermits and the monks have produced a forest culture by living along rivers and streams on the Himalayan heights. To the ancient Indians, therefore, a forest represented the mother and the queen – "Aranyani". It is under such a revered name that the forest history of India is heightened by an attempt to study British colonial rule, which marks an important watershed in the ecological history of India.

During the pre-colonial period, the economic condition of the so-called forest dwellers (those people whose existence depends on a
close and ecologically sustainable relationship with the forest) was uncertain. It would seem, however, that by and large, they enjoyed unlimited use of forests and wastes in their vicinity who directly depended on the forest habitat, in a multitude of ways.

It has often been mentioned, that the significance of colonial forestry was induced partly by its political superiority and availability of technologies of resource use, which were new to India. But what is well recognized is that a major imperative of colonial forestry was basically dictated by the commercial utility rather than the broader social or environmental consideration.

**Early Period of British Rule**

During the first few decades of its rule, the colonial policy in India was characterized by a total indifference towards the needs of forest conservancy. In fact, it was not until the middle of the nineteenth century, that the Raj witnessed a "fierce onslaught" on India's forest. (Stebbing, 1923:26) Indian teak, which turned out to be the most durable and most sought after for ship building, was used extensively for the Royal Navy in the Anglo-French wars of the early nineteenth century, and by merchant ships in the later period of maritime expansion. The teak forests of the Western Ghats were
devastated, as much of Western Europe had been deforested by the sixteenth century. This led to the first instance of forestry in the form of reservation of teak forests in Malabar in 1806.

**Introduction of Railways**

'It was a turning point in the history of Indian forestry when the railway network was introduced, in the last decades of the nineteenth century. This was in response to meet the needs of colonial trade after the mutiny and to enable the export and import of primary commodities and finished goods. In the fifty years between 1860 and 1910 railway track increased from 1349 kms. to 51,658 kms. (Government of India, 1964).

The expansion of railway network in India was a costly proposition as wooden sleepers had to be imported from Norway. This threw open a vast market for British manufactures and it provided a surplus British capital in seeking outlets abroad. There was wanton destruction of forests, especially during the early years of railway expansion and this led to an unprecedented assault on the more accessible forests just to meet the demands of railway sleepers. No provision was exercised over the felling operations and great chunks of forests were uselessly felled whose logs could not be
utilized. The worst hit areas were the sub-Himalayan forests of Garhwal and Kumaon where thousands of trees were not spared even to desolation.

'It was in this situation, that the colonial authorities were finally awakened to the fact that India's forests were not inexhaustible. Forest administration, which had so far suffered a "melancholy failure", was now accorded a subject of administrative importance. The Governor General, Lord Dalhousie, while utilizing the early attempts at forest conservation in 1862, observed, "the subject of forest conservancy is an important administrative question" (Jameson, Unpublished). The railways were built to facilitate both troop movement and trade. Finally, the need was felt to establish a separate department, which would ensure the sustained availability of the enormous requirements of the different railways for sleepers. As Gadgil and Guha point out, for the new Forest Department to function effectively, what was required was a legislation that curtailed the hitherto unrestricted access of rural communities to forest. Ten years after the British had first issued a memorandum that regulated the movement of forest dwellers within the forests of India, the Forest Act of 1865 was introduced. The Act empowered the Government to
appropriate any land covered with trees, however notification could only be effected, if existing rights of the individuals and communities were not impinged upon. This large-scale annexation of Indian forests by the Colonial State constituted a critical turning point, politically, socially and ecologically. Politically, because the monopolistic claim to the forests represented an unprecedented expansion of state power and intervention, with a correspondent curtailment of local communities' rights. Socially, in that traditional patterns of resource use were disrupted by the restrictions to local access, and ecologically, as the forests were undergoing a process of co-modification, which would transform their nature.

This major task of starting the Imperial Forest Department was then left to the expertise of German Foresters in 1864, as Britain itself had no tradition of managing forests for timber production. This assistance by the German foresters was accompanied by the need to curtail to the previously exercised unlimited rights of the users. It was indeed a difficult task to ensure an effective legislation that would not hurt or run contrary to the traditional rights of the villagers and tribal communities, nor go against the colonial policy in India. (Guha and Gadgil, 1988) While, by and large, the British followed a laissez-faire
policy that allowed the villagers to freely roam about in the forests and utilize its produce, there is also definite evidence from certain areas that "all land of every description was made even in absolute right to the community, subjects only to the yearly payment of rent fixed." (Superintendent Dehradun, to Commissioner, Meerut Division, dated: 22.5.1897, No.1997/iv a-244 of 1897) File No.244 List No.2 (UPRA)

The first comprehensive piece of legislation asserting state monopoly right over forest was through the Indian Forest Act of 1865, which was replaced 13 years later by the more stringent provisions of the Indian Forest Act of 1878. This is the first formal Act, which deals with the details of forest conservancy. The provisions of the 1878 Act were to serve as a model not only for India but for other British colonies as well, but, while some officials within the colonial administration were sharply critical of the new legislation, calling it an act going against the customary use of forest by normal people in India, their objections were swiftly over-ruled. Dietrich Brandis was appointed as the first Inspector General of Forests, and is regarded as laying the foundations of modern forestry; indeed, he is often paid tribute as the "Father of Indian Forestry".
Brandis was a botanist from Bonn University and Germany was considered as the leading European country in Forest Management of the time. One of the first tasks undertaken by the newly formed Forest Department was to survey and map the forests of India. 

