

The Changing Forest Management and Utilisation Patterns in Manipur: A Historical Analysis

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ABSTRACT The problem of rapidly dwindling forest resources is one of the most contentious issues of recent times. The negative effect of deforestation is well perceived, but there is little convergence of opinions on the possible causes that varies in time and space. Although there have been studies on the historical process of deforestation in India, little information is available from the North-eastern states of India. The present paper examines the historical process of changes in forest management and utilisation patterns *vis-à-vis* changes in socio-political, population, subsistence system, infrastructure, etc. in Manipur, one of the North-eastern states of India.

INTRODUCTION

It used to be believed that we could run out of non-renewable resources - things like oil, or gold. Yet these, it seems, are the ones we need worry least about. It is the renewables - resources like forests, fisheries, wildlife and crops the ones we thought would last for ever - that are being destroyed at an alarming rate (Harrison, 1993). It is estimated that in India only about 10 per cent (1.6 m.sq. km) of the original extent of tropical forest area are remaining (Myers, 1995). The remaining forests are now being destroyed at a progressively rapid rate. In 1989 an estimated 4,300 sq. km of tropical forest was lost at the rate of 2.6 per cent (Myers, 1995). According to FAO (1990) estimates, India lost 132,000 ha of forest in 1990. However, the recent forest survey report shows slightly different but encouraging trend (GOI, 1993). The comparison of forest cover in the country in 1991 and 1993 shows a marginal increase in the net forest cover to the extent of 22 sq. km. But the trend is not similar in all the regions, for instance in the case of North-eastern region there has been a decrease in forest cover from 1991 to 1993.

Today, the problem of rapidly dwindling forest resources has become one of the most contentious issues of recent times. But, there is a wide variation of opinions in relation to the causes of deforestation. This is partly because deforestation is a complex and dynamic process. It is now, however, clear that only when we understand more fully the complex causes can we formulate coherent policy to prevent destruction of these resources (Brown and Pearce, 1995). Understanding of this complex causes would require recognition that the source problem is an amalgamation of both forestry (like logging, ranching, forest policy, etc.) and non-forestry (like population growth, maldistribution of subsistence agriculture, inadequate rural infrastructure, and lack of government attention to subsistence agriculture), which generally originate in lands far away from the forest (Myers, 1995).

The prevailing scenario in India is very confusing simply because India is amongst the most ecologically and culturally heterogeneous countries in the world. Its endowments range from tropical rain forest of Andamans to the cold desert of Ladakh, from lush paddy fields of Kerala to the sand dunes of Jaisalmar. Its culture is equally diverse with its multitudes of religions and creeds, tribes, caste and folk traditions. Similarly, different regions have different historical, socio-cultural, political and economic background. These differences seemed to have played a significant role in the management and utilisation patterns of forest. For instance, the long socio-political and physical isolation of the North-eastern states of India had prevented overexploitation of the forest in the region, till very recent times.

There are studies on the historical process of change on forest management and utilisation patterns in India (Guha, 1983, 1991; Gadgil and

Guha, 1992), but there is little information available from the North-eastern states. The present study is an attempt to unravel the historical process of change and current patterns of forest management and utilisation patterns *vis-à-vis* changes in socio-political condition, population, subsistence systems and infrastructure in Manipur, one of the North-eastern states of India.

THE SETTING

Manipur is one of the North-eastern states of India, lying between 23° 4" to 25° 50" North latitude and 93° to 94° 47" East longitude (Fig. 1) covering an area of 22,327 sq.km. The state is bordered by Myanmar (Burma) on the eastern side, Nagaland on the northern side, Assam on the western side and Mizoram on the southern side. The state is a land-locked area situated in the middle of the mountain ranges separating the plains of India and Myanmar, and falls on the catchment area of two river systems, the Brahmaputra and the Irrawaddi. The topographical features consist of young parallel folded hill ranges of the eastern Himalayas running into North-South direction with altitudes varying from 850 to 3000 metres above the mean sea level (MSL), covering about 91 per cent of the total land area and a saucer like valley with a thick alluvium deposits at the centre, covering about 9 per cent of the total land area at an altitude of 850 metres above the MSL.

The state is under the spell of sub-tropical-monsoon climate. The rainfall in the state is very high and is well distributed throughout the year (Ansari, 1985). The annual rainfall ranges between 1100 mm to 3500 mm. However, there is great variation between the hill and the valley. The hill area normally receives much higher rainfall than the plain/valley area. There is also variation in soil types between the valley and the hills. The valley soil is mostly clay to clayey loam. Soil in the valley is transported and therefore contains high proportion of clay and is generally composed of clays, sands, silts, etc. of fluvio-lacustrine origin and ferruginous red soil in the foot hill region. On the other hand, the hill areas have only a thin layer of soil. Red soil is predominant in hills but at places laterite soil is also found.

The unique topographical condition of the state seemed to have had tremendous influence on the colonisation process, spatial distribution of population, and socio-cultural, political and economic development in the state. The state, especially the tribal areas, had had little socio-cultural and physical contacts with other states and neighbouring countries till the beginning of 19th century (Roy, 1973; Laiba, 1988). Today, the hills are the abode of 29 Mongoloid tribes belonging to two larger groups, the Nagas and the Kukis, sharing about 30 per cent of the total population. The valley which covers only about 9 per cent of the total land area is mostly inhabited by the Meiteis who constitute about 65 per cent of the total population. The rest 5 per cent of the population is composed of Nepalis, Sikhs, Bengalis, Biharis, Marwaris, etc.

FORESTS OF MANIPUR

The difference in geomorphological structure between the eastern and the western ranges (Disang and Barail series, respectively) plays an important role in distribution of vegetation. The eastern ranges come under *tropical moist deciduous*, *sub-tropical pine* and *tropical dry deciduous* forest types, whereas the western ranges are mostly under *tropical wet evergreen* type (Champion and Seth, 1968) (Fig. 2). The forest of Manipur has the distinction of having a wide range of forest types in comparatively a small geographical area (FRSD, 1991). Besides, these forests are home for wide range of flora and fauna. This belt (Manipur and other North-eastern states) acted as a barrier as well as a bridge between the Himalayan ranges and the Chinese, which have closely related floras (Puri et al., 1990). The forest of Manipur thus have plants found from the Himalayas to Malaya, on the one hand, and Chinese on the other (Ward, 1952). Based on climatic, edaphic and biotic factors, the Pre-investment Survey of Forest Resources (GOI, 1976) classifies the forest of Manipur into six types: (1) wet temperate forest, (2) pine forest, (3) wet hill forest; (4) semi-evergreen forest; (5) teak ganjar forest; and (6) bamboo forest. Some others have broadly divides it into four different zones (Laiba, 1988): (1) The *Burma border forest* (mainly of teak and oak), (2) *Ukhrul forest* (mainly of pine, mixed with oak and chestnut),

