FOREST POLICY OF THE COLONIAL GOVERNMENT :

A CASE STUDY IN TWO DISTRICTS OF NORTH BENGAL

(1835-1919)

THESIS SUBMITTED FOR THE DEGREE OF DOCTOR OF PHILOSOPHY IN ARTS (HISTORY) OF THE UNIVERSITY OF NORTH BENGAL

MAY, 2004

BY

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I was in a hurry to finish this thesis; I am conscious about its weaknesses. The errors in fact and in judgment are, of course, my own.

Diganta Chakraborty.

INTRODUCTION

Natural forests run through and through with the human civilization. Early communities of hunters and fishermen regarded the natural forests in which they lived as a form of property, either private or owned in common, and were ready to fight intruders to defend their assumed rights. As civilization and agriculture developed, private ownership of tracts of woodland became established in most countries, often taking the form of feudal systems of forest exploitation. The typical pattern of forest management in medieval Europe, for example, was the ownership of large tracts of woodland by kings and barons. Many forests, however, were additionally subject to the rights of the peasants, in well-organized communes, to gather fuel, timber and litter for use on their own properties, and to pasture defined numbers of sheep, goats, and cattle on the forest wastes. Hunting rights were vested solely in the feudal lord, and he also held the sole right to fell and export timber, often to distant cities. Regulations or forest laws, were essential for this system to work in an orderly fashion, and these laws were initially aimed at protecting game and defining rights and responsibilities. Such rules, however, were evolved in Europe before the middle of the eleventh century. During this period forest and forest animals and birds were being destroyed at random. In due order Europe felt the necessity of protecting the forests as well as its living creatures. With this end in view William the Conqueror of England introduced series of laws after 1066 A. D. According to these laws penalties for infringements were severe, and peasants who slew deer illegally faced the death sentence.[1] These laws, however, were bitterly resented by the Anglo-Saxons for generations thereafter.

Timber gradually assumed economic importance as commerce developed and forests in Europe diminished through over-felling, over-grazing by livestock, and clearance for agriculture. In England, King Edward IV promulgated a law for the regeneration of cut over woodland by the exclusion of cattle as early as 1482. In France and Germany special laws for the protection and extension of the forests and the protection of agricultural lands by means of the forests had long been in operation and similar laws existed in the Italian states.[2] In Indian scenario economic importance of forests was known from earliest times. The forests were of great economic value to the Indo-Aryans of the Rig-Vedic age. In the first place, they served as natural pastures.[3] Secondly, they were utilized as burial places and probably also as cremation grounds. Thirdly, a hymn of the Rigveda[4] makes it apparent that certain classes of people used to live in the forest tracts. Lastly, they provided the householder with the materials for the construction of houses, chariots, sacrificial implements and the like. Above all, they were a constant source of fuel to the community.[5] It is no wonder, therefore, that the people regularly

prayed that the trees and the plants would be endowed with sweetness so that they might conduce to the benefit of the people --

"To us Herbs and Forest trees be gracious".[6]

Again,

"May herbs that grow on ground and Heaven
And Earth accordant with Forest-Sovrans and both the
World-halves round about protect us."[7]

Various hymns of Rigveda show that there was some form of social control over the forests. But the systematic management had its true beginnings in the German states during the sixteenth century.[8] It was prompted by the need of the landowners to maintain a steady personal income from timber exports, while at the same time ensuring the provision of firewood and timber for local use by their feudal tenants. The classic solution was the working plan, under which each forest property was divided into sections for timber felling and regeneration. The aim was to sustain a steady annual yield of produce-and therefore a regular annual income -- for all the foreseeable future. This called for accurate maps as well as assessments of the timber volume of standing timber crops, together with their expected rates of growth. Professional foresters had to be knowledgeable in geology, soil science and meteorology, as well as in botany, economics, and technical aspects of timber marketing, and their calling attracted able men with university training.

During the nineteenth century the reputation of German foresters stood so high that they were employed in most continental European countries, and also by the British in their vast Indian and colonial forests. Early American foresters, including the great conservation pioneer Gifford Pinchot, gained their training at European centres. But the doctrine of responsible control had to fight a hard battle against timber merchants who sought quick profits in the exploitation of natural forests without regard to their renewal. The twentieth century has seen the steady growth of national forest laws and policies designed to protect woodlands as enduring assets. The character of these laws and policies reflect "national political philosophies". In communist countries all forests are owned by the state. In the United States both the federal and State Governments have deemed it prudent to hold substantial areas of natural forest, and allows commercial companies and private individuals to own other areas outright. Similar patterns of ownership are found over most of Asia, Western Europe, and in the British Commonwealth.[9] In Japan the extensive forests are largely state owned. Incidentally, India as a British colony formed a state owned Forest policy but initially allowed the existence of private ownership of forests in parallel. Tribal ownership is found in many African countries and proves a serious

obstacle to effective modern management. Private owners are nowhere wholly free from government control. Government operates in various ways, including taxation of profits, licensing permits for timber fellings, and requirements to restock cut over land. As timber is valuable for industrial raw material and conservation of soil and water, some form of centralized control becomes imperative. Every developed country has, therefore, established a forestry department, research stations, and training centres for professional foresters. International Co-operation is effected by the Forestry Department of the United Nations' Food and Agriculture Organization, with headquarters in Rome.

In post modern period every country, whether big or small, thinks that forests are the essence of environment and are considered essential for the maintenance of physical features of a country. History preserves cases where the destruction of forests had resulted in the decimation of civilizations. Civilizations which once bloomed on the Indian subcontinent and the Mediterranean coast of North Africa died because they denuded the land that supported them and, in the process, left behind a belt of deserts which now stretch from Rajasthan through Sindh, Baluchistan, Iran, Iraq, Arabia, Syria, Palestine and Egypt to Tunisia and Morocco. It is thus aptly said that forests precede civilizations and deserts follow them.[10]

There is a possibility of such occurrences even today. Today, although about 30 per cent of the globe is still covered with trees, only a fifth of that original primeval forest remains intact. These ancient forests survive in some of the remotest places on earth — Siberia, northern Canada, Papua New Guinea, Amazonia, and the Congo Basin in West and Central Africa. But even these remnants are increasingly threatened by uncontrolled logging, oil and mineral exploitation, road and dam building, industrial development and the impact of poor, often landless farmers who are forced to clear forests to survive. [11]

As recently as fifty years ago, 15 per cent of the earth's land surface was covered in tropical rain forests; today less than half is left. Worldwide, almost half a million hectares of forest are destroyed or seriously degraded each week. Large-scale forest destruction is often followed by climate disruption which, in drier countries with poor soils, often leads to desertification. This problem of growing deserts now affects over 100 countries worldwide and is almost always associated with forest destruction.[12]

Thus it seems that forest is in trouble and it is clear that there is a global crisis facing forests, and that there are just as many problems occurring in the developed countries of the North (weakening of natural forests as a result of human influences) as there are in the developing world (due to over population, poverty, unemployment and industrial development).

However, the most direct cause of forest degradation and loss today is the activities of the international timber trade, and logging is the single important cause.

All these are the legacies of the reckless activities of man in the past. Modern research in history reflects the diversities of approach which have been characteristic of recent historiography. Modern historians all over the world have now shown interest in reviewing forest operations in different parts of the world, and the Indian historians are not far behind. To enrich the diversities of approach modern scholars in India like Ajay Singh Rawat, Ramchandra Guha, Neeladri Bhattacharya, M.V. Nadkarni and others have recently devoted themselves to examine the colonial approach to forest settlement and reactions of the people in different places of India. There are many perspectives in a single problem. At the backdrop of this, taking a cue from them I thought to examine the history of the forest settlement in two districts of North Bengal (Northern part of present West Bengal), namely, Darjeeling and Jalpaiguri and allied problems thereto. Primarily my objective was to trace the various stages through which the forests of these two districts had passed during the development of the country under the British rule. But this simple approach does not take into account the fact that all segments of Indian society – wealthy persons, peasants, tribes, pastoralists, slum-dwellers and industry – have a heavy dependence on the produce of the forests, as the source of fuel, fodder, construction, or raw material for processing. To see whether these things troubled the British in their attempt to forest settlement and management in the said two districts urged me onward to select this subject in consultation with Dr. Anandagopal Ghosh and Dr. Ratna Roy Sanyal as my Ph.D. thesis.

B. Ribbertrop in 'Forestry in British India' and then E.P. Stebbing in 'The Forests of India' described the history of the Forestry in India. But their approach to the northern part of Bengal is too sketchy to have a clear idea of the whole problems allied to the forest settlement in this part of Bengal. No detailed studies so far have been made on these two districts, let alone micro studies. In the absence of detailed studies on the administrative, social, economic and commercial history of these two districts the present study provides a preliminary mapping of the various dimensions of the forest-based problems in British India. Through a synthesis of the available existence from both primary and secondary source materials, I have tried to indicate the quite astonishing range of problems. It is not so quiet as the forests look. I wish to enter the forests.

I have made use of English and Bengali source materials in writing this thesis. I have fully utilized the available sources preserved in West Bengal State Archives in Calcutta and National Archives of India in New Delhi. I have also collected documents from the Office of the Conservator of Forests, Hill Circle, Darjeeling, Divisional Forest Office, Darjeeling, Office of

the Conservator of Forests, Northern Circle, Jalpaiguri. These district records came to my help much. Besides, I have utilized the National Library, Calcutta and made use of the library of the Centre for Studies in Social Sciences, Calcutta. I have also got much benefit from the library of the Divisional Commissioner's Office, Jalpaiguri. In addition to these, to some extent I have used oral tradition kept in the memory of senior citizens of the locality. Many of the sources I have used were not examined so far by other historians. While preparing this thesis I tried to depend mostly on primary sources, but in certain cases I selectively drew from the secondary sources as well. One source led me to the next, but, also, one problem led me to another.

The scheme of this thesis is roughly chronological, but there are frequent overlaps in the different chapters. A policy touched upon in one may be fully developed in another; or a plan told from one point of view in one chapter may in the next be retold from another angle.

The observant reader will detect inconsistencies in the spelling of the Indian names in this work. Whenever I have been free to do so, I have followed the spelling of the 'Oxford Advance Learner's Dictionary of Current English' compiled by AS Hornby and Chambers's Twentieth Century Dictionary edited by William Geddie, but there are many names so familiar to the Britishers and Germans that it would be pedantic not to use the form with which they were familiar, and in the case of quotations the original spelling has been maintained.

At the beginning of my effort I only saw the twig of the trees from a distance. Then I plucked up courage to enter the forests. Gradually I am like a parachutist coming down in unknown territory: at first knowing only a few yards of forest land around me, and by degrees extending my exploitation in each direction. As I pursued each line of investigation I left it to a fairly late stage before I attempted to familiarize myself with the available historical writings and documents left by the British and German foresters, and here my debt to them will be apparent.

Notes and References

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4. Ibid., X, 146.4.

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6. *Rigveda VII,* 35. 5. Translated by Santosh Kumar Das, op. cit.

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CHAPTER - I

PRE-COLONIAL POLICY ON FORESTS IN INDIA

The process of reckless destruction of forests had gone on for centuries in Europe. India was not an exception. Her early history of the forests is closely bound up with the history of ancient inhabitants, as has been the case in many other parts of the world. From the time immemorial the aboriginal inhabited in India which was covered with more or less dense forests.[1] They had to depend on forests for their livelihood, specially for firewood, litter and the grazing for cattle which forests provide. Timber was necessary for houses and agricultural implements. But their population was not so much to do any harm to the vast forest areas in India. Still it is believed by some archaeologists and historians that Sind, Baluchistan and Western Rajasthan were wooded during the prime period of Harappa or Indus Valley Civilization. But when the Harappan people began to use burnt bricks the indiscriminate felling of trees started and the progressive desiccation in these areas took place.[2]

It would not be a gross speculation to attribute this to 700 years of Indus culture spread over half a million square mile cutting the forest cover for domestic fuel, brick kiln, pottery kiln, metal melting and probably for many other uses. Such a mammoth consumption of wood per year is not easily replaceable. In consequence flooding of the Indus and erosion of the banks became a regular feature.[3] With the shift of climate the rainfall decreased from 25 inches per year to almost 10 inches per year within a span of 500 — 600 years.[4] Such a drastic change in the annual rain caused tons and tons of silt to settle and eventually get dried and lifted into the air because of anticyclonic currents replacing the inter tropical discontinuity line. Once the air get charged with dust any precipitation becomes difficult. This finally dries the water sources rendering them salty and the subsoil water level falls down drastically. Indus or Harrappa culture, therefore, was already limping or gasping when the socalled Aryans came to these areas. Here ecology seems to, in an overall manner, be the most dominant agent in causing the collapse of the culture.[5]

This habit of destruction of forests in India continued. From the period of the immigration or emergence of the Aryans up to the advent of the English Indian forests had been more indiscriminately felled under the axe. Indian sages, on the one hand, spoke in praise of the forests, and on the other hand destroyed the forests for their cultivation and livestock. The Aryans were agricultural and pastoral people. In order to carry on their pursuits they commenced

burning and clearing away the dense forests in which they settled with a view to obtaining land for the growth of crops and on which to graze their cattle. The ancient epic, the Mahabharata tells us of the burning of Khundava forest. This forest appears to have been situated between the Ganga and Jamuna rivers, and the description forms the first semi-historical evidence of the destruction of the forests by the early settlers. When Maidanav, an aboriginal inhabitant of Khundava forest was evicted it implied total confiscation of existing use rights of the aborigines. As a result of this high-handedness of the Aryans the aborigines allied themselves for the destruction of forests. When the aborigines were evicted from usual habitat they had gone in to dense forest and mountains where by destroying forests they started shifting cultivation (Jhoom) and thereby earned their livelihood. Notwithstanding the continuity of this process even during 600 — 700 A.D. the forests were dense in the Himalayan foot-hills, particularly in present U.P., Bihar, some areas of Assam near Tripura, in the Allahabad – Rajmahal zone, Dandakaranya forest areas and also in the Deccan. The Western India from Bharoach (Broach) and northwards including Rajputana was hot and scarcity of trees was noticed by the Chinese traveller, Hiuen Tsang.[6] By clearing forests agriculture flourished in the Indo-Gangetic alluviam of U.P., Bihar and Bengal. Although there was no specific government policy on trees save and except the Mauryas in ancient India, yet in general the planting of trees either for fruit which the people yielded or for the purpose of obtaining shade was an act which was held in esteem in ancient India. The Vedic people prayed for abundance of trees. They prayed to Agni not to destroy forests and wild animals. The system of 'Vanaprastha', that is, the third Asrama which was practised by the Brahmanas undoubtedly proved their love for forest-life. The scientific spirit of enquiry about the plant kingdom inspired the ancient Indians to discover that plant and trees are animate beings.[7] In Chapter XXXV of 'Santiparva' of the Mahabharata atonement has been prescribed for killing animals and felling of the woods. The importance of forests was recognized during the Mauryan period. The Arthasastra mentions a Superintendent of forest produce, who also supervised the care of forests. The Arthasastra notes that the Superintendent of forest produce shall collect timber and other products of forests by employing those who guard productive forests. He shall not only start productive works in forests, but also fix adequate fines and compensation to be levied from those who cause any damage to productive forests except in calamities.[8] The ill-effects of the random cutting down of forests must have been felt during the Mauryan period. Forests were also preserved and forest rules were framed since they were a source of revenue, which was provided by the tax on timber and on hunters who maintained a livelihood from the animals in forest.[9] Asoka had love for trees and planted trees along the main highways. Furthermore, Asoka made repeated requests in his edicts that animals should be treated with kindness and care. The 5th Pillar Edict contains a detailed list of animals that are not to be killed under any circumstances, and a further list of animals and

creatures which are declared inviolable on certain days. The king concludes the list by stating that all quadrupeds which are neither useful nor edible should not be killed. This is a justifiable on unnecessary killing of animals.[10]

Thus it seems that when the Brahmins, Jains and Buddhists controlled the society forest still existed over a considerable part of India. This was, however, not the case when the foreigners at a later time invaded India. The great reduction in the forest areas in the country was slowly brought about by the constant invasions of the Central Asian peoples who brought their flocks with them; and as both people and flocks increased in numbers, wider and wider areas of forest were burnt and destroyed to obtain pastures for them. This period may be said to have culminated with the Mohammedan conquest of large portion of India. The Mohammedans had no regard for the forests, nor any religious scruples about destroying them.[11] The Mohammedans thought that the forest was a free gift of nature, and belonged to anyone, just as water did. The destruction, therefore, proceeded apace. Scholars think that India suffered from Mohammedan incursions just as Persia, Asia Minor, Spain and other countries on the Mediterranean suffered.[12] During this period the original agricultural population was further driven back into the forests, hills and mountains where they took the method of shifting cultivation which meant destruction of forests further.