According to the 1878 Forest Act, three types of forest were to be designated – Reserved, Protected and Village Reserved forests – were deemed the most commercially valuable and amenable to sustained exploitation. Overall state control of reserved forests was sought, which involved either the relinquishment or transferral of other claims and rights, although very occasionally, limited access was granted. Legally, channels to contest the reservation of forests existed, though rural communities had little experience with legal procedures, and illiterate villagers were often unaware that a survey and demarcation was in process. Protected forests were similarly state controlled, but some concessions were granted, conditional to the reservation of commercial tree species, when they became valuable. Protected forests could also be closed to fuel wood collection and grazing, whenever it was deemed necessary to do so. As timber demand for the empire increased, it was found that the state had limited control and therefore granted itself to be inadequate as a result
of which many protected forests were designated as reserved forests. The Act also provided for a third designation of forests in its constitution – Village forests – though according to Gadgil and Guha (1992), this was not exercised by the colonial government over most of India. The area of forest appropriated by the State in 1878 was 14,000 square miles, which had increased to 81,400 and 3,300 square miles for Reserved and Protected forests respectively, by 1900 (Stebbing, 1992).

The framework of the 1878 Act was designed basically to cater to the strategic imperial needs at that time – the supply of large timber for the railways. Some of the provisions of the Indian Forest Act 1878 ensured the following rights:

1. The state could be demarcated valuable tracts of forest needed especially for railways purposes.

2. Retain enough flexibility over the remaining extent of forestland to revise its policy from time to time.

3. Monopoly right was established by a legal sleight of hand, which sought to establish that the customary use of the forest by the villagers, based not on ‘right’ but on ‘privilege’ and that
‘privilege’ was exercised only at the mercy of the local rulers (the British were then the local rulers).

4. There were provisions for demarcation of ‘Reserved’ and ‘Unreserved’ forests with a list of reserved trees being drawn. Persons were to be notified to record their claims over land and forest produce in the proposed reserved and unreserved forests.

Consequences that followed after Enactment of the Indian Forest Act, 1878

The most immediate consequence of the Indian Forest Act of 1878 was visible in the discontented minds of the forest communities, who now totally lost control over their habitat. This evolved a sharp reaction from the forest communities who rose in popular revolts in an attempt to restore a ‘golden past’ where the tribal roamed freely in his forest habitat. What was even worse was the feeling of alienation that the forest dwellers felt towards their own home – the forest. This alienated feeling further intensified the gap and started weakening the link between man and forest. Commenting on the attitude of the villagers of Jaunsar Bawar towards the forest settlement, the Superintendent of Dehra Dun said: “Not altogether without reason, the villagers believe that any self-denial or trouble they may exercise
is preserving and improving their third class forests, will end in appropriation of the forests by the (forest) department as soon as they become commercially valuable”. (Sinha, 1988:40) The anthropologist Verrier Elwin too has talked about the melancholy effect forest renovation had on the tribals of Middle India, for whom nothing aroused more resentment against the government than the taking away of the forests they regarded as ‘their own property’. (Voelcker, 1897:14)

It was under such conditions of discontentment, that a series of results, conflicts and struggles manifested themselves and centred around the question of forests. To cite an example, even the “timid and submissive” Garos, a matrilineal tribal community of the North East of India, resented the British over-lordship and joined their brethren in a movement for its dereservation. After the government of Assam considered the question of forest reservation in Garo Hills in 1879, one Mr. Fisher was deputed with the rank of an Assistant Conservator of Forest, in 1881. His report based on an extensive tour of the Hills, formed the basis of forest conservancy. However, there were many cases filed by the Garos and one prominent Garo leader Sonaram Sangma was briefly imprisoned. Out of desperation, Sona
ram Sangma and about one lakh Garos addressed a memorial to Lord Minto, the Viceroy and Governor General of India, in February 9, 1906. They petitioned that their ancestors had enjoyed the privilege of living in the forests in the Garo Hills, made use of the forest products, sold them for their benefit besides cultivating and having rights of pasturage. With the passing of the Indian Forest Act VII of 1865 and 1878 and its subsequent enactments, they had been deprived of their age-old privilege and advantages without having been compensated in any way (Sinha, 1993:115).

The social unrests manifested in different tribal areas thus evoked a sharp reaction to forest administration. This brought a disparity between the revenue and law and order administration on the one hand and the forest department on the other. There also grew a sharp criticism about the exclusion of agrarian population from the benefits of forest management.

The colonial approach to forestry was then strengthened in 1894, on the advice of the German Agricultural Chemist Voelcker, who stressed the importance of good forest cover to avoid environmental degradation that might otherwise impact upon taxable agricultural output. The legislation generated from this advice became
known as the 'Voelcker Resolution' and followed the previous designations of forests as Reserved, Protected, Village plus another, Private; Commercial production of timber was the main policy thrust, but some concessions to the ecological function of forest were also tacitly acknowledged. This act consequently served as a model for forest policies in other colonies.

Criticizing the objectives of the Forest Department, Dr. J.A. Voelcker, an Agricultural Chemist stated in his report *Improvement of Indian Agriculture*, 1893:

"The forest department's objects were in no sense agricultural, and its success was gauged mainly by fiscal consideration; the department was to be revenue paying one. Indeed, we may go so far as to say that its interests were opposed to agriculture, and its intent was rather to exclude agriculture than to admit it to participate in its benefits."