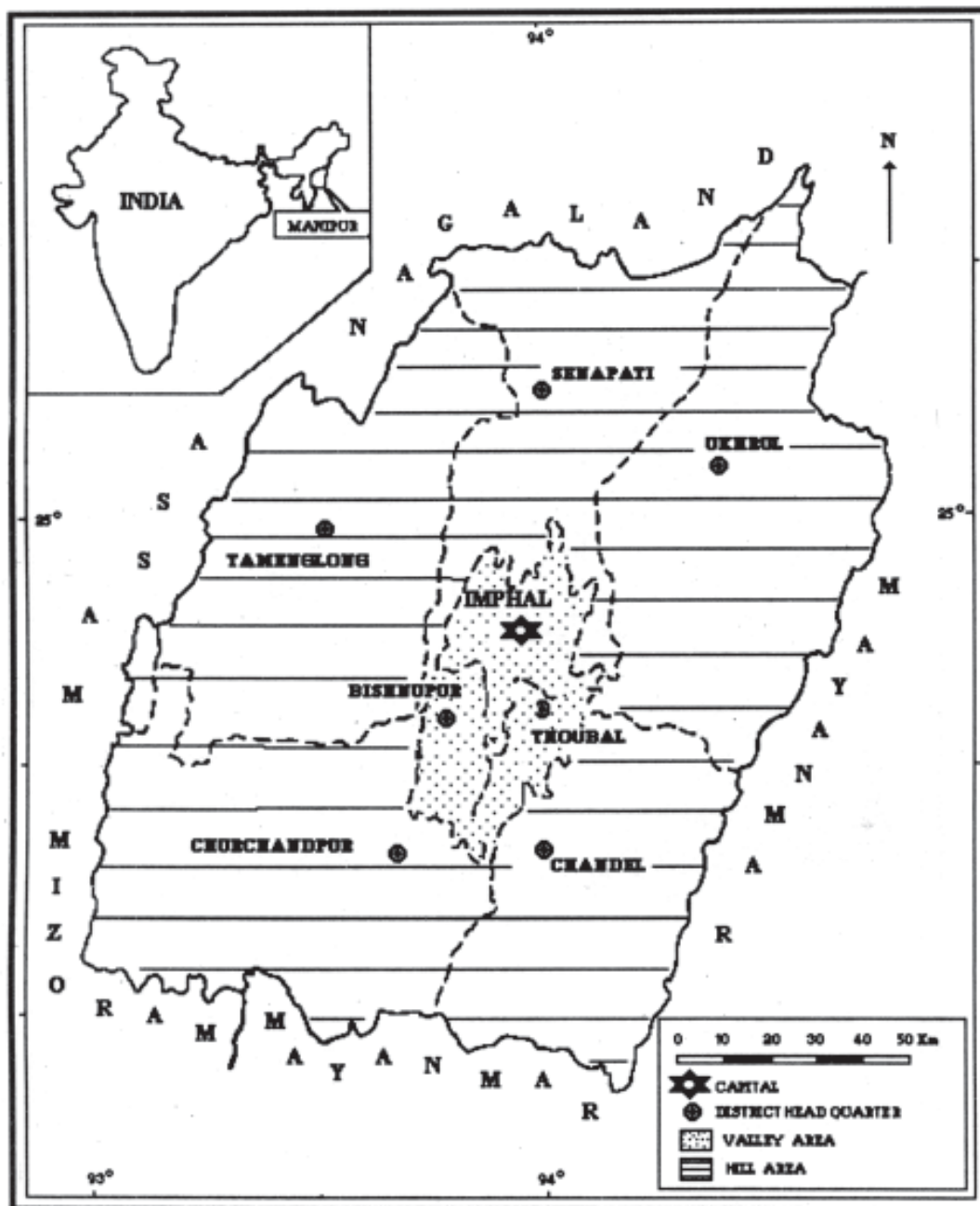


Fig. 1. Geographical map of Manipur state

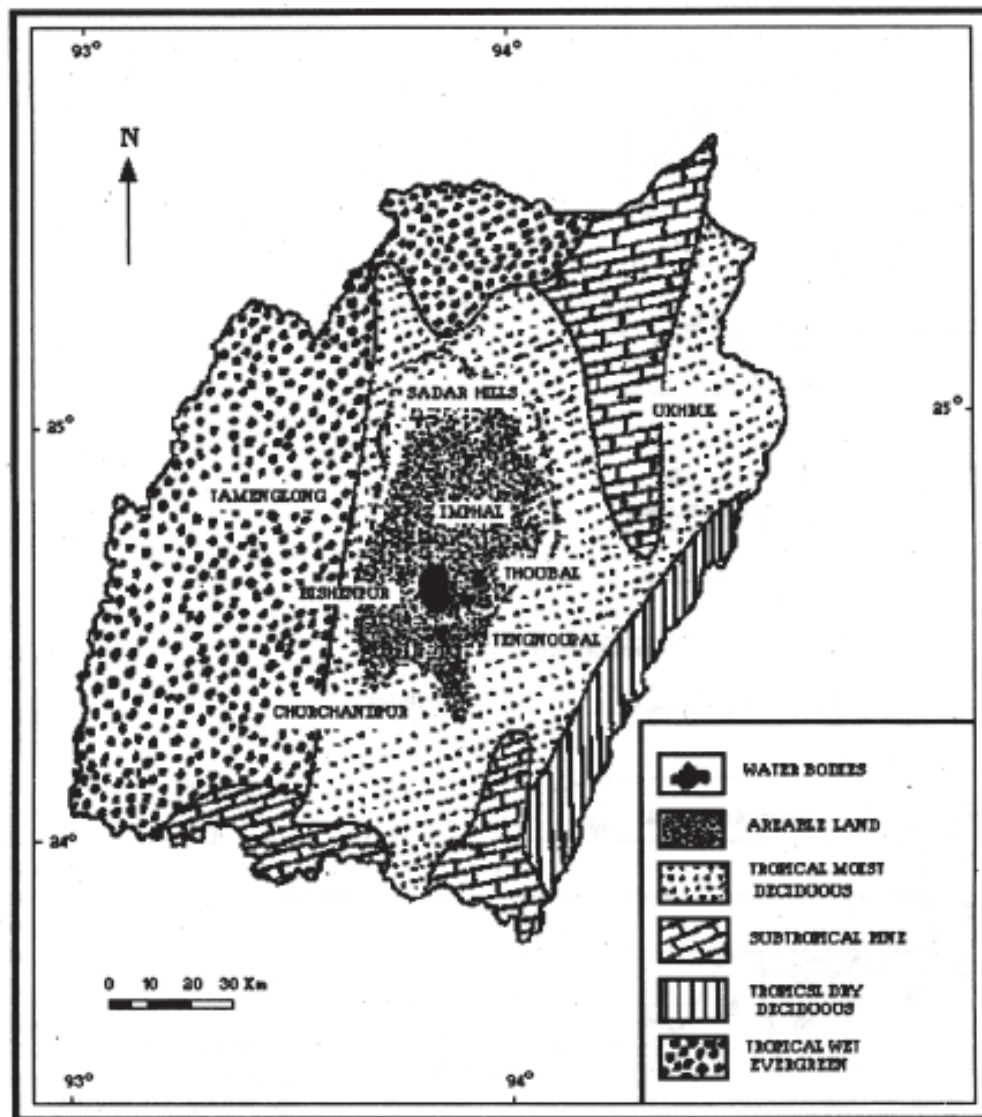


Fig. 2. Map depicting different forest types found in Manipur state

(3) *Forest overlooking the valley* (oak, pine, chestnut, etc.), and (4) *Jiri-Barak drainage forest* (bamboo and cane).

During the last few decades there has been indiscriminate exploitation of forest resources leading to large scale deforestation in the state. According to the latest Land Use Survey Report, 67.32 per cent of total land area is under forest cover, but 95 per cent of the reported forest area is classified as degraded forest or scrub land. Besides, 22 per cent of total land area is under shifting cultivation (DST, 1990). The Forest Survey Report of 1993 also shows similar trend but of different magnitude. Out of the total forest cover of 17621 sq. km, only 5307 sq. km comes under dense forest and the remaining as open forest (GOI, 1993).

THE HISTORICAL PROCESS OF CHANGE

The historical process of change in Manipur can broadly be categorised into three stages: (i) Pre-British contact period (before 1825, A.D.); (ii) British contact period or pre-independence period (1825-1947, A.D.); and (iii) Post-independence period.

Pre-British Period (before 1825 AD)

Socio-political Condition

This period was characterised by perpetual warfare among the different tribal groups/or villages and frequent subjugation by the Meiteis. Very often the valley had also been devastated by the Burmese and, at times, lasting for several years of occupation, leading to complete depopulation of the valley. During this period of continuous Burmese invasion (1750 - 1825, A.D.), the first phase of the Kuki immigrants seemed to have entered the southern parts of the state. It is believed that one of the main reasons for letting the Kukis settled in this region was to check or disrupt the marauding Burmese (Roy, 1973).

During this period, a village was the epitome of all socio-political organisation for all the tribal groups in the state. Each tribal village was ruled by a hereditary chief, who had proprietary rights over all available resources in the village. However, all villagers had complete freedom in utilisation of all available resources, except for those which are prohibited by their social customs. The

chief was also one among equals in terms of resource accessibility and utilisation. The chief was assisted by a council of elders/or ministers in the village administration. Most of the tribal groups, especially the Nagas, were under the political control of Meitei King. The migratory Kukis were not under the full control of the valley and there was no interference whatsoever from the valley in their village administration.

Since contacts with other groups were very minimal, each tribal group/village remained as an independent socio-political unit, followed its own traditional political, socio-cultural and belief systems. The tribals were all animists. They believed on a supreme God who created the whole universe, and also worshipped several other deities. To appease such spirits they performed annual offerings or ceremonies to hill peaks, large streams, large rocks, certain trees and animals, some patches of forest, etc. which are believed to be the abode of such spirits. Those places or objects which are considered as sacred were never touched or hunted.