In this way, man has proved himself surprisingly illiterate in reading the lessons of history. Perhaps this is because, blinded by the glare of immediate profits, he sees the pages of the past as blank. Whatever the cause, the results are discouraging repetition of mistakes. This has been true particularly with man's treatment of the forests. Properly managed, forests can enrich human life in a variety of ways which are both material and psychological. Poorly managed, they can be source for the disruption of the environment of an entire region. However, through the centuries we have seen a pattern repeated. The misuse of axe or saw, of fire or grazing, causes forest destruction. This leads to disruption of watersheds, to the erosion or loss of fertility of soils, to siltation and flooding in stream valleys, and loss of the continued productivity of the land on which man must depend./ The process, yet goes on. In Africa, Asia, and Latin America the tropical forests disappear at a rate approaching the catastrophic.[13] Even in countries where forestry is an old and well-established profession the pressure toward single purpose management of the land and dams after dams threaten the existence of the life-enriching diversity which has characterized forest lands in the past. In general, forests remain in those areas least suited to other uses.[14]

To take the case of India, in Sultanate period there was no policy for the preservation of forests. Contrary to it Balban took such steps which helped to destroy forests around Delhi.

Barani informs us that during the period of early Mamluk Sultans of Delhi, there were dense forests around Delhi, and the Mewati robbers took shelter in those forests. Balban in order to check the predatory raids of these robbers within a year cleared forests round the capital and the robbers hunted out. And forests were further destroyed when he built forts on the four corners of Delhi. He further cleared the forests of Awadh and Doab to suppress the peasants' revolt. To suppress the rebels of Katehar (Rohilkhand) he again cleared forests of the locality and a network of roads was constructed to facilitate administrative control. Muhammad Bin Tughluq (1325-51) tried to encourage agrarian extension by remitting revenues and providing credit to those peasants who cleared fresh land for agriculture. Later on, Firoj Tughluq constructed five canals to provide irrigation facilities to the peasants which cost large areas of forests in Northern India. He also constructed a good number of towns which needed destruction of forests in Northern India. Ferishta among others credits him with construction of numerous gardens but nothing is known about his attitude towards the preservation of natural forests. There was an official in sultanate period named Amir-i-Shikar who was in charge of the hunting establishment of the king and others but there was no department or minister in charge of forests.

From the reign of Babar till the era of East India Company, precious little is found about the detailed description of forest area and its distribution all over the country. From some sources, yet an estimate may be made of the distribution of forests in Mughal India. In his Autobiography the Emperor Babar "mentions that the pergunnas (subdivision of a district) were surrounded by jungles, and that the people of the pergunnas often fled to these jungles to avoid paying their revenues".[15] It is further known that in the days of the Emperor Babar the rhinoceros abounded in the country adjacent to Ghogra, and wild elephants, first met with in numbers at Karrah, near Allahabad. On this and with other circumstantial evidences Sleeman concludes, "the Ghazeepur District, which is situated on the Ghogra, and far east of Karrah, must have been in a great degree of a forest swarming with herds of elephants and rhinoceros three or four hundred years ago".[16] Babar even hunted rhinoceros in the neighbourhood of Peshwar. Babar says in his journal ".... in the course my expeditions I frequently killed rhinoceros in the jungle of Peshwar and Hasnagar." Akbar shot tigers near Mathura. In 1615 Rev. Edward Terry was troubled by lions when he encamped at Mandu in Central India. He notes, "In those vast and extended woods there are lions, tigers and other beasts of prey and many wild elephants."[17] He further referred that Jahangir and his courtiers used to ride down lions and kill them 'with their bows and carbines and launces'.[18]

Even at this background an accurate quantitative statement of forests or agricultural area of Akbar's period, let alone Mughal period, is out of question. But it is important to indicate that

during Akbar's period there was a lot of incentive for increasing the area of agriculture, and that obviously by reclamation of forest areas or by cultivating the fallow land. A project was taken up for land reclamation within five years, when the full revenue demand would be paid on completion by the peasant (1/3rd share), only 1/26th of which is payable in the first year. This financial incentive boosted up the reclamation work, but reclamation was not so much as to deforest the sub-continent.[19] From Abu'l Fazl and other sources of the Mughal period it is assumed that in spite of the reclamation of land for agriculture many parts of India, particularly Eastern India were still heavily forested and contained wild animals.

It ought to be remembered that direct statements can often be supplemented by inferential evidence derived from information such as on locations of hunting grounds or haunts of wild animals. These incidental details tell us much about the extent of forest and even of forest types. For example, wild elephants obviously indicate the proximity of a dense forest while wild cheetahs imply the presence of grass lands and scrub.[20] Since five thousand elephants were kept in Emperor Akbar's establishment alone,[21] and his nobles were ordered to maintain another 7,709 elephants under the conditions of the personal or Zat ranks,[22] it is obvious that there were dense forests in India in Mughal period. This is again proved by the fact that the ruler of Assam alone possessed 1000 elephants, while 500 to 600 elephants were yearly caught in Assam. To add to it, the zamindars all over India in Mughal period maintained elephants. Besides, lions, tigers, rhinoceros and other beasts of prey were killed by the Mughal Emperors which indicate the presence of dense and vast forests all over India. Moreover, Abu'l Fazl mentioned the quantity of fire-wood consumed in the imperial kitchen, namely 1,500,00 mans (37,63,890 kilograms) a year. These information indicate that there were vast forest areas in Mughal India.

Another way to gauge the extent of nature's domain within the Mughal Empire, is by examining the statistics of area under cultivation for the different regions. This method has been taken by Shireen Moosvi and she writes, "These statistics are available to us in some profusion from the late 16th and the 17th centuries, and give us much help in delineating the boundaries between forest and waste, on the one side, and cultivation, on the other."[23] With such evidence at hand, an effort was taken by Irfan Habib in his *'Atlas of the Mughal Empire.'* It was modified and supplemented by Shireen Moosvi who showed (1) the extent of forest, scrub and desert in the sixteenth and seventeenth centuries, (2) the major forest products and notable representatives of wild life in the same period. But Moosvi's effort suffers from limitation since she was unable to show many details of the agricultural, forest, scrubby and desert zones. She took the authoritative map of Vegetation Features in the *Imperial Gazetteer Atlas,* valid for 1909 as the basis of her mapping, from which she reproduced the areas of forest, scrub and desert in Mughal

India.[24] If forest (including waste land), scrub and desert are subtracted from the maps, then only the agricultural land remains. Thus, "even a cursory glance at the maps showing the natural vegetation features of the 16th — 17th centuries brings out the large size of forested area and waste set against the much more restricted area of the agricultural zone at the time."[25]

(Shireen Moosvi compared her maps with the vegetation map of 1909 and found a considerable reduction of forests everywhere in India. According to her in three centuries since 1601 India saw near doubling of cultivated area which obviously implied considerable gain of the arable against forest and waste land. She showed that during the Mughal period major part of the sub-continent was thickly forested. (According to her, except for a narrow stretch of cultivation on both sides of the Brahmaputra and a small cultivated region between the Brahmaputra and Dihing rivers most of Assam and the other north-eastern parts of India were densely forested. (In Bengal the existence of thick forests was shown in 1781 in Rennell's celebrated *Bengal Atlas*. In the north the submontane or Terai forests broadened into a large block covering much of Cooch Behar, and the *Sarkar* of Ghoraghat. It, then, with some breaks, extended to Sylhet, and linked up with the Arakan Forests.) In the Delta, the Sundarbans formed an isolated but large forest zone. A part of the great Central Indian Forest Orissa was covered with forests and some areas were rich with thick and impenetrable woods. Mughal India also saw thick and uninterrupted forest continuing from Himalayan foot hills along the India – Nepal border that formed a broad band of forest right from Purnea in Bihar to Bahraich in Awadh, forming the central part of the famous Terai Forest.) (Abu'l Fazl also reported of the dense forest in *Sarkar* Champaran. (The Terai forest in the Mughal era covered most of the region of eastern U.P. Tavernier in the middle of the 17th century reported that this region was "full of forest"; this forest line continued up to Rohilkhand. Another part of the Central Indian Forest was the dense forest of Jharkhand in the south of the Mughal *suba* of Bihar. The most extensive unbroken forest within India in Mughal times was indeed in Central India. This forest is designated by Irfan Habib as the 'Great Central Indian Forest'. This forest zone was stretching from Bastar (between Mahanadi and the Godavari), Jharkhand (between the Son and the Mahanadi) in the east to the borders of Gujrat (Dohad and Rajpipla). This region was full of dense forest since Lahori reported it as habitat of elephants.[26] There were jungle cover on both sides of the Narmada where Jahangir caught elephants in 1618,[27] and the Lakhi jungles on the banks of the river Sutlej which were so thick that it was diffcult even for a man on foot to get easy passage.[28]

In peninsular India, the forest cover down the Western Ghats and parts of the Deccan plateau was extensive since in the 17th century elephants and teak as well as other timbers had been available there. On the Deccan plateau particularly, there was a large block of forest

extending from Krishna-Tungabhadra confluence almost to the delta, south of the Krishna River. Tavernier found wild elephants being caught just north of Tirupati.[29]

(Besides, from the evidences of Abu'l Fazl, Sujan Rai, English factors, Bernier, Ralph Fitch, Manuchi, Thevenot and Portuguese records it is proved that private trade in Mughal India was carried on Fire-wood, Timber, Bamboo and cane, gum-lac, Beeswax, wild silks, Bezoar (particular type of goats who secreted bezoar stones in their stomachs which were taken by the Portuguese to Achin), Elephants et al. What is not proved is that the Mughal government had any interest in forest preservation, preservation of wild animals and trade of forest produce in state level/Forest did not retreat and much clearing had not occurred in Mughal era because there was no need of the extension of agriculture since there had been no need of further production in society/and the Mughals from the period of Aurangzeb were not interested in export trade as proved by the decline of Surat. But there is no document to prove that timber was in the list of Mughal export trade in the 17th century which 'was the golden period of Indian maritime trade'.[30] However, timber was used in domestic purposes for building houses, ships and country boats. Obviously, 'boatmen and carpenters drive a thriving trade'.[31]

(But Indian forests were mainly saved for social customs and religious traditions of the Indians. These guided the relationship between the majority of the Indian people including the aborigines and the forests. The perception was that forests, like other natural resources, are blessings from God. It was accepted that forests existed for the people and that the people had customary rights over forests, but at the same time, it was understood that forests must be respected and worshipped. As the population grew, various customs emerged irrespective of caste and creed that were aimed at protecting the forests and wild animals. Some social customs prohibited Hindus from cutting certain trees, such as peepul and banyan, shady trees which benefit the people. With the passage of time, the ideas of Vanadevi, Vanabibi, Dakshinaroy developed. All are connected with forests. In fact, several superstitions are still associated with the cutting of certain trees) In Hindu customs the cutting of fruit-bearing trees has been prohibited. Forests were regarded as Devaranya (God's grove) and therefore were sacred. A number of social customs, which were accepted by all religious sects, also emerged, as in Aravalli Hills, where it was understood that use of axe would bring killing storms in the region. This custom prevented the people from cutting big trees; however, at the same time it allowed them to take forest products that fall from the trees. Similarly, the Bishnai community in Rajasthan placed the restriction that only whatever can be broken by hands could be taken away from the forests. In addition, in the villages of Central India, drought and ghosts are associated with assault on forests. (In Bengal certain shady and big fruit trees are associated with ghosts, namely, Sheora, Gab, Hijal, Bel. Even to day, it is believed in India that forests are guarded by

Vanadevi (the Goddess of Forests) and their destruction will bring a curse from her. It seems that these social and religious taboos were invented in India only to protect forests from indiscriminate felling. Religion in this way helped to preserve forests. Absence of government policy towards forests in pre-colonial period was thus made up for social and religious taboo which proved that society was more conscious than government itself about the necessity of forests.