The forest department was criticized for not serving the interests of the rural population in general and agrarian population in particular. Dr. Voelcker, while stating an alternative solution to this, advocated the creation of "Fuel and Fodder Reserves". He justified this policy on the grounds that in the long run any "possible diminution" of forest revenue may be attended by increased revenue to the state from cultivated land.
Thus, it was clear that the organization of a Forest Department might have been desirable from a financial and agricultural points of view but it did promote a great amount of irritation in various parts of India. The Indian Forest Act, 1878 came to be identified as the general law relating to forest in British India, though it suffered from ambiguity in its provisions up to 1947, the administration of forest “estate” of British India was centred around strategic imperial interests. During the period of railway expansion, India’s forests proved to be important strategic raw materials in the imperial scheme of things. The impact of the Second World War was more severely felt on the Indian forests. Timber and bamboo were supplied for construction of bridges, piers, wharves, buildings, huts and lines and ships. (Sinha, 1994:59) India’s forests were being requisitioned for imperial causes. Nevertheless, the Forest Department generated an adequate source of revenue to justify its existence and effects were made to find markets for the rich and multiple species of India’s tropical forests. This was made possible by the requirements of urban centres for fuel wood, furniture, building materials, etc., while supply was facilitated by the improved communications the railway network brought about ecological, economic and political watershed in Indian
The British rulers were reluctant to limit the individual rights over forests and they sought to restrict only those rights, which were inconsistent with the material (imperial) interests. The British Forest Policy was based on the communication that the claims of forest preservation and so, commercial interest at the cost of the forest dwellers were the sole objective.

**The Indian Forest Act 1927**

The conditions that led to the framing of the Indian Forest Act of 1927 were clear. The earlier Act of 1878 was identified as facing operational problems and it was ambiguous in its provisions. Thus, it was replaced by the enactment of the Indian Forest Act 1927, which incorporated all the major provisions of the earlier Acts. Accordingly, this Act repealed the Indian Forest Act VII, 1878, the Indian Forest Act V, 1901, the Indian Forest (Amendment) Act XV, the Indian Forest Amendment Act, 1918, and the Devolution Act XXXVIII, 1920. This was the legal provision till independent India came out with her forest policy in 1952, which was replaced by another one after three decades.*

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*Individuals were expected to file their claims on forestland and forest produce before the Forest Settlement Officer (FSO), who was to enquire into these claims. Rights in respect of which no claims were preferred were to be extinguished unless the individual claiming them satisfied the Forest Settlement Officer.*
The Indian Forest Act, 1927, was a very comprehensive Act including all earlier amendments and major provisions of the Acts enacted before 1927. Among the major provisions of the Act, the most prominent ones were as follows:

1. The Forest Act, 1927, omitted wrongful arrests as granted by the previous Act of 1865 and 1878.

2. The subject of community rights over forest was dropped by the 1927 Act.

In this Act 1927, important terms about forest are defined as follows:

*Forest-produce* means –

(a) The following whether found in or brought from a forest or not, that is to say: timber, charcoal, cautchouc, catechu, wood-oil, resin, natural varnish, lac, mahua-flowers, mahua-seeds, kuthand myrabolams, and

(b) The following when found in or brought from a forest, that is to say:

1) Trees and leaves, flowers and fruits, and all other parts or produce not here in before mentioned of trees;
2) Plants not being trees (including grasses, creepers, reeds and moss), and all parts or produce of such plants;

3) Wild animals and skins, tusks, horns, bones, silk, cocoons, honey and wax and all other parts or produce of animals;

4) Peat, surface soil, rock and minerals (including limestone, laterite, mineral oils and all products of mines or quarries);

5) “River” includes any stream, canal, creek or other channels, natural or artificial;

6) “Timber” includes trees when they have fallen or have been felled, and all wood whether cut up or fashioned or hollowed out for any purpose or not; and

7) “Tree” includes palms, bamboos, stumps, brushwood and canes.

The Act also stated that the State Government may constitute any forest-land or waste-land which is the property of the Government or which the government has proprietary rights, or to the whole or any
part of the forest-produce of which the Government is entitled, a
reserved forest in the manner hereinafter provided.

**Forest Administration in British Assam**

Assam, known in ancient lore as Kamarupa, has been an ideal
meeting ground of diverse races. The trends of civilization and
distinct cultures are still evident in this ancient state, whose history
goes back to the puranic days. Assam was the home of the Ahoms,
during the 13th century that was responsible for the change in the
course of its history. Later Assam passed into the hands of the
Burmese and with the Treaty of Yandaboo in 1826; the Burmese
vacated Assam leaving the British in possession. The Assamese in the
plains maligned as the opium eating indolent community by the
British were proud of their wet paddy cultivation, history, culture,
language and destiny (Sinha, 1994:46).

The physiography of Assam is dominated by the mighty
Brahmaputra river, the mythological son of the greater Brahma.
Rainfall in the region is one of the highest in the world and the state
experiences floods and droughts. Analyzing certain popular views
pertaining to heavy rain and humidity in the region, it was
figuratively said, "If you leave your walking stick after your evening
walk outside your house in the open, it will turn into a plant next morning” (Sinha, 1994: 47). This popular opinion leads one to examine the forest wealth of the region that has a strong ecological history.