Population

No population data exists for this period. However, considering the unstable political scenario and frequent wars with neighbouring states/countries and tribes, besides the incessant warfare and practice of head-hunting amongst the tribes, the population density in the state should have been very low. As mentioned earlier, the valley area had also been repeatedly invaded and occupied by the Burmese for years sometimes carrying away large number of people (Manipuris) as war captives. The longest of such Burmese devastation and occupation took place in 1817, lasting for seven years. Most of the valley people fled to the neighbouring state of Assam or retired in the hills, leading to complete depopulation of the area. Capt. Pemberton, just after the expulsion of Burmese force from Manipur, estimated the total population in the valley as around 20,000 souls only (Pemberton, 1835). Little is known about the population of tribals in the hill area, but it was expected to be very small in number. The colonisation of the southern hill tracts had just begun by small tribal bands of the Kuki group. The sparse distribution of villages was also an indication of very small population.

Subsistence System

All the tribal groups were self-reliant and self-sufficient during this period, drawing all their requirements from the immediate surroundings. They were all shifting cultivators, supplemented by hunting and gathering from the surrounding forest. However, some of the Naga tribes (like Lohhoopas, Marams, and Marings) in the eastern and northern parts of the state seemed to have been practising terrace cultivation for a long time (Pemberton, 1835). On the other hand, the Kukis were migratory. They moved from place to place in search of new shifting fields or because of incessant warfare (Gangte, 1993). There was no generation of surplus in agricultural or forest products. A household only produced what was required for itself, and if there was any surplus that was shared or given to the needy fellows. For instance, there was an elaborate socially sanctioned system of sharing of a game in all the tribal groups.

Communication, Interaction and Exchange of Resources

There was little interaction among the tribals, between the valley and hill areas, and with other surrounding countries. As discussed earlier, one of the most important reasons for long isolation was the hostile and unstable political condition in the state. Each of the groups always used to keep maximum distance from the nearest village to avoid regular contacts. At the time of selection of village sites in the hills, they always looked for the most isolated place, far away from any settlement site. In fear of subjugation by the valley people, the tribals always avoided settling in the nearby surroundings of valley, till very recent time. There was very little exchange of materials and information between the valley people and the hill tribes, as well as among the tribals.