India took a complex attitude to the forests. They destroyed forests but not unnecessarily. But beyond this necessity they respected forests. At the same time they were the first in India, not the British to make indents on its timber wealth. For a long time before the arrival of the British timber had been exported in large amounts to Arabia and Persia. For a considerable period the Arabs had possessed a powerful fleet in the construction of which teak was used; Persia purchased valuable wood from India for furniture and decorating palace and houses; and the valuable sandal wood of South India had for many centuries found its way by the sea and land routes to the western markets. Indian satin-wood, ebony and black-wood also were exported to European markets. There are sufficient proofs that even during the pre-capitalist stage commercial exploitation of forest produce was not totally absent. Sandal-wood and ivory were under state ownership and control during Hyder Ali and Tipu's periods. Teak also gained in prominence during Hyder Ali's regime. He had set up a dock for building ships at the coastal town of Hanover in Uttara Kannada, for which teak was needed. Francis Buchanon has recorded that the ships were meant for war; possibly they were for trade as well. Though teak was, to some extent, allowed for local consumption, the state enjoyed a monopoly in teak, the tree being constituted a 'royal' tree, the felling and sale of which the ruler kept in his own hand. In Burma the Alompra dynasty had taken the same action. In a similar manner the Sandal-wood of Mysore was constituted a monopoly of the ruler. It is admitted in all hands that the Indian rulers of ancient and medieval India could not evolve the policy of forest conservancy or any methods to that extent but by initiating the commercial importance of wood, state ownership of forestry, extending partial rights to the forest-dwellers and monopoly on valuable wood, the Indian rulers of pre-capitalist India paved the way for the forest management of the British. The British lacks evidence that they were expert in forest management in their country, if so, Oak forests of England would not have been destroyed. In fact, Indian rulers and the German foresters influenced and taught the British to take commercial attitude to the forests in India when they felt the need of teak owing to the unavailability of Oak for the British Royal Navy.

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CHAPTER - II

COLONIAL GOVERNMENT'S MOTIVES AND SUCCESSIVE FOREST ACTS AND POLICY OF THE GOVERNMENT OF INDIA

The British matured themselves in the science of forestry before they entered the forests of Bengal. Being almost prepared they slated for the commercial use of Bengal forests. But they gained their knowledge of forests from two regions – Malabar and Burma, which were their laboratories. What they learnt in these two regions was implemented in our area of study. Naturally it is important to get an idea of their experiences in Malabar and Burma.

No forest policy was initiated when the East India Company commenced to govern India, nor was it realized that any such policy was necessary. The early British rulers hoped to consolidate their control by extending cultivation. The denudation of the countryside helped them gain a military advantage against their foes. The new rulers inherited certain Indian ideas of the inherent conflict between farm and forest, but they gave such notions a new significance. The British believed that jungles were lands that had lapsed into a state of nature because of inadequate care by humans to clear wild vegetation. To Nathaniel Halhead jungle was 'land laid waste for five years'. The jungle was thus seen as the result of the abandonment of cultivation, and was also a place of wild vegetation. Increased revenue was their main intention. The extension of the cultivated acreage was an index by which the British evaluated the success or failure of their policies. Forests were a landscape to be conquered and tamed. Before their contact with Hyder Ali and Tipu Sultan the British like the Mughals gave importance to agriculture and did not object to the destruction of forests for the extension of cultivation. As for example the forests in Sundarbans alone shrank by about 2560 square kilometres released for agricultural purposes in the last 200 years. After the Permanent Settlement in Bengal (1793) even when new areas of land were brought under cultivation by the zamindars at the cost of forests the British were not alive to the necessity of putting a stop to this process of reckless deforestation. When the British came in contact with Hyder Ali and Tipu Sultan in the wake of war, they understood the importance of teak as a commercial article. They came to know how Hyder Ali and Tipu Sultan used teak timber for shipbuilding purposes and exported teak to Arab Countries and earned money. The British imitated Tipu in more than one way and the utilization of teak timber for various purposes was not an exception. Now teak timber formed the main demand of the Government officials for shipbuilding, military and other purposes and the

arrangements necessary for felling the trees and their transport from the forests was the only end in view. Tipu's defeat in 1792 brought to them Malabar, and road was clear to exploit the Malabar forests .The earliest record of these attempts is the formation of a timber syndicate in Malabar in 1796.[1] This syndicate appears to have prospered for a time and then collapsed. Other similar attempts where conceived, chiefly in connection with the supply of timber for the Navy, but they met with a chequered existence. E.P. Stebbing has given an extract from Milburn's "Oriental Commerce" on the subject of the amounts of the teak extracted from Malabar forest and the prices ruling at this period. It is of considerable interest:

"In the year 1799, 10,000 teak trees were brought down the Beypur River (Malabar). This was the produce of several years; but it was estimated that from 2000 to 3000 trees may be procured." "Teak timber, of an ordinary quality for ship-building sells at 9 or 10 Rupees a candy, which measures $15^{3/4}$ English cubical feet; a foot therefore costs from 1s6d to 2s. Choice timber sells as high as 16 rupees a candy, or 1s 10d. a cubical foot." This shows that the British understood the commercial importance of teak timber. "Notwithstanding the coast of Malabar may be considered the storehouse for Bombay, yet the demand for teak timber has so much increased that within three or four years large quantities have been imported from Rangoon."[2]

From Malabar they also learnt the right of inheritance and began to argue in its favour, and implemented this right in other areas when they annexed forests in other parts of the country, even in Burma. Within a few years after the first attempt to extract teak from the Malabar forests by European Syndicates there was an impression among the British that since this area was under Tipu the right of felling teak had been an exclusively royal privilege. It meant that teak was a "Royal" tree. And since they inherited Tipu the company now hoped to inherit that legal position. As they thought in August, 1800, the Court of Directors accordingly authorized the Bombay Government to assume this right on behalf of the East India Company. However, for some administrative reasons this was delayed for a few years and on 25th April, 1807 through a proclamation the East India Company assumed this power, and all unauthorized felling of teak by private individuals was prohibited.

The necessity of forest protection also came in the mind of the British when they were carrying out experiments in Malabar forests. The initial step towards forest protection was taken by the government in about 1800. According to British method a commission was appointed to enquire into internal circumstances of Malabar and probability of profit in future. On the report of the Bengal-Bombay Joint Commission thus appointed the government made regulations prohibiting the felling of teak below 21 inches in girth (this was usually measured four feet

above the ground). No further action was taken upto 1805. But the question of protection of forests captured the attention of the British.

Around 1805 – 06 the imminent war with Napoleon made the British alert about the position of the Royal Navy vis-a-vis the French Navy. Hitherto English Oak was mainly used for ship-building in Britain. But before 1800 English Oak was almost depleted. By 1805 the Royal Navy perhaps informed the government of the inadequacy of standard Oak for ship-building and asked to find out a substitute for Oak. It is assumed that on the report of Royal Navy the British Government requested the Court of Directors of the East India Company inquiring to what extent the King's Navy might depend on a permanent supply of teak timber from Malabar. This enquiry resulted in the immediate nomination of a forest committee charged with a comprehensive programme on two major points. First, the capacity of the forests themselves, and second, the status of proprietary rights in them. Thus the first real interest aroused in the forests of India. The main inspiration behind it was the safety of the empire which depended upon its 'Wooden Walls'. Military attitude, thus, preceded commercial attitude towards the protection of forests.

The reports submitted by the forest committee were by no means encouraging immediately. However, two things were known from this report. First, in Malabar the capacity of the forests in mature teak timber had been over estimated, and forests had been almost cut out. Secondly, it pointed out that if protections were afforded the forests a valuable property would be gradually built up. Protection, thus, proved the next necessity if the forests were to be saved from total ruin and disappearance.

The Committee's report was immediately followed by a general proclamation. It declared that the royalty right in teak trees claimed by the former government in the south of continent was vested in the Company and all further unauthorized fellings of this tree were prohibited.[3] Under further pressure from the Home Government, and with regard to the maintenance of the future strength of the King's Navy, the decision was taken to appoint a special officer to superintend the forest work. His duties were to preserve and improve the production of teak and other timber suitable for ship-building. Captain Watson of the police department was the officer selected and he was appointed the first Conservator of Forests in India on 10th November, 1806. First Forest Conservancy was started in Malabar and Travancore regions. This path will be followed by other parts of India in future. In this way forest conservancy took root in India — not out of love for forests, not for their environmental consciousness, not to maintain ecological balance — but simply because of the interest of the

British Navy which was interconnected with British imperialism and commerce almost all over the world. With this, however, commercialization of forests received a major thrust.

Experience in Burma also helped the British to formulate the forest policy in India. In 1826 by the treaty of Yandaboo the Tenasserim Province and in 1852 in the wake of second Anglo-Burmese War Pegu of Burma came under British occupation. The forest committee which was set up to report on the potentiality of Malabar forests of getting continuous supply of standard wood pointed out the depleted condition of forests in that region. With the occupation of Tenasserim a new source of standard wood was visible. To exploit this new source for 'military and commercial objects' Dr. Wallich, the Superintendent of Calcutta Botanical Garden was deputed in 1827 to examine the potentials of Tenasserim forests. His report pointed out the utility of forests and method of forest operations which were of great help to the British in future. In his two expeditions he found different trees to be used for different purposes and drew the attention of the government to the forest wealth of Tenasserim for military and commercial utility. He reported that besides ship-building different trees of this area might be used for gun carriages, country-boat, naves and charcoal for gun powder, posts of house-building, planks, burning bricks and as mere article of fuel. Secondly, to facilitate the commercialization of the Tenasserim forests he pointed out the utility of the river system, streams and nullahs of the area. He reported that the network formed by the streams and nullahs was quite adequate to float with ease all the timber which could be felled in these forests. In some cases elephants can be used to bring out logs from the dense forests. He further reported that bamboos could be employed in floating out the timber and subsequently used by the Military Department in Burma and Bengal. Thirdly, he also gave an idea of labour cost in connection with the transportation of bamboos which were in need in Bengal Commissariat to be considered by the government. Fourthly, although it was not accepted at that time but Dr. Wallich was the first to propose that teak forests should be protected as Reserved Forests and Modified reservation in respect of some other valuable trees. But he thought it judicious to keep these in the hand of private persons or speculators in exchange of some revenues according to ad valorem duty on tree and licence system was being encouraged. But with the passage of time government understood the importance of Dr. Wallich's proposal and introduced it in India. Dr. Wallich was followed by Dr. Helfer, Captain Tremenheere and Captain Guthrie who placed proposal after proposal before the government but nothing was done to improve the conditions of forests. Only the proposal of Mr. Colvin to set up a small Forest Department in Tenasserim was accepted. Up to 1857 this licence system and small Forest Department were the only notable achievements in Tenasserim.

Further experiments in Tenasserim and Pegu under Dr. McClelland and Sir Dietrich Brandis brought the theme of Scientific Forestry and showed the government ways towards future. Forest Management in a form was initiated by Dr. McClelland but it was turned into a science by Brandis. In Burma Brandis introduced a system of Valuation Surveys, so eminently adapted to the circumstances, that with but slight modifications it is still in force up to the present day. Secondly, he proposed the selling the whole of the seasoned timber in a certain forest to the highest bidder. Thirdly, he gave proposals to stop timber theft which produced satisfactory results. Fourthly, for the improvement, extension and consolidation of the forests Brandis prescribed pruning, plantation, nurseries in "toungyas" or hill plantation, scattering seed in cleared portions of the forests and consolidation of teak forests. He also proposed construction of roads to facilitate the commercialization of forests. Besides, he started a central timber depot in Rangoon; he introduced the system of 'division' in forests; he was instrumental in making 'working plan' as guide to the foresters for future forest operations in a specified area. As his method yielded good results, all this formed the basis of the British system of reserved forests.

Recently it has been argued by some that commercialization was not the solitary motive behind the so-called scientific forestry of the British. They do not rule out a pre-history of colonial forests conservation that had more to do with ecological concerns. R.H. Grove points to the idea or fear in the early colonial state that uncontrolled destruction of the forests would cause climatic change, and thus lead to draught, famine and, eventually, to social disorder. This idea was propagated by an influential group of scientists, mainly medical surgeons, serving in the East India Company, who, according to Grove, succeeded in establishing conservationism or Environmental interventionism as part of the responsibility of the Colonial State.[4] Grove agrees with those who argue that the demand for timber for railway construction in the 1860s became a central driving force for the development of the imperial forest policy, but says that this alone cannot explain the extension of government forest control in India. According to him, beside the need to control unruly tribal groups in marginal forest and hill tracts, "the fear of climatic change remained an important motive." Reading colonial documents relating to the forest, one indeed often comes across references to such a motive, or a sort of underlying assumption that state control is motivated by the need for protecting the forest against uncontrolled destruction by local people and private commercial interests.[5] The strength of Grove's analysis is in his recognition of the significance of ideological issues and the debates among colonial administrators.[6] Theoretically the position was correct, or it might be to camouflage the ulterior motive of the British. In practice it was seen that initially the forest was under the revenue department which explicitly spoke that commercialization was the major out look of the British in forest management. The British Government added environment to their single motive of

commercialization only to keep others out of the forest and monopolize the forest operation to their monetary benefit. In fact, the true outcome of the British penetration of forest tracts, like Darjeeling and Duars was in most cases a historically unparalleled deforestation. Annual reports and working plans also reflect the same thing. E.Somanathan, Ram Chandra Guha and Madhav Gadgil also hold the view that forest conservation in India originated from the imperial need for timber.[7] Grove did not examine how the ideological ideas actually influenced changes on the ground.[8])

(Be that as it may, during the early days of their rule, the British neither formulated any rule for forest operation nor made any attempt for the preservation of forests. They took the forest resources in India as 'inexhaustible'. Even there was no forest organization, let alone forest department. Valuable timbers in large quantities were exported to England for the construction of the Royal Navy. They thought of Indian valuable timber from the strategic and commercial imperatives of a trans-continental empire. South Asia acquired a new significance in the context of Anglo-French rivalry and the need to tap new sources of wood for shipping) Naval rivalry accentuated the problem of the shortage of timber within Britain. By 1760 the demand for the Royal Navy had resulted in a scarcity of oak along the Welsh Coastline and in parts of England. By 1809 the combined tonnage of British fleet was over four million tons, but the continued expansion of the navy and of the fleet of merchant ships became difficult. There were very few large oak trees left in English royal forests, and planting had been persistently neglected. At the same time the notion that the retreat of the woods was a sign of progress was still widespread. (The decline of oak was seen as a sign of 'improvement', as agricultural crops were more remunerative to land owners than plantations of slow-growing oak trees. Large landowners in parts of Scotland did take to tree planting, but this was mainly in reaction to internal market demand, and did not help supply wood for ship-building yet, the global search for timber was not merely an outcome of an absolute shortage of the raw material. It was also a response to the strategic isolation of Britain during the revolutionary and Napoleonic wars between 1793 and 1815.) The Baltic supply lines for ship timber were cut off due to the neutrality of the Baltic countries during the blockade. The British then reached out to distant sites including the Cape, New Zealand and Australia.[9] But they overlooked the potentiality of the Indian forests because of their agricultural constraints and Mughal legacy.

(At the close of the 18th century the position of forestry was no better than before the advent of the British. The government exploited what it required and the people also obtained all their requirements without difficulty. There was no preservation of forests. Moreover, the general policy was to expand agriculture and to obtain teak and other timber for constructional

purposes. The unrestricted exploitation soon found its consequences. Forests rapidly diminished and adequate quantities of timber could not be obtained. So, towards the first decade of the 19th century the British came to realize the necessity of conservation of forests.