Forest conservancy as a subject that faced many anomalies in India and Assam in the year 1870 forms a typical example. It was the very nature of civil administration and the varying condition of forests in the region that set such irregularities in forest conservancy. Assam was then not an independent province and a commissioner under the orders of the Governor of Bengal governed it.

The first completely published memorandum of the forests of Assam was included in the Resolution of the Government of Bengal on the 1869-70 report, dated 12th December 1870. However, the first mention made on the subject of conserving the forests was in the year 1850. In a report to the commissioner, the collector of Kamrup suggested that a tax should be levied on all timbers felled instead of allowing the timber contractors to fell where they pleased. Most of the wood carried from Bengal and had now made their appearance in Kamrup, in search of valuable species of trees such as sal timber, sal forests. As such, it was felt that a check should be established on the
felling of young trees of valuable species in order to prevent waste and ensure the regeneration of the forests. The proposal was that the income derived from such taxes would reach a sum of Rs.500 to Rs.600 annually although the tax was a small one of Rs.15 per 100 logs on the approval of the Commissioner and Deputy Governor of Bengal the new tax system was approved but it did not survive long. In the year 1852, the Board of Revenue abolished this system and a new policy system was introduced, which supported the cause of the farmers. This new policy was more common in other provinces of India where the farmers were left at liberty to weaken the forests they pleased provided they proved themselves to be the highest bidders for a period of five years.

The conservancy matters related to the new policy included certain orders that were the steps in the right direction, for example, in 1863, the Commissioner recommended that the fiscal officers should protect the forests from spoliations and prevent the felling of small trees of certain noted species. Another name was the preservation the Nambor Forest and the deputation of Forest officers.

It was in the year 1868 that a new revenue system was introduced under which the Mouzadars (small tahsildars) were given
the charge of forest and their protection. The appointment of an Assistant Conservator of Forests Mr. Gustav Mann who was specially deputed for preparing a general map of all the forests in the lower provinces of Bengal was another important step. This inspection commenced at the Sunkosh Rivers, the western boundary of the Province north of the Brahmaputra and was carried out during the years 1868-69 and 1869-70, the results being recorded in the Annual Forest Administration Reports of Bengal for these years.

In what was supposed to be an adequate protection to the forests or realizing the proper revenue from them, the 1868 Revenue System too proved a failure. The First Annual Progress Report of Assam, prepared by the Assistant Conservator, Mr. Gustav Mann in 1874-75 projected certain loopholes in the Revenue System. Most of the valuable sal forests were being felled, forests were devastated and it was the Mouzadars who were making a lucrative business out of it. Over and above this, two saw mills Deehing and Dibrugarh, were working in the forests and the Mouzadars who were actually supposed to be the guardians for the government’s interest, were themselves supplying timber to the saw mills. The advent of the tea industry also proved to be a great cause of threat to the forests of
Assam as large areas of natural forestlands were deforested for cultivation of tea. This also posed a real problem to the forest department as to which classes of forestland might be sold or leased out for tea industry.

Under this backdrop, the forest conservancy slowly dawned over Assam when government examined selection, classification of Assam forest. The Reports of the Assistant Conservator, Mr. Gustav Mann noted that the forest areas of Assam reached the 7800 square miles mark, including vast areas of jhum cultivation in tribal belts, such as Garo Hills and also excluded grassland areas with scattered trees over them.

**Forest Operations in Assam after June 1873**

In June 1873, Mann submitted to the Commissioner a memorandum of proposed forest operations in Assam. At the same time, Schlich, Conservator of Forests, Bengal and Assam was touring in Assam and the Commissioner asked the Conservator if he would give him the benefit of his advice on the memorandum. Schlich compiled with the suggestion and drew up a memorandum embodying his views regarding forest operations in Assam, dated 10th July 1873. This memorandum is of high interest, since it displays the
position from which the whole matter was regarded by the
Commissioner and the Conservator.

The forestry proposals for Assam under Schlich briefly
suggested the following records:

(1) To bring the total up to an area of 700 square miles, the rest of
the forest areas being left entirely open, only sal, rubber and
soom (Machilus odd ratissima) being declared reserved trees.

(2) Another question of importance at this time was the formation
of plantations and the methods of collecting and protecting
rubber or casutchouc.

(3) Schlich also records that the first step towards forest
conservancy in Assam was the reservation of the Nambor
Forest in the Sibsagar and Naga Hills Districts during the time
when colonel Jenkins was Commissioner of Assam.

(4) Experimental plantations were carried out on teak that was
planted in several established stations. Experimental
plantations had been established adjacent to the Kulsi River
(July 1872) where it leaves the Khasi Hills, and at Makoom, on
the Deehing River. However, Schlich was never enthusiastic
about the success of teak and the Makoom plantation was
already a failure. Schlich thought that the cold dampness of
Upper Assam was possibly against the growth of teak.

(5) Schlich was not very optimistic to the possibilities of Assam
forests from the revenue point of view since he felt that Assam
was provided with much more timber and wood than was likely
to be required for local use. However, there were good
prospects for conserving and extending the pine forests of
Upper Khasi Hills. He also considered that an export trade in
timber from Assam was impossible because very little labour is
available and in the process, the expenditure in exporting the
timber is too high in proportion to its value. The Commissioner
agreed to this.