The other important factor for long isolation was lack of transport system, both in the hills as well as in the valley. Although there were instances of having early trade routes passing through the state (Singh, 1975a), it was only after the arrival of British that transport system in the state got improved. During this period the state remained completely isolated with no communication system except for a few small bridle roads (Fig. 3) connecting Assam and Burma

(Sharma, 1989). Because of the treacherous terrain and hostile inhabitants found along the route, these routes had hardly been used except for occasional marching of troops by the British. Therefore, no trade relation and exchange of materials with other surrounding states seemed to have existed during this period. The exchange of materials within the state (between hill and valley) was also limited to small amounts of chilli, ginger, cotton, elephant tusk, *agor* (*aquillaria agquatocha*), etc. from the hill areas and metals, clothings, salts, etc. from the valley area.

Forest Condition and Utilisation Pattern

As mentioned earlier, the hill forest of Manipur has been the home of various tribal groups and these tribals have had exclusive control over these forests. In most of the areas, except for some Naga villages, the village chief had proprietary rights over all available resources. However, this ownership system did not have any influence on utilisation patterns and accessibility to forest resources for the other households in the village. The general utilisation patterns of forest was guided by their social norms and customary practices, which were strictly regulated by a council of elders or ministers. More than one third of total forest area was kept aside as sacred patches or other reserves. Every village used to have a tract of primeval forest surrounding the settlement site to protect from wild and jhum fire. Collection of timber, fuelwood and other non timber forest produce, except for fruits and nuts, were not allowed from such protected places. Locally these patches are known as Gamkhap, and are analogous to Sacred Groves forest in many parts of India (Gadgil and Vartak, 1975; Gokhale et al., 1997; Malhotra et al., 1997).

The valley area was completely devoid of any forest since a long period of time. However, the surrounding hill ranges were fully covered by almost unbroken mass of magnificent primeval forest and luxuriant vegetation from bottom to top. But the immediate mountain sides overlooking the valley in the western range and that portion of the eastern face which fronts the valley has, on the contrary, been almost entirely cleared of forest and was annually cultivated by the Nagas, who reside upon it (Pemberton, 1835). During this period forest in the hills remained untouched except for local utilisation like clearance

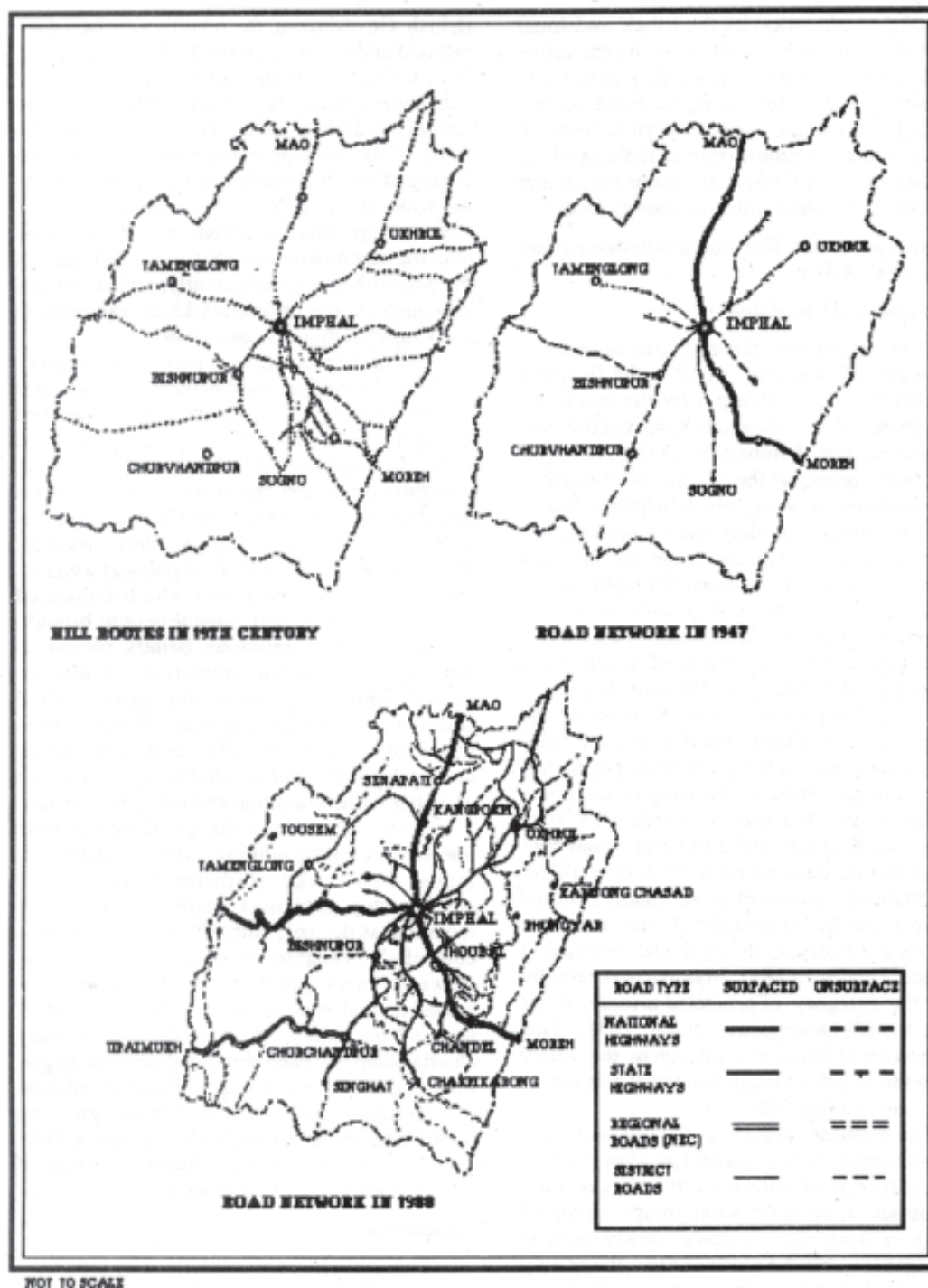


Fig. 3. Development of road system in Manipur since early 19th century

for shifting cultivation by the tribals and small extraction of timber and fuelwood by the valley people from the nearby surrounding hills. Capt. Pemberton (1835) after seeing the luxuriant forest condition and utilisation pattern of forest in the state wrote, "I know no spot in India, in which the products of the forest are more varied and magnificent but their utility is entirely local."

British contact or Pre-independence period (1825-1947 A.D.)