The record of ship-building by Indian and European rivals of the East India Company gave cause for the hope that Indian teak would supply wood for British shipping. By 1800 ships built in India had already been deployed in places as distant as Java and the Red Sea.[10] Now the British took the forest a bit seriously but forest policy was far off. Between 1800 and 1806 the British progress towards forestry can be thus summed up: First, in 1800 a commission was appointed to enquire into the availability of teak in the Malabar forests. Second, in 1802 the Earl of Vincent called for the regular construction of ships of Indian teak in Bombay. Third, on the basis of commission's report unauthorized felling of trees in the south was prohibited. Fourth, a forest committee was constituted in 1805 to enquire into the capacity of teak forests and the status of proprietary rights in them; the British proclaimed royalty rights over the teak trees in the south. And lastly, on 10.11.1806 Captain Watson was appointed by the Madras Government as the Conservator of Forests.

The Conservator soon established a timber monopoly throughout Malabar and Travancore. But the repressive methods by which this was done by him and later his successor were intolerable, and gradually it gave rise to seething discontent amongst both proprietors and timber merchants.[11] Added to it, the local officials pressed ahead, and in 1807 they claimed that they had a molopoly on all wood on private and public land in both Malabar and Travancore. Peasants were not even to be allowed to cut trees for fuel. Early colonial officials including Dr. Wallich (Surgeon and Botanist) held that complete control of forests by the government was both desirable and necessary. However, there was no question of unanimity of opinion among officials. Thomas Munro argued that the residents of Malabar planted and protected trees on a regular basis. A free market in wood was all that was required in order to help preserve and replenish tree cover. Munro favoured a minimal role for the government, and had a deep faith in the ability of peasants and other landowners to act in their own long-term interests. Other officials favoured limited state intervention in preference to monopoly control or a free market. The government was in a fix, but they found strength in the argument of Munro, and as a result the post of Conservator was abolished in Malabar in 1823.

But that did not bring any good to forests. In 1829 private extraction and trade was resumed under supervision. But absence of government regulation failed to stop excessive deforestation. In 1830 Raja of Nilambar in Malabar argued that government regulation, but not monopoly on the trade in wood, was essential to stop the destruction of all valuable trees. In

1830 the government of Bombay felt the need to appoint again a Conservator to protect teak. In 1831 the Indian Navy Board recommended the re-establishment of the Conservatorship. By this time the Botanists and Surgeons showed anxieties about deforestation and warned the Government that excessive deforestation might lead to general aridification. From 1839 onwards Alexander Von Humboldt's argument linking deforestation, aridification and temperature on a global scale caught the attention of the surgeons in India. In Bombay presidency Dr. Alexander Gibson and in Madras Asst. Surgeon Edward Balfour by 1839 had started to persuade the authorities on the need for conservation of forests. In the same year Admiral Malcolm reported to the Bombay Government that he favoured the revival of the office of Conservator. Till then, the Government could not make up its mind about the future of forests in India. On the one hand, the Government think that an abundance of wood increases moisture and that a deficiency promotes aridity; on the other hand, in 1841 Lieutenant A.W. Ball of the Indian Navy cuts trees in the forests of inner Himalayas, and floats logs down the Sutlej and Beas. Ball hopes to demonstrate that 'exhaustible forests' of the interior can replenish supplies in the plains and on the Western Coast. It shows that government had no forest policy at all. As late as 1842 the Court of Directors considered that some Teak plantations of limited extent might be established to safeguard the future, and that the present supply could best be arranged under contracts.[12] As a follow up, plantation of trees was taken up in Malabar in 1842. During this period Mr. Conolly, Collector of Malabar urged his views of scientific forestry again and again and succeeded in creating a small local Forest Department in order to provide timber for his district. To save the forest from disappearing he in 1842 laid the foundation of the famous Nilambar plantation. Though the necessity of scientific advice was beginning to be more constantly urged, it was not till 1847 that the Bombay Government appointed Dr. Gibson as Conservator of Forests. Madras did not follow suit, but in 1856 appointed Dr. Cleghorn to be Conservator of Forests in that presidency. A circle was completed – apparently the British Government started again from a point which they left in 1823. But it is undeniable that by this time they became mature enough to take steps towards forest conservation. This is revealed from the reports of Dr. Gibson and Dr. Cleghorn. In their reports the physical value of the forests was for the first time taken into consideration. Dr. Gibson reported that destruction of the forests by over felling and the rapid increase of shifting cultivation had led to the silting up of rivers. Dr. Cleghorn drew the attention of the government on the same line. Besides, both officers strongly advocated that government should claim and exercise the proprietary right to all such forests as could not be clearly proved to be private property. Secondly, they were in favour of a stricter conservative control. Thirdly, they wanted an immediate restriction of shifting cultivation in the hills. Future will prove that they were in right direction and they set their minds for strategic and commercial ends. But the government was lagging behind. The Colonial Government of India till the middle

of the 19th century could not make its mind to formulate a uniform Forest Policy in British occupied India. At the same time, it should be mentioned that the work of Conolly along with Chathu Menon, an Asst. Sub-Conservator in Nilambar teak forest was an eye-opener to the British. They were pioneers in teak plantations. These plantations were highly successful and over the years became world famous. This afforestation activity forced the Directors of East India Company to undertake improvement of forests of Malabar by forming teak plantations.[13] On this line uniform forest policy was ahead.

Uniform forest policy was the result of the experience of the British gathered in different forest tracts since 1800 quite matured by the geniuses of German foresters in service of the Colonial Government. The introducer of uniform forest policy of the British Government in India was Dr. McClelland, Superintendent of Forests in Pegu, which was annexed in 1852. In 1854 Dr. McClelland, who for months had been travelling in the forests, submitted a report in which he proposed certain restrictions on the unchecked exploitation of forests by private parties. This valuable report evoked a memorable reply by the Government of India, dated 3rd August 1855, in which Lord Dalhousie, the then Governor General of India laid down, for the first time, the outline of a permanent policy for forest administration.[14] This was a Memorandum, which might well, be termed the 'Charter of Indian Forestry'.[15] In this Memorandum Lord Dalhousie formulated the policy for forest conservancy. "This pronouncement was an act of far-sighted statesmanship and marked the first concrete step towards scientific conservation of the forests."[16]

In his Memorandum Dalhousie in outlining forest policy enunciated the following points: First, he pointed out that on the annexation of the province of Pegu it was laid down as the ruling principle in the management of the forests that the teak timber should be retained as state property. Second, that in consequence all killed standing trees and felled trees still lying in the forests, as also standing green trees, were public property to which individuals had no right or claim. Third, that the two former categories should be disposed of in such a manner that the full price of the timber should accrue to the government and not go to swell the profits of timber traders. Fourth, that in the case of standing green trees which had reached exploitable size they should be removed in conformance with the future proper maintenance of the forests and not be exploited for the benefit of timber merchants and to the ruin of the forests, as had been the case in the Tenasserim Forests.

By this pronouncement, for the first time, the British declared forests as valuable goods – goods which needed protection and proper distribution. The implication was that there existed a conflict between the people and the forests and that the conflict had to be managed. Lord

Dalhousie's pronouncement was the act of a far-sighted statesman and proved him to be a man far ahead of his times. It marked the first real step towards the scientific conservancy of the forests. Soon afterwards appointments of Conservators of Forests in some provinces followed. In 1856 rules for conservancy of trees and brushwood in Rawalpindi district were published followed by forest conservancy rules in Hazara in 1857. This marked the commencement of the much needed protection for the forest areas of Punjab. By this time, as a result of the revolt of 1857, the country began to be opened up by a network of railway lines and roads. To satisfy this growing demand, sound principles of conservation were all but abandoned and forest destruction went unabated.[17] Large stretches of forest land were cleared to lay roads, railway lines, bridges and the best timber from adjoining areas were converted for manufacture of sleepers, planks for railway coaches and bridges , as well as to meet the various types of growing demands of fast developing military centres where Barracks for British troops were being constructed in the aftermath of the revolt of 1857. Devastation of such a magnitude, however, led to some concern and serious thought was given to protect and develop the forest resources of the country.[18]

At about the same time (1858–64) exotic acacias and eucalyptus species were introduced in Nilgiris. Plantation activity thus became a recognized part of forest conservancy. Publication of a book "Forests and Gardens of South India" by Cleghorn, Conservator of Madras Presidency catalysed the forest conservancy works.

The British Government was on the line of organized Forest Management. Dalhousie's Memorandum was taken seriously and some steps were taken to implement this. First, in the year 1864 the Government of India took the important decision of treating forests as state property. The idea of allowing proprietary rights in forests to individuals was abandoned. Secondly, all government forests were made inalienable. Thirdly, the need for exercising great care in disposal of waste lands containing forests was given due importance. Fourthly, demarcation and fixing the limits of forests to be preserved were felt essential to be taken up immediately. Lastly, in 1864 an organized state department under an Inspector-General of Forests was established. The government emphasized the need for a comprehensive Indian Forest Act carrying out an All India Forest Policy. The systematic management of forests began with the appointment of Dietrich Brandis, a trained German forester, as the first Inspector-General of Forests in 1864. However, all this was not Forest Act, they were the results of the spirit of the Memorandum only. But this spirit acted on the British Government of India when it passed the First Indian Forest Act in 1865. The major significance of the Memorandum was that the objective of management of forests changed from obtaining supplies of timber for various purposes to protecting and improving forests and treating them as a biological growing entity.[19]

The First Forest Act of 1865 was directly indebted to the works of Dietrich Brandis in Pegu. His experiments and struggles in Martaban and Tenasserim forests taught the British towards scientific forestry in India and much influenced the later foresters including Ribbentrop. His experiments paved the way for the Forest Act of 1865 in more than one way. Firstly, he introduced from the outset principles of enumeration and organization of the working of the forests which went a long way to form the basis of the working-plans. Secondly, he also introduced measures for the protection and improvement of the forests, and correctly foresaw that if the people of the country could even be brought to plant teak in the shifting cultivation, this would likely to become the most efficient mode of artificially reproducing the tree. Thirdly, he introduced the system of selection of trees to be felled and their girdling was placed under the control of the Forest Department. Lastly, he objected to the general introduction of exploitation of forests by private enterprise and proposed to enforce suitable conditions and prices from private timber firms. In fact, his method created a practical system for the working of the forests which was taken into account before the formulation of the first Forest Act of India. If his guidelines were not considered before the introduction of the Forest Act of 1865 the forests of India would have been sacrificed. His activities from 1857 to 1864 foreshadowed the constituent part of the first Forest Act of India.

The Forest Act of 1865 empowered the Government in the following ways :

(1) The Government reserves the right to declare any land covered with trees, brushwood or jungle as Government Forest by notification, provided that such notification should not abridge or affect any existing rights of individuals or communities.

(2) Local governments may make Rules for management and preservation of forests and for regulating the conduct of persons employed on them. Such Rules shall not be repugnant to any law in force.

(3) Powers were given to local government to prescribe punishment for breach of provisions of the Act.

(4) Rules when confirmed and published have the force of law.

This Act came into operation on 1st May 1865 and was cited as "The Government Forests Act, 1865".

The most important feature of this Act was that it empowered the local governments to draft local rules for their respective provinces for the better management and preservation of the

forests. The necessity for such forest legislation was borne out by the fact that during the years 1865 and 1866 seven local Governments and Administrations, Mysore, Coorg, Burma, Central Provinces, Berar (Hyderabad Assigned Districts), Oudh, and Bengal submitted draft rules for confirmation to the Government of India, whilst the North-West Provinces and Punjab had such rules under consideration.[20]

In spite of the virtues in some respects certain portions of the Act of 1865 were deficient in many respects. Dr. Brandis first drew the attention of the Government of India to these deficiencies in 1868. He submitted a revised Bill and a Memorandum explaining the necessity for new legislation. On this the local Governments were asked to express their opinions on the draft Bill, which was then redrafted and was again considered by the Government of India in 1871. At a Forest Conference held at Allahabad in 1873-74, the defects of the Act VII of 1865 were discussed in details. Lastly, Mr. Hope, a member in the Viceregal Council showed the defects on 6th March 1878. He pointed out that the said Act, "drew on distinction between the forests which required to be closely reserved, even at the cost of more or less interference with private rights, and those which merely needed general control to prevent improvident working." Secondly, "it also provided no procedure for inquiring into and settling the rights which it so vaguely saved, and gave no powers for regulating the exercise of such rights without appropriating them". It thus obliged the government, in short, either to take entirely or let alone entirely. Thirdly, "on control over private forests in the general interests of the community, it was absolutely silent." Fourthly, "for duties on timber even those actually levied, it gave no authority." Fifthly, "protection for Government forests, so interlaced with private ones as to be the chronic danger of plunder, there was none." Mr. Hope also stated that in various minor points also the Act was deficient.

Subsequently, a more comprehensive Act was passed in 1878, which classified forests into three categories: (1) reserved forests, (2) protected forests and (3) village forests. The distinction was based on the people's rights over the forest produce. The reserved forests, as the name implies, were to be totally controlled by Government, and the people were denied any access to them. The protected forests could be accessed by the people but restrictions applied as to what could be taken away from the forests. The village forests, on the other hand, were to be community forests providing daily subsistence to the people. For the first time, the Act also established a forest bureaucracy in the form of Forest Settlement Officers (F.S.O). F.S.O's were placed at the local government level and were asked to protect forests from nearby villagers. This Act extended to all provinces of British India, with the exception of Madras, Coorg, Berar, the Hazara District of the Punjab, Ajmer and Baluchistan.

Thus, this Act provided for the constitution of 'Reserved', 'Protected' and 'Village' forests. The first draft of the Act was intended to form only one class of demarcated state forests (reserves), and to provide for a limited protection of all other government forest lands until the time arrived in any particular area when it could be decided definitely which particular forests or forest area should be demarcated and constituted reserved forest. This was modified in the Act as passed. The Act does not impose the demarcation of an area before it can be declared a protected forest. The Act requires that the nature and extent of the rights of Government and private persons should be enquired into and recorded previous to the forest being declared a protected one. Even in the case of emergency to declare a forest protected one, it imposes on the Government the duty of instituting such enquiries. It means that existing rights are protected by the Act pending such enquiries.

The guarantee thus extended to the protected forests invites some problems. For, whereas a reserved forest once notified was safeguarded against any possible infringement of private rights and secured a permanent settlement, in the protected forest existing rights were recorded but not settled. Such rights might increase and new ones arise without any limitation, with the result that the forest might eventually disappear and with it the rights of user. The local governments faced this problem immediately and intimated the Government about it, with the result that protected forests were gradually converted into reserves.