(6) Schlich was particularly interested in the rubber question,
which was one of the most troublesome subjects with regard to
forests in Assam. The high commercial value of this article had
led to ruining the trees by over tapping and smuggling without
any supervision. Thus, Schlich was of the view of levying
revenue on rubber by imposing an export duty, leaving a
collection free. It was also proposed to create a Government
Monopoly which apparently proved to be the Commissioner’s own idea.

(7) On the subject of labour supply, Schlich’s memorandum was in favour of paying the current rate to every coolie (local labour) who came and by giving them perfect liberty to go again when they liked, a policy which was adopted by Mr. Aylmer, the then forest officer in lower Assam.

(8) The other question, which Schlich considered, was in connection with the Soom (Machilus odoratissuria) forests and the silkworm industry. Schlich did not consider that the Revenue Department should interfere because the out turn of silk product comes from the forest and therefore it should be credited as forest revenue. To this, the Commissioner took the strongest objection stating that as the Revenue Authorities had created the industry they should benefit by the results of their labours.

In consideration of the 1874-75-forest report, a few cases were settled with regard to the forests of Cachar, which was then transferred to Assam. Accordingly, the first Annual Administrative forest report for Assam was drawn up for the year 1874-75 and the
Chief Commissioner sanctioned the following five forest divisions for the province – (1) Goalpara, (2) Guwahati, (3) Tezpur, (4) Golaghat, (5) Cachar.

(1) Goalpara – The Goalpara Division comprised of the Government open forest in the Eastern Division of the Goalpara district, covering an area of 422 square miles, out which, about 80 square miles were sal forests.

(2) Guwahati – The Gauhati Division comprised of the Forest Reserves in the Kamrup District and the western half of the Nowgong District all of which, were sal forests.

(3) Tezpur – The Tezpur Divion comprised Forest Reserves in the Darrang District covering an area of 179.59 square miles, out of which, only 1 square mile was sal forest, all the rest being mixed lower hill and mixed plain forests. This area included the Nowduar Reserves and the Charduar rubber plantation.

(4) Golaghat – Golaghat comprised of the Nambor Reserve of 389.25 square miles in the Sibsagar and Naga Hills District and the Mikir Hills Reserve of 65 square miles in the eastern half of the Nowgong District.
(5) Cachar – The Cachar Division comprised an area of 825 square miles in the Cachar District and 273 square miles in the Sylhet District which it had been proposed to declare reserves under Act VII of 1865 to be managed by the Divisional Forest Officer.

Thus the post colonial period was characterized by a change in forestry regulations, which led to the widespread expansion of forest industries in consonance with the greatly expanded nature of industrial development since independence. Another interesting feature was that much of the history of Indian forestry has been strength of evolution of system of intervention in the processes of natural generation to upgrade the value of forests for the Raj.

Post Colonial Forestry in India

With the attainment of independence, India adopted a Centrally Planned Economy model of development. Five Year plans were launched that set out priority areas in each sector. Thrust areas in forestry were often found to reflect the dominant theme of the general plan, thus the First Five Year Plan to be implemented after Independence was mostly concerned with food security (not long after the severe famines in east India), while the Second and Third Five Year Plans reflected a drive towards industrialization.
Considerable administrative and legislative changes were accompanied by an intense drive to industrialise under Nehru. Such fundamental changes impacted upon the forests of India. There were many factors that contributed to the acceleration of forest loss and deforestation in the newly independent state. New legislations were introduced which altered land tenure systems notably the Zamindari (landlord) Abolition Acts, provided an incentive for large-scale felling of trees on land that was to be nationalized. The intensity of deforestation increased particularly in cases where the ex-zamindars were ready to fell the trees “to make a quick buck” thereby leading to commercial exploitation of forests. Forest was also a casualty as a result of the people and politicians. Between the 1950’s and 1970’s millions of hectares were leased out to industries at heavily subsidized rates and were able to continue with unsustainable silvicultural practices subject to generous contributions to the politicians offers, who would then influence the Forest Department to turn a blind-eye (Gadgil and Guha, 1992). In this way, contractors were able to over-fall their allotted coupes to maximize profits, with little redress. There was a sharp increase in production of industrial and fuel wood leading to the rapid growth of forest industries. The
paper industry, for example, recorded an increase from 98,800 tonnes in 1948 to over one million tones in 1978 (Guha, 1983: 18). Communication network was spread out even to the far-flung isolated forest areas and all-weather roads and major highways were built to facilitate increased extraction. All these changes brought forward a call to the Forest Department to discard its earlier "conservative approach" in favour of a more "dynamic" one. Such a dynamic approach towards production forest laid emphasis on large-scale plantations of quick growing, high yielding tree species, which would give a boost to the economy of the country. This could be clearly visible in the 1961 massive programme, which represented a significant departure from earlier forest management practices.

Concurrent with the drive for a wood-based industry was the growing awareness that dwindling natural forests would have to be supplemented with biomass specially produced for industrial consumption. The thrust of the Second and Third Plans, therefore, were concerned with the production of fast growing species, such as eucalyptus and plantations which consequently sprang up, often over the clear fell of the less productive indigenous forests. By 1980, over 2.2 million hectares of plantations had been grown (CSE, 1982).
Newly independent India, was experiencing an acceleration of forest loss, and appeared increasingly unable to provide for rural, subsistence needs. That rural needs were actually relegated in order to meet the needs for industry, indeed as a matter of policy, is illustrated in the National Forest Policy of 1952, which stated:

“Village communities in the neighbourhood of forest will naturally make greater use of its products for the satisfaction of their domestic and agricultural needs. Such use, however, should in no event be permitted at the cost of national interest. The accident of a village being situated close to a forest does not prejudice the right of the country as a whole to receive the benefits of a national asset” and:

“Restrictions should be imposed in the interests not only of the existing generation but also of posterity.” (Kumar, 1992: 63).