Socio-political Condition

This period was the most crucial phase in the history of Manipur. In 1826 the Burmese were driven out of Manipur by the combined force of the Meitei (Manipur) King and the British Government (Pemberton, 1835). It culminated into signing of the "Treaty of Yandabo" with the Burmese king, which helped to finally draw a territorial boundary line between the two countries and also put an end to the age old threat of Burmese invasion. This was the beginning of establishment of relationship with the British government. Afterwards, in order to ameliorate the existing relationship, two more treaties were further signed in 1833-34. The British government agreed to give the line of the Jiri river and the western bend of the Barak river on the boundary and, in return, the King conceded the Kabaw valley to Burma. Besides, the King agreed not to interfere in any business transactions between Assam and Manipur, and also build a road connecting the two states (Brown, 1873; Dun, 1886). Thus, stability in the valley was finally restored and those who had migrated to Assam and other areas during Burmese invasion also returned to the state. Finally, in 1891, Manipur was brought under the category of protected princely states of the British Government (GOI, 1891). This stabilisation of political condition in the valley had had tremendous impact on tribal population in the surrounding hills.

The political situation in the hill area however remained unchanged till late 19th century. Intertribal or inter village warfare was still not uncommon. Most of the Kuki groups continued to migrate from place to place, slowly pushing the Nagas towards the northern side. It was only in the later half of the 19th century, with the introduction of firearms and astute support from the

British Government, the rebellious tribals were brought under some control by the Meitei King. In order to have proper administrative control over these tribals, they were settled in a fixed territory and a new house tax was introduced in 1910. These new developments coupled with raising of the first world war labour force led to the Kuki uprising of 1917-19 (Bhadra, 1975). After this uprising the British Government took over the administration of hill areas on behalf of the Meitei King. Consequently, sub-divisional headquarters were opened at Ukhrul, Tamenglong and Churachandpur (Singh, 1986).

For the tribals, the later part of 19th century was also the turning point in their socio-cultural history. The Christian missionaries also arrived during this time and slowly brought them (tribals) under the common fold of Christianity. Along with this conversion, the missionaries also introduced modern education and health care practices in the area (Gangte, 1975). All these developments coupled with changes in political scenario, and opening of new roads which enhanced greater interaction with outside people brought changes in their religious beliefs, socio-cultural practices, outlook, subsistence system, resource sharing and ownership patterns, food habits, etc. People from interior villages started migrating towards the valley and surrounding areas, which they had avoided for ages, in search of better living condition and job opportunities.

In spite of all these changes there was little interference in the administration of tribal villages, hence the traditional system of chieftainship remained unaffected. The chief remained as the sole authority and continued to control all available resources in the village. However, in most of the tribal groups who have settled in and around sub-divisional headquarters and the valley, the system of hereditary chieftainship had been abrogated since the beginning of this century. Along with this dissolution of hereditary chieftainship, rapidly growing population and increasing value of land and forest resources, the private ownership system of land and forest resources emerged in these areas.

Population

This period was characterised by continuation of the Kuki immigration in the southern side, slow movement of the tribals towards the northern

side till early period of this century, a gradual population growth since the beginning of this century and outmigration of tribals from interior villages to the towns and surroundings of the valley.

With the stabilisation of political situation and socio-cultural change, there was a sudden population growth in the state. As shown in table 1, the estimated total population around 1860 was about 139,000 souls (Brown, 1873) of which tribal population in the hills was 74,000 souls, much higher than the valley population of 65,000 souls. This was, perhaps, due to large scale outmigration of valley people to Assam and other neighbouring states during Burmese invasions in the beginning of 18th century. The first census was conducted in 1881 and the total population was 221,070 souls of which 135,000 belong to the valley (Meiteis) and the hill tribes had a population of about 85,288 souls (Dun, 1886). This stupendous increase of valley population might have been because of the returning of outmigrants from the neighbouring states/countries. But, there was very nominal increase in tribal population during this period. In 1901 the total population in the state was 284,465 souls and estimated tribal population was around 100,000 souls. In 1931 the total tribal population was estimated to be 154,804 souls, accounting for 34.74 per cent of the total population of the state. However, the estimated total tribal population in 1941 is found to be marginally less (152,885 souls) than the previous census.

Table 1: Decennial total and scheduled tribe population growth in Manipur state

Period	Total population		Decennial population growth rate	
	Total	ST*	Total	ST
1860	139000	74000	**	**
1881	221070	**	**	**
1901	234465	100000	**	**
1931	445606	154804	**	**
1941	512069	152805	14.92	-1.29
1951	577635	194239	12.80	27.11
1961	780037	249049	35.04	28.21
1971	1072750	234466	37.53	34.29
1981	1420453	387977	32.46	15.99
1991	1837149	**	29.46	**

*ST = Schedule Tribe ** information not available
Source: Brown, 1873; Singh, 1986; Census, 1951, 1981, 1991

The two successive world wars might have had some influence on the slow growth of population during the early quarter of the present century. After the settlement of hill tribes and imposition of house tax in 1910, and mobilisation of labour force during first world war, a large number of the Kuki tribes seemed to have migrated out of the state (Singh, 1986). During the second world war, Manipur became the battle field of advancing Japanese troops supported by the Ajad Hind Fauj and the British Imperial forces (Roy, 1973) and this led to complete devastation of the valley and surrounding hills. Apart from these, since the opening of the state to outside people and increased interaction, several endemic diseases which were unknown to the state seemed to have raged the region taking a large toll (McCulloch, 1859). All these catastrophes and the migratory habit of some of the tribals, especially the Kukis, might have contributed to stagnation of population growth and even decline of tribal population in the state (Singh, 1986). Further, the constitutional safeguards, restricting outsiders (non-Manipuris) settling in Manipur, prevented large scale immigration of population from outside.

Subsistence System

There was no substantial change in the subsistence system of the tribals except for those who have settled in and around sub-divisional headquarters and the valley area. Most of the tribals especially in the interior villages were still dependent on shifting cultivation, hunting and gathering with little commercialisation of agriculture. But, in the villages nearby towns and valleys, they have adopted settled/or terraced cultivation since early thirties. This has led to changes in occupational pattern among the tribals, especially those settled in towns or market areas. They have abandoned their traditional subsistence practice and taken up settled agriculture, different kinds of jobs and small scale trade and commerce. Thus, in the later stage of British rule, there was emergence of different subsistence systems among the tribal groups.