The work took time, and for many years the demarcation work absorbed the time and energies of a large part of the staff. This favourable outcome was the result of reiterated injunctions from both the Secretary of State and the Government of India that the selection of the remaining valuable forests and their demarcation should be undertaken without intermission. In 1889-90 there were 56,000 square miles of reserves and nearly 20,000 square miles of protected forests. By the end of the century the reserves extended to 81,000 square miles, whilst the protected forests had an area of 88,000 square miles, (Stebbing II, P.470, 1982). The rate of growth of protected forests was much higher than the reserved forests.

Chapter-III of the Act of 1878 had an intention to provide for the constitution of village forests. It was admitted that village communities and private persons had a right to expect that Government should afford protection to their forest property, both against trespass and damage, and also against the accrual of new rights. The procedure demanded that the forest should first be created reserved forests and this provoked the suspicion of the owners with the result that the chapter III of the Act throughout the remaining part of the century had remained inoperative.

Another legal lacuna of this Act was pointed out by Ribbentrop, an Inspector General of Forests and a contemporary historian of Forestry in India. He analysed the Indian Forest Act of 1878 and subsequent separate Acts for Burma (1881) and Madras (1882) and showed the short-comings in the following words: "All three Acts provide for the control over forests and lands not belonging to the State, if such control appears necessary for the public weal, or if the treatment such forests have received from their owners injuriously affects the public welfare or safety; but the provision that the owner of the land can require the Government to acquire the land in question under the Land Acquisition Act has rendered special legislation necessary when such interference was deemed necessary as for instance in the Hoshiarpur 'chos' in the Punjab."[21] To bridge this and other gaps numerous sets of local rules were drafted and passed after the Indian Forest Act VII came into force.

The British policy, although claiming to be solely in the public's benefit, introduced a new dimension to the forest issue. First of all, the policy emphasized the commercial use of forests. Forests were viewed as valuable source of raw material to support British industrial revolution.[22] Second, the policy was perceived as the policy of managing forests from the people rather than for the people. A number of protests that were raised after the adoption of the Acts also reveal this perception. Third, the policy asked for governmental intervention and, in later years, also institutionalized this interventionist role. The role that was adopted was of a regulator and not of a mediator alone. Last, by emphasizing and then by allowing the commercial value of forests, the policy defined the forest issue as an economic one. The economic elite entered the scene and used forests as means of participation in the growing and modernizing economy. On the other hand, the people who were forest owners by tradition were transformed into labourers. Forests thus provided a rich ground for the extension of capitalism and imperialism.[23]

But it is debatable whether the Act of 1878 can go to that extent immediately as held by Renu Khator. How British industrialization at that stage was helped by the Act of 1878 was not clear. Some modern scholars hold, "it did not preclude commercial use of timber in terms of scientific working plans".[24] At the same time it is undeniable that the new Act was more comprehensive and stringent, and further cut into the local use of forests than ever before. The Government held absolute rights of ownership in reserved forests and their products were not to be used by locals unless specifically permitted by way of grant of privilege and not as a matter of right. Access to these forests was restricted, except as thoroughfare in permitted routes. The ostensible motivation underlying the reservation of forest was to protect them against uncontrolled grazing and cultivation, and permit only a sustainable use of forests. In the protected forests the local's access and privileges were permitted for the time being except in

those cases where they were specifically prohibited (as in the case of cutting valuable timber-yielding trees). It was in the case of village forests that the rights of locals were conceded in respect of grazing, fuel needs, requirement of small wood for implements, and own house construction but not for sale or barter. The extension of cultivation was possible only when permitted, and such permission was available only in areas where the exercise of local privileges was allowed, but not in the reserved forests. Because of commercial value of timber, forests rich in standard timber were invariably reserved, leaving relatively less productive areas for the exercise of local use. Regulations, in a sense create crime. The Act thus became the seed-bed for timber theft. The villagers began to say, "If the forests are made reserves we shall always be criminals."[25]

Forest Department was created, and it took the care of the forests. Under it forests were demarcated, surveyed and mapped. Now it was considered necessary to lay down certain general principles on which they were to be managed. At this stage the Government of India invited Dr. Voelcker to examine the conditions of agriculture in the country and suggest how it could be improved. Dr. Voelcker submitted his report on "Improvement on Indian Agriculture" in 1893. In Chapter VIII of this monumental report he discussed at length the condition of the forests and stressed the need of formulating a forest policy with a definite bias for serving agricultural interests more directly. On the basis of his recommendations the Government of India issued Resolution No. 22F. Dated 19th October, 1894, declaring its forest policy. This was a landmark in the history of forest management in India.[26] According to this policy the Government of India were guided by the following:

(1) The sole object to which the management of forests is to be directed is to promote the general well-being of the country.

(2) The maintenance of adequate forests is dictated primarily for the preservation of the climatic and physical conditions of the country, and, secondly, to fulfil the needs of the people.

Subject to these conditions :

(a) Permanent cultivation should come before forestry.

(b) The satisfaction of the needs of the local population at non-competitive rates, if not free, should over-ride all considerations of revenue.

(c) After the fulfilment of the above conditions, the realization of maximum revenue should be the guiding factor.

The Government Owned Forests were classified with reference to their primary functions under four heads.

(I) Forests, the preservation of which is essential on climatic or physical grounds.

(II) Forests which afford a supply of valuable timbers for commercial purposes.

(III) Minor forests which include tracts which, though true forests, produce only the inferior sorts of timber or smaller growths of the better sorts, and

(IV) Pastures and grazing ground proper, which are usually forests only in name. [27]

The above classification was not intended to be rigid and a particular forest might fulfil more than one function. The earlier classification of reserved and protected forests was not dispensed with, but could be applied to these categories. The question of restricting locals from using any of these classes was to be decided on the basis of whether the 'public benefit' from such restrictions was to be almost absolute in the first category with relaxation extending as one moved towards fourth category. Even in regard to second category, the consideration of forest income was to be subordinated to the satisfaction of local needs. It was the less productive minor forests, that is third category, producing inferior quality timber or only small growth of better sorts and pastures, that is fourth category, which were mainly expected to meet local needs. It is worth remembering here, however, that these areas were not intrinsically less productive but could have been rendered so because of the untrammelled exercise of rights over what was regarded as common property. Thus anyone could cut timber for their own use, but its regeneration was left entirely to nature. Even in the use of third and fourth categories of forests, certain restrictions were put on the ground that the "User must not be exercised so as to annihilate its subject, and the people must be protected against their own improvidence." Forest land could be given for cultivation, only if it did not disturb the consolidation of forest land, if cultivation was on a proper and permanent basis, and if it did not affect the forests that were either yielding good income or meeting local needs.

It may be noted that the ultimate control and ownership of classes of lands vested with the Government, though in the fourth category, rights of individuals and communities could be even statutorily recognized. A lenient attitude was expressed towards the end of a policy statement, which indicated a preference for a more generous application of the forest law so that the needs of agriculture and of the local people were respected. It says:

"The Governor-General In Council desires, therefore, that with regard both to fuel and fodder reserves and to grazing areas pure and simple and specially to such of them as lie in the midst of cultivated tracts, it may be considered in each case whether it is necessary to class them, or if already so classed, to retain them as forest area, and if this question is decided in the affirmative, whether it would not be better to constitute them protected rather than reserved forests."[28]

While the fundamental facts emphasizing the need for conserving the forests as stated in 1894 policy were still true, it was not without drawbacks even in contemporary period, let alone in independent India. First, the policy of 1894 was applicable to the forests under the management of the Forest Department, with the result that other government owned lands were not covered by it. The control of the management of private forests was also to be provided for in the new statement of forest policy. Secondly, it made it clear that the over-riding consideration would be 'public interest', which could well be interpreted as the interest of the larger economy; where it conflicted with local interest the latter had to be subordinated. Thirdly, though this is understandable, the policy did not spell out the organizational reform needed to safeguard local interests at least where they did conflict with public interest, and to protect the environment, conserve valuable species and ensure their regeneration. Fourthly, it did not emphasize the need for managing the forests on the principle of sustained and, where possible, progressively, increasing yield of produce most in demand. This drawback may be seen in another way. While the area available for local use was on the decline, no attempts were made to raise the productivity and sustainability of whatever area remained for local use. Fifthly, the policy did not give a definite indication of the extent of forests in the country as a whole and in particular tracts that would constitute a minimum, and should lay down steps that would lead to this ideal. Sixthly, the policy did not take into consideration the conservation and growth of forests, nor a system of incentives for the locals to grow trees and protect and develop forests. It hardly helped in making actual forest management people-oriented, and the alienation of the local population from forest development continued. The policy did not take into account the necessity to spread the message of forestry amongst the people to convince them that their welfare depended on successful forest conservation; nor it indicated that the claims of the neighbouring communities should, in no event be admitted at the cost of jeopardizing national interest. Seventhly, it did not consider the necessity to manage systematically the forest forming the catchment of important rivers, and did not put importance to river system to facilitate commercialization of forestry. Side by side, it did not hold that wild life was an integral part of the forest and a valuable asset, as a result, it did not lay down a suitable wild life policy. Lastly, it did not consider desirable to emphasize that Government should provide the best facilities for

training in Forestry and for research in the various aspects of forestry, as also maintain a liason with the industries utilizing forest products. Even the problem of shifting cultivation was not dealt with properly.

It is true that the forest policy of 1894 had many defects, and it is rather easy to find fault with any Act or Policy in later period. In fact, no Act or Policy declaration is full proof. Defects surface during the period of its implementation or when an action is judged by time. The Forest Policy of 1894 had merits as well as drawbacks. Notwithstanding its drawbacks the policy evolved during this period continued for a long time in all its essential detail. Even the Indian Forest Act of 1927 which institutionalized 'commercialized forest-management' and the policy statement of 1952 made no basic departure from it.[29]

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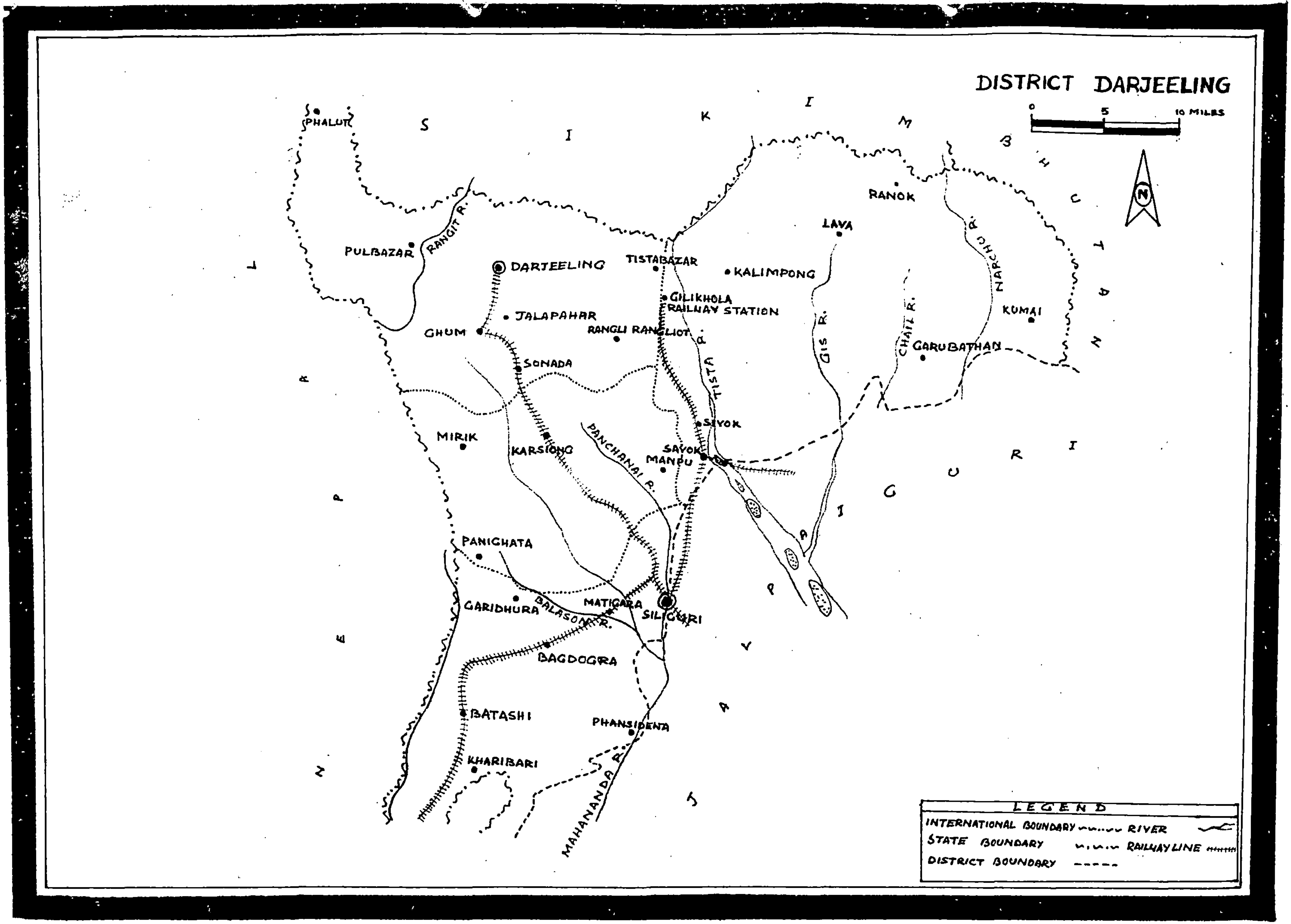
CHAPTER - III

IMPLEMENTATION OF THE FOREST ACTS AND POLICY IN THE AREA OF STUDY : DARJEELING AND JALPAIGURI DISTRICTS

DARJEELING

Before discussing the actual implementation of the Forest Acts and Policy of the Colonial Government, it is advisable to know about the study region. Of the two districts being studied here, the district of Darjeeling is unique in its features and history. Darjeeling is the headquarters of the tea growing district of Darjeeling, in West Bengal, 310 miles north of Calcutta, and the most popular hill station in India after Simla. This district extends from $26^{\theta}31'$ to $27^{\theta}13'$ north latitude, and it is between $87^{\theta}59'$ and $88^{\theta}53'$ east longitude.[1] But W.W. Hunter is more specific. According to him the district is between $26^{\theta}30'50''$ and $27^{\theta}13'5''$ north latitude, and between $88^{\theta}2'45''$ and $88^{\theta}50'3''$ east longitude.[2] There is anomaly between these two accounts about the total area of Darjeeling. In Hunter's Account the total area in 1876 was 1,234 sq. miles, whereas in O'Malley's 'Gazetteers' of 1907 the total area of the district was 1,164 sq. miles. In 1872 the total population was of 94,712 souls and in 1901 was of 2,49,117 souls.[3] In shape the district resembles an irregular triangle, of which the apex projects into British territory before its occupation by the Brtish, while the base rests on Sikkim. It is a frontier district, running up between Nepal and Bhutan and stretching from the plains of Bengal on the south to the State of Sikkim on the north. Darjeeling district is bounded on the north by the Ramman, Great Rangit and Tista rivers, and by the Phupchu, Rishi and Rangpu mountain streams, which successively mark the boundary-line between the district and Independent Sikkim. It is separated from Nepal on the west by the lofty Singalia chain of mountains; on the north-east from Bhutan by the Jaldhaka river, while its south-eastern and southern boundary by the British districts of Jalpaiguri and Purnea.