The post colonial period saw the continued control over management of forests and utilization of resources by the administrators, which was an imprint of its colonial post. This is evident from the first forest policy of 1952, which affirms the claim
that the policy shares with its predecessor some important features, one of which is the state monopoly right at the expense of the forest communities. (It is understood that first colonial forestry today is still characterized by the passive acceptance of colonial norms especially with regard to the use and management of forests.) Closer home still existing dichotomy between District Council and State Government in terms of management of forests presents a sorry state of affairs. Added to this is the superior attitude of national laws and policies, which did not seem to cater to the problems of the tribes.

The Forest Policy of 1952

After India attained independence in 1947, the need for a new forest policy was felt. Thus, to incorporate the changed conditions, the Board of Forestry, Government of India, formulated a national forest policy in consultation with the State governments. A resolution No.13-1/52F was adopted and India’s new National Forest Policy was evolved and declared on 12th May 1952. (The new Forest Policy of 1952 recognized the protective functions of the forest and aimed at maintaining one-third of India’s land area under forest.) The following guiding principles were laid down at the VI Conference of FAO in 1951:
(a) Each country should determine and set aside areas to be dedicated to forests, whether at present forested or not;

(b) Each country should apply the best practicable techniques in seeking to derive the maximum benefits available from the protective, productive and accessory values of its forests.

(c) Adequate knowledge of all aspects of forest resources and forest management, including consumption and utilization of forest product is indispensable.

(d) Public consciousness of forest values should be developed by all means.

**Forest Conservation Act 1980**

This Act was again not subservient to the needs of the tribes, though it aimed at changing the existent commercialisation of forest. The tribes still felt the need of an Act that would secure their rights over the forests. The Forest Conservation Act 1980 provided for:

1) The strict restriction of wanton destruction of forests for developmental purposes by the State Governments.

2) Tribes were restricted from changing the forestland or any section of land for agriculture or other productive purposes.
The Forest Conservation Act 1980 was further amended in 1988 with a view to:

1. Imposing a ban on the conferment of forestland or any portion to an individual agency or corporation not owned, managed or controlled by the government.

2. The plantation of tea, coffee, spices, rubber, plants, oil-bearing plants, horticultural crops or medical plants on forestland was prohibited on grounds that they constitute non-forest activity.

**Forest Conservation Act (1988)**

The Forest Conservation Act 1988 was a continuation of the earlier Act, which basically created the exclusion of tribes from forest. The Act of 1988 barred the leasing out of forestland or any portion of the forest to any individual agency or corporation not owned, managed or controlled by the government. There was also a prohibition towards the plantation of horticultural crops or medicinal plants and tea, coffee, spices, rubber plants etc., as they constitute non-forest activity. It appears that the forest Act 1988 was clearly in contrast to the interest of tribals who are a part and parcel of the forest and dependent on forest economy.
National Forest Policy (December, 1988)

For the first time in the history of forest legislation, this Act focussed its attention on increasing the forest cover in the country through effective means like afforestation programmes and social forestry. Tribal rights and customary practices in relation to forest were protected by this Act realizing the inseparable link between timber and forests. On whose the forest policy of 1988 has tried to uphold the tribal needs and at the same time maintain the ecological balance and meet the economic needs of the villagers residing in the forest area.

Forest legislation has today come a long way ever since the British showed their first interest in forestry, which was undoubtedly dictated by imperialist consideration. The overall needs of the rural communities in general and tribals in particular have not actually taken centre stage in all these legislations and the goals of forestry legislations both in the colonial and post-colonial period have not been realized.

Forestry under the Five-Year Plans

In March 1950, the Government of India set up a Planning Commission to prepare a plan for the most effective and balanced
utilization of the country’s resources. The Planning Commission has since been functioning as the kingpin of national development.

The various five-year plans have laid emphasis on accelerating the speed of forestry development and creating fresh avenues for its expansion. The works carried out under various plans are:

The first Five-Year Plan (1951-56) was launched at a time when the two world wars had drawn upon heavily on the forest resources. Major river valley projects, industrial development defence and other projects vital for the development of the country also relied heavily upon forests and forest areas. Thus the first plan encompassed all these aspects while taking into account the further development of forests and forestry. Under this plan, emphasis was laid upon the following points:

1) Ensuring that the production of both fuelwood and fodder is maintained to meet the growing needs of the people.

2) Attaining a maximum sustained yield of timer for railways, defence, industries and the common man.

3) Rehabilitation of forests, which had been over exploited in the two world wars.

4) To raise plantation for industries.
During the period of Second Plan (1956-61), emphasis was laid on the survey, demarcation and rehabilitation of forest degraded areas and development of the degraded forests. Priorities were also given to prevention of soil erosion, forest plantation and increase of timber yield for railways, defence and industries.