Communication, Interaction and Exchange of Resources

The British supremacy over the administration to some extent led to reorientation of economic

life in the state. As part of the Treaty of Yandabo (1833), the construction of roads were taken up in the hill areas for easier movement of laden animals, camels, carts, military troops, etc. (Sharma, 1989). In 1845 the Imphal-Cachar road was opened, and it became an excellent path for foot passengers and pack animals but was too narrow for wheeled carts. Sometime later, in 1881, the Imphal-Dimapur road was constructed and it became the main gate way for reaching Manipur (Singh, 1963). Several routes also linked up Manipur with Burma on the East. However, many of those ancient hill tracks seemed to have lost sight due to lack of traffic as well as repairing (Sharma, 1989).

Opening of more roads would have enhanced interaction and trade relation with other states. For example, opening of Dimapur road have facilitated the export of rice from Manipur (Hutchinson, 1909). However, transaction of other merchandise remained very minimal and confined only to some forest products (like wax, elephant tusk, *agor*, etc.), livestock and handloom products from the state while the main import items were betel nuts, brass and other metals (Singh, 1963). The major tribal centres were also connected by unmetalled roads to the valley. This improvement in communication must have augmented interaction of people and exchange of information and materials within the state. However, apart from these tribal centres and their immediate surroundings, other places remained completely isolated leaving little room for physical interaction and exchange of resources.

Forest Condition and Utilisation Patterns

The forest condition had remained unchanged till the domination of Manipur by the British in 1891. During this period of rule by the Meitei King, the forests of Manipur, except for the Jiri-Barak Drainage Forest, were controlled by a state officer under the direct control of the President, Manipur State Durbar (Singh, 1975b). In 1898, the management of *Jiri-Barak drainage forest* was entrusted to Assam forest Department (Singh, 1972). This led to a serious depletion of the forest resources in the area and gradually converted it into open grasslands dotted with scrub forests (Singh, 1992). In order to prevent indiscriminate felling of trees by the contractors,

"selection felling" system was initiated in 1914 (Singh, 1975b). Under this, the girth limit was fixed and the trees to be felled were marked. The minimum girth limit of a tree was fixed at 4' 6". But, the minimum girth limit varied depending upon the tree species. For instance, the minimum girth limit of *Nageshwar* tree was fixed at 5'. and for *Motidel* and *Sonara* tree was 4'. The safe girth limit for *evergreen* trees was fixed at 6'. However, the system failed miserably due to lack of skilled manpower and improper implementation (Singh, 1992). In 1927, the "Block-system" was introduced. Under this system, the forests of Manipur were demarcated into several blocks and a minimum block annual revenue was guaranteed for each block which was sold to contractors, year after year, by public auction. Since there was no strict vigilance, indiscriminate felling of trees followed, flouting all the then existing rules and regulations. The Forest Department of the Princely State of Manipur was created in 1931 and the whole forest came under the direct ownership of the State Forest Department (Singh, 1972). Till that time the Assam Forest Department had managed the forests of Manipur. However, the legal ownership and exploitation rights of these forests have not been well defined (Singh, 1992).

Around this time, public auction of all forest products at various toll stations of the valley had started in Manipur. At the same time, some statutory concessions were granted to hill villages in the form of village reserve (Durbar Resolution No 10-H of 20.7.32) (Rana, 1987). The resolution permitted formation of village reserve within the radius of a quarter of a mile around the village. Apart from these, several reserved and protected forest areas had also been created. Removal of trees and making of shifting fields inside the reserves and virgin forest were not allowed (GOM, 1990a). But, these regulations were not strictly enforced and the tribals continued to settle and practice shifting cultivation in the forest (Singh, 1992). Moreover, certain privileges like grazing, hunting, wet rice cultivation, wood rights, etc. inside the protected forest were also given to bonafide village settlers (GOM, 1990a). There was also "Monopoly right" over the forests of Manipur. It was given to the hill villagers to exploit forest products within the village reserves. According to the

Durbar Resolution No.16-RO-8-4-1926, apart from hill tribes, the central valley people were also allowed to cut/collect firewood free of cost from neighbouring hills for domestic consumption (Rana, 1987). For the remaining unclassified forest areas, the traditional system of management and ownership remained unabated.

Thus, a dual ownership system of forest emerged in Manipur: the State Forest Department who legally controls the whole forest land, and the tribals who practically control at the local level. This ambiguous ownership system might have encouraged indiscriminate exploitation of forest resources, as neither side had control over the functioning of the other side. The Forest Department with its meagre resources and manpower could have never monitored the utilisation of the vast forest area by the local inhabitants. At the same time, local tribals could never stop the Forest Department from harvesting of forest resources.

Little is known about the forest condition, especially after the onset of commercial exploitation i.e., after the domination of the state by the British. No quantitative information on the extent of forest cover and extraction of forest was available. However, condition of forest in the state seemed to have remained unchanged till the beginning of this century, except in those hill areas overlooking the valley and the *Jiri-Barak forest* bordering Assam (Brown, 1873; Dun, 1886). As discussed earlier, transport system in the state was not well developed during this period. Therefore, commercial exploitation was mostly confined to the *Jiri-barak drainage forest* and the forests lying in the immediate surroundings of the valley which were easily accessible. Besides, there was also conversion of forests to settled and terraced fields in the immediate surroundings of the valley in early forties. Apart from these areas, forest condition in the state remained unchanged. Since population density was very low in the hill areas, shifting cultivation would not have led to large scale degradation of forest (Hemam, 1998).

Post-Independence Period

Socio-political Condition

The historical process of change in Manipur

reached a full circle with the merger of the state to the Indian Union. In 1949, the state merger agreement was signed and Manipur became a Part-C state in 1950. This marks the beginning of a new era. Manipur became a Union Territory in 1963 and, subsequently, it was declared as a state in 1972.

The merger of Manipur to the Indian Union had brought tremendous changes in the socio-political condition of the tribals. After the merger, the Manipur (Courts) Act, 1955 was enacted and this made the Cr.P.C., I.P.C. and the Indian Evidence Act applicable to the tribal areas of Manipur. Later on, the Hill Area Act, 1955 was passed and Village Authorities with elected members were set up with the traditional village chief as the ex-officio chairman of the Village Authority. This replaced the traditional village council system. In 1971, the Autonomous (Hill Areas) District Council was formed to look after the administration, and welfare and development programs of the hill districts under the supervision of the District Collector. In spite of all these changes, the traditional institution of village chieftainship continued to play a dominant role among the tribals, especially in the isolated areas.

After independence, all the tribals were brought under the Scheduled category providing special privileges and facilities. For the general development of the tribals several development programs like transport and communication, education, health care, trade and commerce, small scale industries, modernisation of agriculture, etc. have been taken up by the Government through state five year plans. On the other hand, conversion to Christianity, increasing interaction with outsiders and changing socio-economic situation led to repudiation of traditional customs, beliefs, rituals and ceremonies, festivals, etc.