Darjeeling consists of two well-defined and distinct tracts of country. First, the mountainous tract is that portion of the lower Himalayas which lies west of Bhutan, south of Sikkim and east of Nepal; second, the Terai or plains immediately beneath the hills, and the ridges and deep valleys of the lower Himalayas extending as far as the northern borders of Purnea district.


DISTRICT DARJEELING
0 5 10 MILES
N
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BHUTAN
NEPAL
JALPAIGURI
PHALUT
PULBAZAR
RANGIT R.
DARJEELING
TISTABAZAR
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GILIKHOLA RAILWAY STATION
JALAPAHAR
GHUM
RANGLI RANGLIOT
SONADA
RANOK
LAVA
GIS R.
CHAIL R.
NARCHU R.
KUMAI
GARUBATHAN
TISTA R.
SEVOK
SAVOK MANPU
PANCHANAI R.
MIRIK
KARSIONG
PANIGHATA
GARIDHURA
BALASON R.
MATIGARA
SILIGURI
BAGDOGRA
BATASHI
PHANSIDEWA
KHARIBARI
MAHANANDA R.
LEGEND
INTERNATIONAL BOUNDARY
RIVER
STATE BOUNDARY
RAILWAY LINE
DISTRICT BOUNDARY

Meaning of the names Darjeeling and the Terai

The name Darjeeling is a corruption of Tibetan word 'dorje', the thunderbolt of Sakra (Indra) and 'ling' means, a place. The combined word 'Dorjeling' signifies a place where thunderbolt comes down, that is, Observatory Hill of Darjeeling where once Buddhist monastery was situated. Even to day the Lama holds in his hand during service the emblematic thunderbolt (Vajra) of Sakra (Indra) or the double headed thunderbolt.[4] The name 'Terai' originates from a Persian word signifying dampness.[5]

Influence of climate on Forests of Darjeeling

Four great hill ranges radiate from a central point at Jorbungalow – a saddle 7,372 feet in elevation – situated to the north-west of Senchal mountain (8,600 feet), highest point of the tract. The northern slopes of the tract are drained by the Little and Great Rangit, tributaries of the Tista river, which receives the waters of the eastern face; while the Mahananda and its feeder, the Balason, drain the southern and western portion. The climatic conditions of Darjeeling district are varied, particularly as regards temperature due to its peculiar topography and penetration of air. In the Terai and the lower valleys the heat is tropical, but in the town of Darjeeling the temperature is that of a temperate zone. From 1500 feet to 2000 feet is tropical zone; from 2000 feet to 5000 feet is sub-temperate zone and above 5000 feet is the temperate zone. Nature of trees varies from zone to zone. Thus, average maximum temperature of Darjeeling is 14.7^{θ} C and minimum 8.6^{θ} C. The lowest average minimum temperature is 1.66^{θ} C in January and highest 14.4^{θ} C in July. The average day temperature in the Terai from November to February varies approximately from 15^{θ} C to 21^{θ} C, from 26^{θ} C to 30^{θ} C during the period May to September and during the rest of the year it runs between 24^{θ} C to 26^{θ} C. Average rainfall annually in Darjeeling approximately is 121" and in Siliguri (Terai) is 122". The temperature and rainfall are important factors for the treatment of the forests. The following extract from Mallet's Geology of Darjeeling and Western Dooars (Page 6) gives a good idea of the climate as regards rainfall and its effects on forest growth :-

"The densely luxuriant vegetation by which these mountains are covered, ranging from the matted canebrakes of the Terai, and the India-rubber trees and other tropical forms of the deep valleys, to the oak and pine forests which clothe the highest ridges has been described by Dr. Hooker in his journals. He attributes the heavy rainfall to which such luxuriance is largely due to the fact that the alluvial plain between Sikkim and the mouth of the Ganges is almost a dead level, the foot of the hills being only 300 feet above the sea. Hence the vapour-laden southerly winds from

the Bay of Bengal reach the outer range of hills without impediment; while the same current, when deflected easterly to Bhutan or westerly to Nepal and the north – west Himalays, is intercepted and drained of much moisture by the Khasia and Garro hills in the former case, and the hills of Rajmahal and Chutia Nagpur in the latter. Sikkim is hence the dampest region of the whole Himalaya."[6]

Condition of forests in Darjeeling district before Forest reservation

One of the early prospectors was Lt.-General Lloyd. He visited Darjeeling in 1824.[7] In his description of forests in Darjeeling he said that the hillsides of Darjeeling were clothed from summit to base with vergin forests.[8] When the hill territory was first acquired (1835) the early settlers, and even the officers of Government, were impressed by the great extent of the forests rather than by the benefit to be obtained from them.[9] In April, 1848 J.D. Hooker found outer Himalaya (Terai) clothed every where with a dusky forest.[10] When he reached Punkabaree he saw the mountain 'clothed with forest from the base'; and the little bungalow of Punkabaree 'nestled in the woods'. He also found 'range after range of wooded mountains, 6000 to 8000 feet high'. Beyond Punkabaree he found a 'giant forest' and all around, the hills 'clothed with a dense deep-green chirpping forest'. Even the spurs on to the plains of India 'are very thickly wooded' and 'apparently covered with a dense forest'. At about 1000 feet above Punkabaree he saw gigantic timber.[11]

Occupation of the Terai and Darjeeling (British Sikkim)

E.P. Stebbing in his book 'The Forests of India' (Vol.1) referred to in many places that forest conservancy in Bengal started from British Sikkim. The term 'British Sikkim' needs explanation and from this explanation it will be clear how the forest wealth of Darjeeling came under British control. In the 18th Century Darjeeling and Terai (Eastern Morung) formed part of the dominions of the Raja of Sikkim. Its history is connected with the history of Nepal. The present reigning and ruling families of Nepal descended from Rajputs who fled Chitor on its capture by Mohammedans under Ala-ud-Din Khilji in 1303 A.D. These Rajputs settled at the town of Gurkha whence they eventually made themselves masters of the whole country and gave its name to the warlike and gallant inhabitants. Prithvi Narayan, the king of Gurkha in the 18th century, moved eastwards and occupied the town Nayakot, a few miles outside the Nepal valley, but he was turned out by his overlord king, Jaya Prakasha. At this time there were no fewer than four kings in the valley; their capitals were at Patan, Bhatgaon, Kirtipur and Katmandu and they were of the Malla dynasty of Newars. There were continued quarrels and wars between them; the king of Bhatgaon asked the assistance of Prithvi Narayan, which was willingly supplied, and reoccupied Nayakot;

then entering the valley he laid siege to Kirtipur. At this Jaya Prakasha asked for help from India where the British were consolidating their rule and a small detachment under captain Kinloch was sent up; this weak force suffered terribly from fever during their passage through the Terai.[12] This is the first time that the British saw the Terai forests. However, Prithvi Narayan became king of whole Nepal valley and extended his conquests east and west along the southern slopes of the Himalayas until his kingdom stretched from Almora to Sikkim. He died about 1722. After him the Gurkhas marched east into Sikkim in 1780, and upto 1810 various parts of Sikkim suffered repeatedly from their inroads. At the end of this period, the Gurkhas had overrun Sikkim as far eastward as the Tista river, and had conquered and annexed the Terai particularly the eastern Morung. Thus the belt of the country, lying along the lower hills between the Tista and the Mechi rivers went under the control of Nepal. By this time, owing to a disagreement over the frontier policy of the Gurkhas the British declared war against them towards the close of 1813. Two campaigns followed. The first campaign did not bring anything to the British. In the second campaign General Ochterlony defeated the Gurkhas and made them to sign the Treaty of Sagauli in 1816. By this treaty the Gurkhas along with Almora, Mussoorie, Nainital and Simla ceded the 4000 square miles of Sikkim territory occupied by the Gurkhas to the British. At this stage the British did not understand the value and importance of the area from economic standpoint. But, according to their time-honoured political consideration with the object of hedging in Nepal with the kingdom of an ally, and preventing all possibility of further aggrandizement by the Gurkhas, the British restored the whole tract to the Raja of Sikkim in 1817 by the Treaty of Titalya. However, a provision of this treaty kept it open for British intervention in future. According to a provision the Raja of Sikkim was bound to refer to the arbitration of the British Government any disputes between his subjects and those of Nepal or any other neighbouring state.

Ten years later, disputes arose on the Sikkim and Nepal frontier, which according to the terms of the Treaty of Titalya, were referred to Governor-General. Accordingly, in 1828 Lt.-General (then Captain) Lloyd was deputed to effect a settlement. He along with Mr. J.W. Grants, the Commercial Resident at Malda penetrated the hills, which were still an unknown territory to the British.[13] But H.V. Bayley's view[14] referred to by Fred Pinn does not tally with this. Lloyd in his report of 18th June 1829 claimed to have been the only European to see Darjeeling on his way to Rinchinpong to settle the dispute between Nepal and Sikkim, but it must be assumed that J.W.Grant was the originator of the idea of Darjeeling's suitability as a Sanatorium[15]. Lord William Bentinck has put it on record that to the extreme earnestness of Mr. Grant in his commending Darjeeling he showed interest in Darjeeling to be a future Sanatorium for the British.[16] However, the reports were

very favourable, and second survey was made early in 1830 by the Deputy Surveyor-General, Captain Herbert, once again in the company of Grant. His account was equally enthusiastic and Lloyd (then Lt. Colonel) was ordered to start discreet negotiations with the Raja of Sikkim for acquiring the hill site. Behind this, the major considerations were two : First, the place would be advantageous as a centre which would engross all the trade of the country; second, a position of great strategical importance, commanding the entrance into Nepal and Bhutan. In fact, it was the key of a pass into Nepal territory. The Court of Directors approved the project on the ground that it might prove a valuable depot for the temporary reception of European recruits, and even a permanent cantonment for a European regiment. Mr. Lloyd succeeded in obtaining the execution of a deed of grant by the Raja of Sikkim on 1st February, 1835. The deed ran as follows : "The Governor-General having expressed his desire for the possession of the hill of Darjeeling on account of its cool climate, for the purpose of enabling the servants of his Government, suffering from sickness, to avail themselves of its advantages, I, the Sikkim-Puttee Raja, out of friendship for the said Governor-General, hereby present Darjeeling to the East India Company, that is, all the land south of the Great Rungit river, east of the Balasun, Kahail and Little Rungit rivers and west of the Rungno and Mahanuddi rivers." This 138 square miles (24 miles long and about 6 miles wide) area was known as 'British Sikkim', which according to British source of information 'contained only 100 souls'.[17]

British sources of information inform us that this area included the villages of Darjeeling and Kurseong. These villages were given 'as a mark of friendship for the Governor-General (Lord William Bentinck) for the establishment of a Sanitarium for the invalid servants of the East India Company'.[18] This was an unconditional cession; but in 1841 the Government granted the Raja an allowance of Rs. 3000 as compensation and raised the grant to Rs. 6000 in 1846. Afterwards it was increased to Rs. 12000 per annum.[19] This allowance was finally stopped, in consequence of the Raja's improper conduct in connection with the Sikkim expedition of 1888.[20] But O'Malley did not refer that the amount was ever raised to Rs. 12,000. In this connection he noted that the grant of Rs. 6,000 per annum was withdrawn and the Raja was further punished by the annexation of the Sikkim Terai which was a free gift from the British.[21]

In fact, the cession of Darjeeling was not as simple as reported by Mr. Lloyd or described by O'Malley and E.C. Dozey. If it was taken for granted that Raja of Sikkim was a friend of the British, he could easily demand the release of one of his revenue officers who had absconded with a large sum of money and took shelter in British territory. The Government did not oblige the Raja,

and Lloyd was instructed to cease negotiations. The Raja also could demand the restoration of a territory which had once belonged to Sikkim. But the Raja as a gentleman did not ask to do so though there was no reciprocity of friendship as was expected. When the question of the restoration of Darjeeling arose the Raja replied that he could not possibly take back the deed of grant – a monstrous idea for any oriental to ask for return of a gift. Equally oriental was his expectation of a reciprocal gift. To speak the truth, Mr. Lloyd confused everything. Col. Lloyd, whose lack of sensitivity in human relations was one of his least attractive traits, at last forwarded the deed to Calcutta with the information that the grant was an unconditional gift. He did not point out one gift deserved an equally precious gift in return — and the damage was done.[22] The Raja was not going to forgive such an insult. Relations with the British Government deteriorated. Col. Lloyd misled the Government in all hands. Moreover, neither side had forseen the complications which might arise. The Raja discovered to his surprise some unexpected consequences: he had imagined a few bungalows would be built at Darjeeling but he found a sovereign state within his state where exploitation of forests, cinchona farming and establishment of tea estate would go simultaneously. The British authorities often accused Sikkim Government for violating the chief articles of the treaty signed at Titalya, but they forgot that the British Government violated totally the Deed of Grant (Darjeeling).

Although the British got Darjeeling as a token of friendship from the Sikkim Government, but Terai or Eastern Morung was annexed by them.[23] It was a disputed territory and the causes of conflict lay in its past history. This is a small strip of land, about 288 square miles in measurement and situated at the foot-hills of the Himalayas on the northern side of West Bengal. For centuries it was a cockpit of power struggle between three states, Nepal, Sikkim and British India, towards the close of the eighteenth century.