During the Third and the Fourth Plan period, special attention was paid on increasing production of timbers through plantation of fast growing species particularly for the pulp and paper industries. The Third Plan also saw the introduction of the Indian Forest Service in 1966 with a view to providing better and effective technical supervision in forest conservation and development activities all over India. An important event that took place during the Fourth Plan was to appoint the National Commission on Agriculture in 1970, which presented its report in 1976. The Commission recommended launching of massive social forestry programme in order to meet the growing requirement of timber, fodder and fuelwood to the community. Social forestry schemes were, thus, extended all over India through foreign aids like the World Bank, Swedish International Development Authority, the U.S. Agency for international development etc.
During the **Fifth Plan period** the Government of India took a significant step by inclusion of Social Forestry programmes in the “20-Point Programme for Economic Development”. Forest was also included in the concurrent list with a view to giving special attention under the supervision of the Central Government. Till date forest like agriculture was a subject of State Government.

**The Sixth Plan** saw the replacement of the outdated Colonial Act of 1927 with new and drastic legislation called Forest Conservation Act, 1980 which prohibited de-reservation of forests and diversion of forestland to non-forest use without prior concurrence of the Central Government. As a result of the Act diversion of forestlands that reduced forest cover was drastically stopped.

The slogan – “Forest for Survival” was the theme of the Seventh Five-Year Plan. It aimed at preserving biological diversity, increasing the forest cover with massive afforestation programme and constituting large-scale biospheric reserves. The creation of National Wasteland Development Board in 1985 was another significant step in this direction of reclaiming wastelands and greening the country.
Towards the beginning of the Eighth Plan, the Government of India adopted a National Forest Policy in 1988 with a view to give a new direction and vision to country’s forest development. The policy envisaged the need for creating massive people’s movement through active involvement of village communities living close to the forest, in protection and development of forest. Pursuant to this policy, the Government of India issued notification to all state governments to involve local communities in the management and protection of forests. This has led to the development of Joint Forest Management (JFM) programmes and a new drive with the help of various NGOs for creating people’s awareness on protection of environment. Other areas identified by the National Policy are:

1) Non-regularisation of encroachments.

2) Deploying improved modern forest management practices to deal with forest fires.

3) Increase in forest extension activities.

4) Emphasis on forest education and research activities.

The National Forest Policy 1988 aims at having a minimum of one-third of Geographic area of the country under forest cover and enjoin two-thirds of the area under forest in all hill areas.
Forest Cover Information for the Country

Forest cover includes all lands more than 1 ha area having tree canopy density of 10 per cent and above. The basic data for forest cover is obtained from the remote sensing satellite whose sensor captures reflectance of sun light from the tree canopy in multiple bands. In such data, with present technique and skills, no distinction with respect to the trees species has been attempted. Thus all species of trees (including bamboos, fruits or palms etc.) and all types of lands (forest, private, community or institutional) satisfying the basic criteria of canopy density of more than 10 per cent have been delineated as forest cover while interpreting satellite data.

According to the 2001 FSR Report of forest cover in the country, the total forest cover is 675,538 km and this constitutes 20.55 per cent of the geographic area of the country. Of this, 416,809 km or 12.68 per cent is dense forest cover while 258,729 km is open forest cover. The non – forest includes scrub estimated to cover an area of 47,318 km.
### Table 2.2: Forest cover in the country

<table>
<thead>
<tr>
<th>Class</th>
<th>Area (km²)</th>
<th>Percent of Geographic Area</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Forest Cover</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a) Dense</td>
<td>416,809</td>
<td>12.68</td>
</tr>
<tr>
<td>b) Open</td>
<td>258,729</td>
<td>7.87</td>
</tr>
<tr>
<td>Total Forest Cover *</td>
<td>675,538</td>
<td>20.55</td>
</tr>
<tr>
<td><strong>Non-forest</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scrub</td>
<td>47,318</td>
<td>1.44</td>
</tr>
<tr>
<td>Total Non-forest **</td>
<td>2,611,725</td>
<td>79.45</td>
</tr>
<tr>
<td>Total Geographic Area</td>
<td>3,287,263</td>
<td>100.00</td>
</tr>
</tbody>
</table>

* Includes 4,482 km² under mangroves (0.14 % of country’s geographic area)
** Includes Scrub

![Pie Chart: Forest Cover in the country]

**PIE CHART: Forest Cover in the country**

There are three important analysis that can be analyzed with regard to forest cover in the country, namely, (1) forest cover in the hill districts of the country, (2) forest cover in the tribal districts of the
country, and (3) distribution of forest cover within and outside recorded forest areas.

These have been discussed in detail as follows:

1. Forest Cover in Hill Districts

The National Forest Policy (1988), aims at having a minimum of one third of geographic area of the country under forest and tree cover and enjoins maintaining two third of the area in hills under forest cover in order to prevent erosion and land degradation and also to ensure maintenance of ecological balance and environmental stability. It is therefore felt desirable to know the extent of forest cover in the hill districts in the country.

According to the Planning Commission, the classification of hill states, hill districts and talukas is based on the criterion of an area having an elevation of more than 500 meters above mean sea level. In accordance to this, there are 123 districts in the country that can be classified as hill districts. The total forest cover in the hill area of the country is 271,326 km constituting 38.34 per cent of the geographic area, against the goal of 66 per cent as laid down in the National Forest Policy 1988. Out of total 123 hill districts, only 51 districts have forest cover more than 66 per cent. Of the rest, 33 hill districts
have forest cover less than 66 per cent but more than 33 per cent and the remaining 39 districts have even less than 33 per cent forest cover.