There were changes in resource management and ownership patterns in different areas depending upon its accessibility level. In the towns and nearby villages there was emergence of private ownership pattern. In these areas, the village chiefs, taking advantage of their hereditary position, started coercion of all available resources in the village. However, condition in the interior villages remains unchanged. All the villagers still have complete freedom in utilisation of

forest resources, and the ownership pattern remains the same.

Population

After the Indian independence there has been a rapid population growth in Manipur (Table 1). However, the growth of population has never been same among different ethnic groups. There has been a steep increase in decennial population growth rate among the tribals. As shown in table 2, the population growth rate has always been higher in the hill area since 1961. Out of five hill districts, only one is having below 3 per cent annual growth rate, and two of them are still showing upward trend of population growth. Although the hill area harbours only about 30 per cent of the total population, its contribution to the total surplus population during 1981-1991 was about 40 per cent.

average (Table 2). Besides, distribution of population in the hill areas is also very uneven. In all the hill districts, about 50 per cent of the total population in each district live in one subdivision, covering less than 20 per cent of the total area. This is mainly because of the migration of tribals from interior villages to the towns and the surrounding areas in search of better opportunities and living amenities. Therefore, population density in the other areas tend to be very low. Thus, the general distribution pattern of population in the hill area can be categorised into three zones: the town areas, where concentration of population is highest, the immediate surrounding areas of towns within a radius of 5-10 km, which are easily accessible and where population density is less than the towns, but still much higher than the remaining vast tract of mountains with very low population density.

Table 2: Decennial population growth and population density of Manipur state and Hill Area of Manipur

Year	State			Hill Area		
	Total	% of growth	Density	Total	% of growth	Density
1951	577,635	12.80	26	190,611	**	9
1961	780,037	35.04	35	252,431	32.43	12
1971	1,072,753	37.53	48	351,808	39.37	17
1981	1,420,963	32.46	64	491,876	39.81	24
1991	1,826,714	29.46	82	642,234	31.99	32

*Census 1951, 1981, 1991

**information not available

In the hill areas, because of the prohibitory orders of the Government, no person other than the tribals could own land permanently. This constitutional safeguard prevented large scale encroachment by outsiders. Therefore, the rapid increase of population in the hill areas can be attributed to natural accretion, except in the North district where large Nepali population has been settled. The gradual expansion of health care services and subsequent controlling of epidemics like malaria, cholera, small pox, etc. after Indian independence seem to have contributed to substantial reduction in mortality rate. This reduction in mortality without corresponding reduction in fertility appears to have been the major cause of rapid population growth in the state.

In spite of rapid population growth during the last few decades, population density in the hills remains very low in comparison to the state

Subsistence System

This is the phase in which major changes in subsistence system took place. In early 1950s, all the tribals were dependent on shifting cultivation except for those few who have settled in town and valley areas. During the last few decades, fallow cycle in the state has been declining very rapidly from 20 or more years to 3-5 years, due to rapid population growth and large scale commercial extraction of forest (GOI, 1983; GOM, 1990b; FRSD, 1991). This reduction of fallow cycle has led to a sharp decline in the productivity of shifting fields. Therefore, shifting cultivation which had sustained them for centuries could no longer provide enough food for the tribals. At the same time, development of road network led to extension of rapidly increasing demand from the valley. This trend of declining productivity of shifting fields and increasing demand for forest resources from outside,

coupled with changing lifestyles and need for ready cash led to increasing commercial exploitation of forest resources and plantation of commercial crops. However, majority of the tribals (around 60%), especially in the interior areas, are still dependent on shifting cultivation.

The changes in subsistence system which had started in the early period of the century have become more conspicuous. The tribals are currently found living with different modes of subsistence at different places, depending on the physical accessibility. There are tribals who still live in physically isolated villages with no direct road communication, solely dependent on shifting cultivation with very little commercialisation of forest or agricultural products. On the other extreme, there are town dwellers who are completely dependent on Government jobs, labour works, trade and commerce, small scale industries, etc. In between, there are some tribes settled in the surroundings of the valley and town areas, who have adopted settled/terrace cultivation and commercial plantation of crops.

Communication, Interaction and Exchange of Resources

The large scale expansion of transport network in the state started only after Indian independence. As shown in table 3, there has been a sudden growth of transport network since 1950. However, in the hill areas it was only after 1970 that a proper road network started connecting all the major tribal centres. Road density in the hill area remains very low (13.31 km/100 sq. km) when compared to 79.39 km/100 sq. km of the valley (DES, 1991). Till today, majority of the villages in the interior areas in the hills remain isolated, without any direct road connection (Sharma, 1989).

Table 3: Growth of transport network in Manipur state

	1956	1961	1971	1981	1990
Road length (km)	959.80	1705.40	2864.60	3222.10	4754.10

Source: DES 1983, 1989, 1991

This rapid expansion of transport network have given tremendous boost to interaction and exchange of materials with outside people. There is more and more influx of materials (food and non-food items) as well as greater outflow of

forest resources (timber, fuelwood, bamboo, wild vegetables, etc.) and agricultural/horticultural products (chilli, ginger, cholorocasia, banana and other fruits) from the tribal areas. This process of physical integration due to development of transport network, coupled with changes in other socio-cultural aspects led to rapid commercialisation of forest and agriculture in these areas during this period. As mentioned earlier, this rapid commercialisation and development of road network has brought about a tremendous change in the ownership and utilisation patterns of the forest.

Forest Condition and Utilisation Pattern

Legally the whole forest land belongs to the Forest Department of State Government. There are two types of forest according to their utilisation pattern: (i) the reserved and protected forest, and (ii) unclassified forest. The total reserved and protected forest area in the state is 1463 sq. km and 4171 sq. km, respectively (GOM, 1990b). These sites are maintained by the State Forest Department, and the local people are not allowed to use it. For the unclassified forests which accounts for almost 63 per cent of the total forest area, the local authorities or village chiefs remain the sole owners. With rapid expansion of communication network since Indian independence, many of the interior areas become accessible. This increase in accessibility led to extension of commercial exploitation of forest resources to interior areas. The attachment of economic value to forest resources led to coercion of land and forest resources by the village chiefs in the nearby or easily accessible villages, disrupting their traditional ownership and utilisation patterns. The villagers' traditional rights of free collection of timber, fuelwood and minor forest products for domestic use are no more in those commercialised tribal villages (Hemam et al., 1998). However, in the interior villages where there is no direct road connection and commercial pressure, traditional system of management and ownership still exists.