From the various authorities on the history of Cooch Behar and contemporary records it is known that till the seventeenth century the disputed territory known as Eastern Morung was a part of Cooch Behar Kingdom and was administered by the Baikunthapur branch of the royal family based in present Jalpaiguri town. Perhaps in the fifties of the Seventeenth century due to the weakness of the Cooch Behar Raj the area was annexed by Sikkim. But this possession did not prove durable, for in the wake of Nepali expansionism after the Gurkhas came to power in the middle of the eighteenth century, all vestiges of Sikkim administration in the Eastern Morung were wiped out during 1770-86.[24]

The British were aware of the importance of this region even before warren Hastings' period. Thomas Rumbold, the Patna Chief, first noticed it and, being concerned about the clandestine Nepali trade through this region, proposed in 1767 to initiate effective measures to stop this trade.[25] Captain Jones also tried to persuade Warren Hastings to annex the western bank of Mahananda after he realized its strategic importance while chasing the Sannyasis and Fakirs.[26] An illicit arms trade to Nepal through this area was also known to the British. Over and above, the Court of Directors in London became for some time quite interested in Morung for its timber.[27] Still upto 1786 the British did not want to have a conflict with Nepal over this region. By 1786 the Nepalese under the leadership of one Gangaram Thapa withdrew from this area, but it remained an arena of conflicting claims between Nepal and Sikkim. By 1788 the Nepalese failing to occupy Sikkim again entered into the Morung region. At this stage, the British understood fully the commercial value of this area. They thought to link British trade with Tibet through Sikkim .Hence Captain Latter of the Bengal Army was asked to proceed to Sikkim to help its ruler in all possible ways against the Nepali invaders. In the spring of 1815 the British Army entered the Morung and established contact with the Sikkim authorities. The Sikkim government agreed to co-operate with the British and it was decided that Sikkim would get arms and ammunition from the English to thwart the Nepalese in future, and the lost territories would be restored to them. Against this Sikkim would serve as a link between Calcutta and Lhasa.[28] This led to the extension of the Anglo-Nepalese War (1814–16) which ended in the Treaty of Sagauli in 1816. By another treaty signed on 8th December 1816 Nepal ceded the territory between the Singalia range and the Tista river to the Company.[29] This region was then handed over to the Sikkim Government by the Treaty of Titalya (1817) in 'full sovereignty'. But the subsequent modification of the Treaty did not satisfy the Sikkim puttee Raja and thorn was there in their relations. In fact, Darjeeling grant (1835) and modifications of the Treaty of Titalya kept bitter relations between Sikkim and British India. At this backdrop, Dr. Campbell and Sir Joseph Hooker's arrest by the Sikkim Government was an excuse for annexing Terai or Eastern Morung. Both of them were arrested in November 1849 and released on 24th December 1849, and Terai was occupied and annexed in 1850 during the period of the great annexationist Lord Dalhousie. In fact, when Terai was annexed there was no case at all to annex the region except the naked policy of annexation of the British. Thus an area of 'free gift' was taken back from Sikkim which was the only lucrative or fertile estate the Raja of Sikkim possessed.[30] Probably timber wealth, possibility of establishing Tea Estate and Tibet trade made it a compulsion on the part of the British to bring this region under their direct control. The British had information before 1865 that there were about two or three thousand acres covered with valuable Sal on the

bank of the Rangit. For a part of this Major Wardroper held a lease rent- free for fifteen years, on condition that one-fifth be brought into cultivation in ten years. The lease was dated from the 8th November 1854.[31] Secondly, it is undeniable that Major Robert Bruce's discovery of indigenous tea plants in Assam in 1821 and subsequently by Mr. Scott in 1824 led to the development of the tea industry in north-east India, at first under government initiation and from the foundation of the Assam Tea Company in 1839, entirely by private enterprise.[32] It is known from British sources[33] that in 1834 the Governor-General, Lord William Bentinck, had appointed a committee "for the purpose of submitting a plan for the introduction of tea culture into India." This committee was appointed one year before the occupation of Darjeeling and sixteen years before the annexation of Terai or Eastern Morung. It is unbelievable that the British Government was ignorant of the discovery of indigenous tea plant in Assam, and how is it possible that from this base of ignorance in 1834 'Assam Tea Company' was established within three years in 1839? Moreover, if there was no prior knowledge of the possibility of establishing tea estate a committee for that purpose could not be appointed. British sources further state that in 1840 Dr. Campbell was transferred from Katmandu to Darjeeling, and there he started the experimental growth of tea.[34] No doubt, by this time they found the soil of Darjeeling and Morung favourable for the cultivation of tea. Experiment was successful in 1852, and by the year 1856 the tea industry began to develop on an extensive scale, especially on the lower slopes. It was a commercial enterprise since 1856.[35] In view of this, conclusion may be drawn that behind the occupation of Darjeeling and Morung the British Government had a secret plan to establish tea gardens in these regions. They suppressed this fact to the Sikkim Government. But they did not suppress two things: (i) Darjeeling and Morung were essential to link British Indian trade with Tibet; (ii) this area was essential to keep Nepal and Bhutan in control. So, the British were not so innocent as they posed themselves before the occupation of Darjeeling and Morung. Thus to say the least, the British rulers were not only charmed by the places but potentiality of the places from the points of tea, timber, trade and strategic importance compelled the British to own it. And they used the famous 'British Twist' and forced the then ruler of Sikkim to gift (out of friendship?) hamlet of Darjeeling to Lord Bentinck[36], and using tactics occupied Morung. Still, there were subsequent raids into the British territory but ultimately a treaty was made in 1861, which finally put an end to all troubles with Sikkim.[37]

In this way the area acquired was full of forests, and valuable trees were available there. But in Bengal till 1862 nothing had been done in the matter of forest preservation or scientific exploitation of forests. By 1862 the British Government was confronted with two problems and for their solutions they showed interests to Bengal forests. Firstly, Calcutta used to import its timber for

dockyards and other purposes for long years from the northern India and Burma. By this time the supply of timber and specially of good quality almost dried up. Secondly, the price of the fire-wood and timber had greatly increased. Whether these requirements can be met by exploiting local resources, and possibilities of importing produce from such forests were the concern of the Government. To get these information Sir Dietrich Brandis, a German, who was in Burma, was requested by the government. Brandis made a tour through part of the forests of Bengal and discussed the questions of a future policy with Dr. T. Anderson, the Superintendent of the Botanical Gardens in Calcutta, towards the end of 1862. This was the beginning of forest conservancy in Bengal and the work was mainly done by Dr. Anderson. Both of them agreed about the potentiality of the forests of British Sikkim and thought that the problems faced by the government could be partially solved by exploiting the forests of that area. In January 1863 the Government of India showed interest about Bengal forests and requested the Bengal Government to give its attention to the conservation of forests under its jurisdiction. The Government of India was also interested to know the best course to be adopted in placing the forest administration on a more efficient footing. The Bengal Government and the Government of India considered almost everything. The idea took a shape when in 1864, Dr. T. Anderson was temporarily appointed as Conservator of Forests, Lower Provinces, in addition to his other duties. He was particularly selected since he was already in charge of the Government cinchona plantations in Darjeeling hills and had knowledge about the forests of British Sikkim. It got an organizational face when the office of the Conservator of Forests in Calcutta was commenced in January 1865.

After his appointment as Conservator of Forests Dr. T. Anderson put 13 questions to all Commissioners of the then Bengal through the Under-Secretary to the Government of Bengal to get available information about the forests of Bengal. This was issued on 21st September 1864 from Darjeeling. Mr. J. Geoghegan, Under-Secretary to the Government of Bengal forwarded this questionnaire to all commissioners and requested them to furnish, as early as practicable, with the information required directly to Dr. Anderson.[38] The questionnaire was prepared meticulously to know from each division the nature of forests — their area and situation, legal position — Government property or Private property, whether forest conservancy did exist in Government property — its nature and management, botanical or native names of the trees available, collection of forest revenue directly or indirectly, whether any leases ever been granted to cut timber, if so, the terms of the leases, names of the rivers or streams, except the Ganges, used for the transport of timber, information about hauts or fairs at which timber was sold and the price of the various timbers, nature of the fire-wood, its price and to whom do they belong, whether the villagers had

any right of cutting fire-wood and bamboos in forest and jungle land — nature of such rights, whether there were any estates under private property of zamindars or owners were minors under the guardianship of Government, and lastly, whether cultivation analogous to kumari or joom (Jhoom) method was prevalent in divisions.

Of these questions, No. 5 was 'What revenue is derived, directly from the forests in your districts? This refers only to such revenue as can be called forest revenue, such as that derived from timber, and licenses to collect other forest produce as gums, dyes, caoutchouc, bees wax, honey, or to manufacture charcoal.'[39] Question No. 8 was 'Are there any hauts or fairs at which timber is sold? Can you supply me with any statement of the price of the various timbers sold at them?' Most of the Commissioners answered to the question No. 5 in the negative. Commissioner of the Santhal Parganas as an answer to the question no.5 informed the Conservator:

"A lease has been granted to Gudadhur Boral to cut sleepers for the Railway at 4 annas per sleeper. This lease extends only to Doomka and Godda.. In Pakour Rupees 382 has been collected under a lease granted to Dhurum Doss Haldar, for cutting sleeper for the Railway. In Rajmahal Rupees 630 were derived last year for the rights to cut firewood."[40]

Answer to the question no. 8 was: "No hauts or fairs where timber is sold. In Pakour firewood is sold near the river side at Rupees 12–8 per 100 maunds. The firewood markets in the Rajmahal division are at Katgola, near Teenpahar, Surkunda, Phoodkeepore, near Oodwa Nalla, and Suckreegully. The price ranges from Rupees 6 to 12 per 100 maunds."

The Collector of Shahabad district informed the Commissioner of Patna Division, "The revenue derived from the forest tracts of this district amount to Rupees, 1, 934 – 12 per annum ....."[41]. The Commissioner of the Rajshahi Division as answer to the question no. 5 wrote that no revenue was derived directly or indirectly, from any of the forests by Government. As answer to the question no. 8 he informed the Conservator, "There are no special hauts in which timbers are sold. They are, however, procurable in almost all large bazaars in every district in my division, viz., Singrah in Rajshaye, Nemansurai in Maldah, Julpigoree in Rungpore, Chapgattee, Bhugwangolah, Jellingee, Devipore, Azimgunge, Jeagunge, Ellahegunge and Berhampore in Moorshedabad. Besides the above there are several places on the banks of large rivers in which timbers are sold, though no haut or fair is held there. The price of timber varies in different places. In Moorshedabad timber known by the names chowker and dokers is sold from Rupees 78 to 22 each, according to size and quality. In Bograh dhoom 4½ cubits long and 2¾ cubits in

circumference fetches Rupees 6, dustee 10 cubits long and two in circumference Rupees 5, and Gujaree 10 or 12 cubits long and one in circumference annas 8 to 12. In Rungpore the price of timber of small size varies from 3–8 to 7–8, dokers and chowkers are sold at from rupees 7–9 per hauth in circumference. Sissoo wood is sold at from rupees 5 to 7 per pair. In the districts of Rajshahye, Pubna and Maldah the prices vary from Rupees 2½ to 40, according to the size and quality of timbers."[42] The price of fuel varied in different places from 2 annas to 8 annas per maund. No revenue was collected from Bankura, Birbhum and Midnapur but timber was sold in different places in these districts and in Burdwan Division. From Birbhum it was known that the price of a cubic hauth of Sal would probably cost one rupee, and a moul piece 8 annas. In 24 Parganas the average price of firewood was from 3 to 4 maunds per rupee. The Commissioner of Sundarbans noted against question no 5 that a revenue of rupees 110 was realized on a license to collect bees wax and honey in Dullooah, Burgonah, and Nultonah; also rupees 25 for the privilege of cutting timber in Nultonah. These forest tracts were situated in the Bhakhargunge portion of Sundarbans. The condition of timber trade in Midnapur is known from the report of Captain Swayne, Executive Engineer. He informed the collector, "The timber trade in the district of Midnapore is an important one as it meets the requirements of almost the whole district. The consumption of the supplies of the several markets is confined chiefly to the district. The investments of dealers of timber in this district may be roughly calculated at nearly two lacs of Rupees." He further noted that low jungles supply firewood and their roots were burnt and converted into charcoal. He also informed him about the range of prices: "The prices of unsquared logs of all Sal and Peasal (from 12 to 20 feet in length) vary from 8 annas to 13 annas per curra (a curra is equal to ¾ of an inch of the diameter of the section of the butt)"..... "and a log of abloosh or ebony is about twice that of a log of Sal or Peasal of the same dimensions".[43] Dacca Division informed the Conservator that there were two hauts for the sale of Gujaree timber, one at Kasimpore and other at Mallikharee. There were eight bazars in Sylhet where different kinds and quantities of wood were sold. It was a detailed report.[44] From Cachar it was known that revenue was derived by establishing a custom ghaut on the river at which all rafts being floated down have to pay duty for each timber etc. The Deputy Commissioner of Cachar informed Dr. Anderson about the revenue collected and expenditure thereon as follows:[45]

Year	Revenue	Expenditure
1860 – 61	Rs. 12,300	0
1861 – 62	Rs. 15,000	0
1862 – 63	Rs. 15,000	0
1863 – 64	Rs. 10,700	0
1864 – 65	Rs. 8,000	0

There were also bazars at Soonai Mook, Burkhola, Bundookmara and Sealtekh in Cachar. From Tributary Mehals, Cuttack it was known that there were may centres where various timber was sold and prices varied according to the quality and nature of the timber. The Superintendent, Revenue Survey Chotonagpur Division provided Dr. Anderson with an information in 1864 about Hazaribagh district which ran "The best trees have nearly all been cut, and great havoc has been made during the last ten years on the forests of this district, which have supplied a vast amount of wood for the East Indian Railway and for building purposes."[46] The same report came from Manbhoom that the best timber of that district had been cut for railway sleeper.

Darjeeling was then under Bhaugulpore Division. As answer to the questions of the Conservator of Forests the Divisional Commissioner of Bhaugulpore gave him first a general picture of Darjeeling forests as it stood in 1865. According to this statement "The jhars in the Terai contain a quantity of sal, and the banks of the river some sissoo. Of the former I should say there are about 12,000 acres, but they also contain a large proportion of valueless trees. The upper part of the Terai, amounting to about 50,000 acres, is also, to a great extent, covered with, as far as I know, valueless jungle; there are about two or three thousand acres covered with valuable sal on the bank of the Runjeet. For part of this Major Wardroper holds a lease rent-free for fifteen years, on condition that one-fifth be brought into cultivation in ten years. The lease was dated from the 8th November 1854, and none of the land has been cultivated the whole may now be resumed. The tract is described five miles along the bank, 700 yards depth, to commence from the junction of the Little and Great Runjeet. It is limited to 1,200 acres. The rest of the sal is on land which has been surveyed as included in a lease to Mr. Barnes, but it does not fall within the area to which he has right and is, therefore, available. By a recent order all land in this district above 6,500 feet elevation has now been reserved for timber. There may be some sixty to eighty thousand acres in all, but I have no means of estimating the area."[47] He further intimated to him that most of the forests in Darjeeling were the property of the Government, but no forest revenue directly or indirectly was derived from these forests. Leases were given to procure timber only, but no licences were issued "to collect other forest produce, such as gums, dyes, caoutchouc, bees wax, honey, or to manufacture charcoal". It was also noted in the report connected with Darjeeling, "the only river ever used for the transport of timber is the Mahanuddee, which was made use of for the transport of sal railway sleepers."[48]

From these information some points are clear. First, before the introduction of forest administration in Bengal there were many timber markets in different districts and parganas of

Bengal. Second, the Government without doing anything either for preservation or development of the forests collected revenue from the forest products. Third, for the expansion of railways sleepers were produced by the government through contractors and thereby indiscriminate felling of woods, destroyed many forest tracts. Fourth, selling of fire-wood and timber was one of the occupations of the people of Bengal. Fifth, commercialization of forests in the true sense of the term did not begin in and around 1865 but the system of local sale prevalent during the period showed that there were potentialities for developing such infrastructure in Bengal. Sixthly, in Darjeeling rent-free lease system of forest operation was prevalent and some forest tracts were reserved before the first Forest Law of 1865 was passed. Lastly, the river was used for the transport of timber from hills to the plains and the system of the sale of timber in hats or bazars was in vogue even before 1865.