2. Forest Cover in Tribal Districts

Importance of forests in tribal economy is well known, as they are a source of subsistence and livelihood for the tribal communities. Out of a total of 593 districts in the country, 187 districts have been identified as tribal districts. The total forest cover in these tribal districts is 404,087 km., which constitutes 59.8 per cent of the total forest cover of the country. The following table shows the distribution of forest cover in the tribal districts of the country.

### TABLE 2.3
State / UT wise forest cover in Tribal Districts

<table>
<thead>
<tr>
<th>State / UT</th>
<th>No. of Tribal Districts</th>
<th>Geographic area in Tribal District</th>
<th>Forest Cover</th>
<th>Percent Forests Cover</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Dense</td>
<td>Open</td>
</tr>
<tr>
<td>Andhra Pradesh</td>
<td>8</td>
<td>87,090</td>
<td>17,062</td>
<td>8,339</td>
</tr>
<tr>
<td>Arunachal Pradesh</td>
<td>13</td>
<td>83,743</td>
<td>53,932</td>
<td>14,113</td>
</tr>
<tr>
<td>Assam</td>
<td>16</td>
<td>50,137</td>
<td>7,233</td>
<td>5,073</td>
</tr>
<tr>
<td>Chhattisgarh</td>
<td>9</td>
<td>90,134</td>
<td>27,852</td>
<td>13,322</td>
</tr>
<tr>
<td>Gujarat</td>
<td>8</td>
<td>48,650</td>
<td>5,085</td>
<td>2,486</td>
</tr>
<tr>
<td>Himachal Pradesh</td>
<td>3</td>
<td>26,764</td>
<td>2,120</td>
<td>1,023</td>
</tr>
<tr>
<td>Jharkhand</td>
<td>8</td>
<td>44,413</td>
<td>7,826</td>
<td>5,803</td>
</tr>
<tr>
<td>Karnataka</td>
<td>5</td>
<td>26,597</td>
<td>10,009</td>
<td>2,419</td>
</tr>
<tr>
<td>Kerala</td>
<td>9</td>
<td>27,228</td>
<td>9,274</td>
<td>3,042</td>
</tr>
<tr>
<td>Madhya Pradesh</td>
<td>18</td>
<td>139,448</td>
<td>27,883</td>
<td>13,935</td>
</tr>
<tr>
<td>Maharashtra</td>
<td>11</td>
<td>138,272</td>
<td>18,656</td>
<td>10,126</td>
</tr>
<tr>
<td>Manipur</td>
<td>9</td>
<td>22,327</td>
<td>5,710</td>
<td>11,217</td>
</tr>
</tbody>
</table>

Forest Cover
<table>
<thead>
<tr>
<th>State</th>
<th>No. of Tribal Districts</th>
<th>Dense</th>
<th>Open</th>
<th>Total</th>
<th>Percent Forests Cover</th>
</tr>
</thead>
<tbody>
<tr>
<td>Meghalaya</td>
<td>7</td>
<td>22,429</td>
<td>5,681</td>
<td>9,903</td>
<td>15,584</td>
</tr>
<tr>
<td>Mizoram</td>
<td>8</td>
<td>21,081</td>
<td>8,936</td>
<td>8,558</td>
<td>17,494</td>
</tr>
<tr>
<td>Nagaland</td>
<td>8</td>
<td>16,579</td>
<td>5,393</td>
<td>7,952</td>
<td>13,345</td>
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<tr>
<td>Orrisa</td>
<td>12</td>
<td>86,124</td>
<td>19,008</td>
<td>13,832</td>
<td>32,840</td>
</tr>
<tr>
<td>Rajastan</td>
<td>5</td>
<td>38,218</td>
<td>2,343</td>
<td>3,709</td>
<td>6,052</td>
</tr>
<tr>
<td>Sikkim</td>
<td>4</td>
<td>7,096</td>
<td>2,391</td>
<td>802</td>
<td>3,193</td>
</tr>
<tr>
<td>Tamil Nadu</td>
<td>6</td>
<td>30,720</td>
<td>3,198</td>
<td>2,807</td>
<td>6,005</td>
</tr>
<tr>
<td>Tripura</td>
<td>3</td>
<td>10,486</td>
<td>3,502</td>
<td>3,563</td>
<td>7,065</td>
</tr>
<tr>
<td>Uttar Pradesh</td>
<td>1</td>
<td>7,680</td>
<td>1,113</td>
<td>350</td>
<td>1,463</td>
</tr>
<tr>
<td>West Bengal</td>
<td>11</td>
<td>69,403</td>
<td>6,108</td>
<td>4,220</td>
<td>10,328</td>
</tr>
<tr>
<td>Andaman &amp; Nicobar</td>
<td>2</td>
<td>8,249</td>
<td>6,593</td>
<td>337</td>
<td>6,930</td>
</tr>
<tr>
<td>Dadra &amp; Nagar Haveli</td>
<td>1</td>
<td>491</td>
<td>151</td>
<td>68</td>
<td>219</td>
</tr>
<tr>
<td>Daman &amp; Diu</td>
<td>1</td>
<td>72</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Lakshdweep</td>
<td>1</td>
<td>32</td>
<td>27</td>
<td>0</td>
<td>27</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>187</strong></td>
<td><strong>1,103,463</strong></td>
<td><strong>257,048</strong></td>
<td><strong>147,039</strong></td>
<td><strong>404,087</strong></td>
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