The noticeable changes in forest utilisation and ownership pattern in Manipur appeared only after 1950s. As discussed earlier, till 1970, there was no proper transport system in most of the hill areas, and majority of the interior villages are still not connected by motorable roads (Sharma,

1989). Exploitation of forest resources was therefore confined to easily accessible areas like surroundings of the valley, Jiri-Barak forest, and forest lying along the sides of national highways. Hence, large scale commercial exploitation of forest resources in the hills seemed to have started only after the construction of motorable roads in early 1970s. As reflected in the annual outturn records of forest products over the years, the annual outturn value of forest resources remained very low till 1970. But, there was a sudden spurt in the outturn value of forest products in 1975. Since then, there has been a rapid increase in the outturn of forest products (Fig. 4). A study in Manipur South district revealed that till the construction of Tipaimukh road in 1972, there was no deforestation in the district, except in the immediate vicinity of Churchandpur town (Hemam et al., 1998).

Since the inception of State Forest Department in 1935, several measures have been taken up for the proper protection and management of the forests like creation of reserved forests and protected forests. In fact, establishment of reserved and protected forests in the state had started from as early as 1914. Various development and conservation schemes like social for-

estry, jhum control measures, rural fuelwood plantation, road side plantation, economic plantation, rubber plantation, soil conservation, wild life conservation, etc. have also been launched. In spite of all these efforts of the state as well as the central government, deforestation in the state appears to be accelerating during the last few decades and the forest condition in the state has reached a critical stage of ecological degradation (FRSD, 1991).

CONCLUSION

It is apparent from the foregoing discussion that the changes in management and utilisation of forests is closely interlinked not only with population, forest policy and governance, infrastructure and economic condition but also with political condition, socio-cultural practices, ownership patterns and subsistence systems. The influence of these factors also vary in time and space. In the pre-British period, it was the socio-cultural and political systems which largely influenced the management and utilisation patterns of forest. There was no deforestation excepting in the valley area. Even the valley area was very thinly populated and frequently invaded by the Burmese leading to large scale migration to other

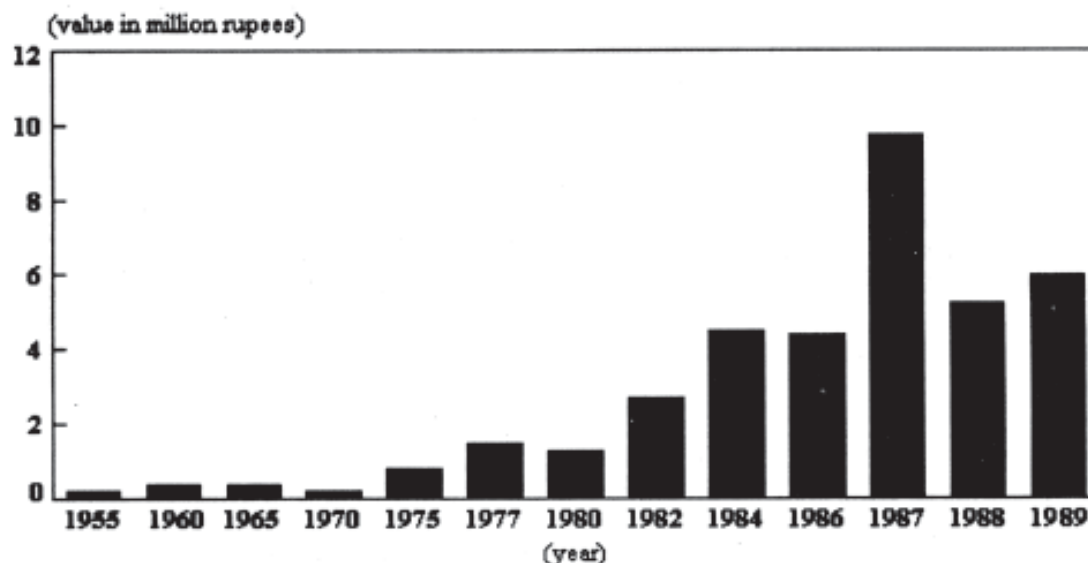


Fig. 4. Annual outturn of major forest products in Manipur (1955 to 1989) [Source: DES 1989]

neighbouring states. Because of very low population density, lack of infrastructure and market facility, low level of consumption the forests in the surrounding hills remained fully intact.

After the domination of the state by the British in late 19th century there was a sea of change among the tribals not only in political condition but also in belief system, cultural practices, outlook, etc. There was stabilisation of political turmoil with the subjugation of tribal warfare and settlement of tribal villages within a well defined boundary. With the spread of Christianity and education, their lifestyle and outlook also started changing. There was movement of tribals from interior areas to towns and valley areas in search of better living condition. At the same time, the forest lands have been taken away by the Forest Department of Manipur Government. But the tribals continued to enjoy usufruct right. This led to development of a dual ownership system. However, there was no large scale exploitation of forest in the state because of lack of infrastructure. The extraction of forest was confined only in the Barak valley which is easily accessible from Assam and the surroundings of central valley. Moreover, the protective policy of the British prevented encroachment of any outsider in the hills (tribal area); hence, the population density remains very low in the hills.

After independence, there was sudden increase in transport network, population and extension of various developmental programmes. The traditional system of village councils have been replaced by an elected body of village authority. However, there was no structural changes; the hereditary chief remains the head of the authority and the sole owner of all available resources. With the opening of the interior areas and increasing demand of forest products, the forest becomes a commodity. Subsequently, the village chiefs taking advantage of their hereditary positions started coercing all available resources. In easily accessible or commercialised areas villagers were no longer allowed to collect timber, fuelwood and other NTFPs freely. The traditional system of preserving sacred sites of trees were no longer maintained in commercialised villages. The maintenance of village reserve surrounding the forest settlement site is also gone in all those villages who have adopted settled agriculture.

The rapid increase in population, changing attitudes towards shifting cultivation, and reservation of forest areas as reserved or protected by the Government, large scale commercial logging have led to drastic reduction in fallow cycle from 20 or more years in the recent past to 3-5 years. This has also resulted to large scale degradation of forest in the state. Out of the reported 64 sq. km forest lost in the state in 1992-93, 28 sq. km is being attributed to shifting cultivation (GOI, 1993). The trend is higher the degree of accessibility greater the degree of deforestation and deviation from traditional management, sharing and utilisation of resources.

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