Implementation of Forest Law of 1865 in British Sikkim (Darjeeling)

Thus collecting all available information about Bengal forests the British proceeded to implement the first Forest Law in British Sikkim. The organization of the office of the Conservator of Forests was started in Calcutta in 1865 when three divisions, viz., Sikkim, Bhutan and Assam each under the superintendence of an Assistant Conservator of Forests were proposed but only one forest division, namely, Sikkim Division was sanctioned by the Government of India.[49] I - It was decided that the administration of the forests of British Sikkim 'will be vested' in the following officers:-

1st – The Conservator of Forests.

2nd – His Assistants.

3rd – Subordinate Forest Officers, viz., Overseers, Darogahs, Jemadars, Duffadars, Forest-Watchers and Peons. It will also be the duty of all Police Officers to watch over the observance of the rules, and to afford every assistance to the Forest Officers in the exercise of their duties.

II – Within the limits of the forests, the marking, girdling, lopping or felling of trees, shrubs, bamboos, or canes, and the removal, or attempted removal, of any natural produce of the forests, except with permission of the Conservator, is absolutely prohibited under the penalty of confiscation provided by the Act.

III- Within the limits of the forests, the grazing of cattle, the burning of lime or charcoal, and the lighting of fires is absolutely prohibited, except with the permission of Conservator of Forests. Any one found so doing shall be arrested and shall be liable, after conviction before a Magistrate, to a

fine not exceeding 50 Rupees, or in default, to imprisonment for a period not exceeding fourteen days.

IV- The arrangements for the sale and cutting of timber in Government Forests shall be made by the Chief Local Forest Officer, subject to the approval of the Conservator of Forests. No timber trees shall be cut that have not been marked for felling by Forest Department. Ryots, however, dwelling near a Government Forest shall be permitted, by the Local Forest Officer, to remove grass, bamboos and timber, except Sal (Shorea Robusta), Sissoo (Dalbergia Sissoo), Kala Sissoo (Dalbergia Latifolia), Chalaunee (Gordonia Species), Chestnut, Oak, Magnolia for building or thatching native dwellings.

V – Cultivation in Government Forests of roots and grain of any kind, except in tracts defined by the Local Forest Officer, and on the payment of the rent usually levied from squatters in the district, is prohibited. Any infringement of this rule will be punished, after conviction before a Magistrate, by a fine not exceeding Rupees 50, and confiscation of the crop, or, in default, by imprisonment not exceeding fourteen days.[50]

In addition to these some other rules were also implemented in British Sikkim. It is notified that no sale of timber shall be considered as concluded, and no timber is to be delivered on account of the same, unless the full amount of the purchase-money has been paid to the Forest Officer conducting the sale. The sale will hold good for a certain period. Timber not removed from the forests within the time fixed, whether paid or not, remains the property of Government. Such sales do not require the approval of the Conservator of Forests, but may be concluded by the Forest Officer in charge of the Division.

The rules also note that parties requiring timber in large quantities, either from the temperate or tropical forests, may receive permits or licenses to purchase the seasoned timber standing or lying in the forests. This timber will remain the property of Government until the full amount of purchase-money is adjusted. Sales of timber under this rule are not be concluded for a longer period than three years. Beyond this time-frame timber not brought away, whether paid or not, will remain the property of Government. The sale of large quantities of timber cannot be concluded without the written sanction of the Conservator of Forests, Lower Provinces, although the Assistant Conservator may conduct the preliminary arrangements for the sale.

The rules further note that persons permitted to cut timber in Government Forests will be required to register in the office of the Assistant Conservator of Forests, British Sikkim, a specimen or 'fac simile' of the brand or mark wherewith their timber shall be marked under the superintendence of the Forest Officers. A fee of Rupees 10 will be charged for the registration of a mark or brand. The use of private individuals of the Government timber brand, or of any other brand already registered for use in the division, is prohibited, and any person found using a property mark other than his own, or effacing any property mark from timber, either in the forests, or in transit from them, or from timber floating in the river, before such timber has paid the duty, will be liable, on conviction before a Magistrate, to a fine not exceeding Rupees 500, or, in default of payment, to imprisonment for a term not exceeding six months.

The rule enforces that all timber which may be transported by the rivers Teesta, Mahanuddee, Balasun, Meech and Kunkaie, will be stopped at the stations of the Forest Department for the purpose of levying fees payable on such timber at rates to be published hereafter. No rafts or timber will be allowed to pass or quit these examining stations until a pass has been given by the Officer in Charge of the station after payment of such rates.

It is further enforced that all drift and unclaimed timber, and all timber found floating in the above mentioned rivers without a registered brand or mark will be confiscated to Government.

The Conservator of Forests, in granting permission or licenses to contractors or others to cut timber in Government Forests, will bind them by such conditions regarding time and route of removal, method of cutting up the timber into logs, sleepers, or scantlings, protection from fire, and etc., as he may deem necessary for the prevention of waste economizing the supply of timber, and the safety of the forest. If such conditions are not observed, the timber will be liable to confiscation.

River or road borne produce passing a post established for the collection of duties under this rule will be exempt from duty if it be shown that such produce was grown or collected in private forests, or that it was bought from the Forest Department, or has already paid forest duty elsewhere. These exceptions are not applicable to foreign timber or forest produce.

No Forest Officers shall engage in any other employment or officer whatever other than his duties under these rules, unless expressly authorized to do so in writing by the Conservator of Forests.

The principal Forest Officer of the division shall be responsible for the payment monthly into the principal treasury of the district of all money received by him in payment for the timber or forest produce of the division. No Forest Officer subordinate to the officer in charge of the forests of the division shall be authorized to grant receipts for forest revenue without the countersignature of the principal Local Forest Officer.

Any subordinate Forest Officer who shall be guilty of any violation of duty, or neglect of any rule or regulation or lawful order, made by a competent authority for his guidance in matters connected with guarding the boundaries of forests, the marking, girding, or felling of trees, marking and passing of timber, the reporting and preventing of offences against the forest rules, or who shall engage without authority in any employment other than his forest duty, or who shall withdraw from the duties of his office without permission, or without having given previous notice for the period of two months, shall be liable, on conviction before a Magistrate, to a penalty not exceeding Rupees 250, or, in default of payment to imprisonment for a term not exceeding three months.

Lastly, all contracts, licenses, permissions granted to parties to exercise any privilege, or to do any act in forests under the preceding rules, must contain a condition that infringement of any general rule or special provision will entail forfeiture of such contract, license or permission, and also of any wood or forest produce marked out or gathered, provided it is still within the limits of the forest.[51]

These rules applicable to the Government Reserved Forests of British Sikkim are bounded and limited as follows:-

Within the Hill territory of Darjeeling —

1st. — All forests situated above an elevation of 6,000 feet above the sea, and including the cantonment lands of Jellapahar and Sinchal.

2nd. — The forests in the Lebong Hill, and included between Mr. Grant's location and Ging.

3rd. — The Sal Forests in the Valley of the rivers Great Rungeet and Teesta to an elevation of 3,000 feet above the sea. In the valley of the Teesta, these forests extend on both banks of the river to an elevation of 3,000 feet above the sea.

4th. — The forests on the outer range of hills bounded by the base of the hills, and a line drawn at an elevation of 3,000 feet above the sea.

5th — The Sissoo and Sal Forests of the Terai, as defined on the Map, and demarcated by the boundary pillars, used by the Forest Department.[52]

The rules prescribed for the Government Forests in British Sikkim were framed in the spirit of the Act VII of 1865 which allowed local governments to promulgate local rules, and to notify any land covered with trees, brushwood or jungle as a government forest. The Government of India confirmed the said rules "for the betterment and preservation of the government forests in British Sikkim", in accordance with Section 6 of the Act, published in the Gazette of India.[53]

It is interesting to note that the draft proposal prepared by the office of the Conservator of Forests, Lower Provinces in 1865 was not accepted in toto by the Government of India. Through the Government of Bengal the proposal was sent to the Secretary to the Govemment of India in the Public Works Department with a request that His Excellency (Viceroy) in council may be moved to give confirmation to the rules submitted by the Conservator of Forests. Then the Secretary to the Government of India P.W. Dept., sent the proposal to the Advocate General to know the rules contain anything contrary to the Law, and whether they are in accordance with the Act VII of 1865, and as such the Advocate General was requested to recommend for confirmation.[54]

The Advocate General wrote, "It appears to me that the first seven rules should be omitted : they have been framed without sufficient attention to the provisions of Act VII of 1865. That Act gives the definition of "Government Forests" as "such land covered with trees, & c., as shall be declared to be subject to the provisions of the Act." Accordingly, it is a condition precedent to the introduction of any Forest Rules that there "should be a Notification in the Official *Gazette* defining the lands which are to become subject to the provisions of the Act." He continued "It further appears to me that there is no substantial purpose by the proposed distinction between "Reserved" and "Unreserved" Forests, and it may be doubted whether any such distinction is warranted by Act." He further noted "I have made some verbal alterations in the rules with reference to the following points. The Act (somewhat strangely as it appears to me) gives no power to impose penalties in any case where the Act itself provides for confiscation; and, therefore, I have been obliged to strike out the (present) XIX and XX Rules. I should have thought that the confiscation, and fine or imprisonment, ought to have been cumulative. I am of opinion that, under section 67 of the Penal Code, imprisonment in default of fine, the offence not being substantively punishable, except by fine, must be simple imprisonment." The Advocate General concluded "I do not understand the use of the word "Unreserved" in Rule XVI, nor of the word "Reserved" in Rule XII.

They appear to be used in some sense different from that in which they are used in the earlier rules which I have struck out. If the duties are intended to be payable in respect of timber and produce cut and collected on lands which may be hereafter leased or sold under the Waste Land Rules, it should be so stated; and if "Reserved" timber means timber cut on waste land which has not been leased or sold, that should also be expressed."[55]

It seems that there were various defects and lacunas in the proposed rules framed for British Sikkim. The Government of India took into account the criticism of the Advocate General, and after some changes and modifications confirmed the Rules on 15th August, 1866 prescribed for British Sikkim which would be the model for the forest rules in Lower Provinces for a few years. The Advocate General's observations on the Act VII itself was also considered in future. However, the Advocate General was not the only person to find defects in Act VII of 1865. Mr. Brandis found the Act very defective and explained in a revised Bill and a Memorandum very clearly the necessity for new legislation in 1868.[56] The main deficiencies were those noticed by the Hon'ble Mr.Hope in the viceregal council which met on the 6th March 1878:

"It drew no distinction between the forests which required to be closely reserved, even at the cost of more or less interference with private rights, and those which merely needed general control to prevent improvident working. It also provided no procedure for enquiring into and settling the rights which it so vaguely saved, and gave no powers for regulating the exercise of such rights without appropriating them. It obliged you, in short, either to take entirely, or to let alone entirely. On control over private forests, in the general interests of the community, it was absolutely silent. For duties on timber, even those actually levied, it gave no authority. Protection for Government forests, so interlaced with private ones as to be in chronic danger of plunder, there was none. In various minor points also it was deficient."[57]

The Act VII of 1865 was the mother of the Forest Rules for British Sikkim. But the Act's major or minor defects could not in any way do any harm to the forest management in initial stage in British Sikkim since there was no Zamindars in British Sikkim, and as such there was no private forests in British Sikkim. But the 'Rongs' or Lepchas used to live there and were dependent on forest land and forest produce. Yet, the Rules framed for British Sikkim said nothing specifically about their rights. They were not ryots but original inhabitants of the area. The ryots were allowed to remove grass, bamboos and timber of inferior quality for building or thatching native dwellings.

But they were not allowed to use superior timber like Sal, Sissoo, Kala Sissoo, Chestnut, Chalaunee, Oak, and Magnolia. In nowhere the rights of the Lepchas were specifically mentioned.

However, it is to be noted that the first reservations were notified in the official Gazette on 13th July 1865 according to the provisions of Act VII of 1865 in the forest areas of the present Darjeeling Division as well as the Sal forests of the Terai districts reserved from sale under the Waste Land Rules.[58] In British Sikkim the entire control of the reserved forests, under the Rules dated 15th August 1866 was placed in the hands of the department.[59] But some problems of Darjeeling Forests were not solved in 1866. H. Leeds, Conservator of Forests, Lower Provinces in his Forest Administration Report for the year 1867–68 notes that there is a fine tract of Forest about 12 square miles in extent, called the "Goom Pahar" near Darjeeling, whence most of the local supplies have been drawn for some time past. This tract is worked and managed by the Darjeeling Municipality. It has been proposed to transfer this forest to the Forest Department, but the terms cannot be agreed upon at present with the Municipality.[60]

It is also known from Mr. Leeds' Forest Administration Report for the year 1867-68 that all timber upto 1868 has been worked out by direct Government agency; but it is hoped that permit-holders will, in time, be induced to enter and work the Forests, by which the Departmental Establishment will be relieved from a mass of work and accounts, occupying time which should be employed in conservancy matters.

During this period the work was carried on entirely by Nepalese coolies, who used to come during November and December at the foot of the Hills, sometimes to the number of 1,700 to 2,000 at a time. They used to return for the most part to their own country again in May, when the operations closed for the season and the climate became very unhealthy. Some few instead of returning home used to go up into the Hills and were employed on plantations and felling and stacking timber in the temperate Forests. It was hoped by the forest administrators that many of these people would gradually be drawn along the base of the Hills and be induced to settle on the lower slopes, by which labourers would become more easily available than it had hitherto been. These coolies suffered a great deal from fever, of which they were greatly in fear. But they readily accepted European treatment, and it was proposed next session to have an Apothecary stationed among them near the Teesta to treat them at once when they got sick or met with accidents.[61]

The implementation of the Act VII of 1865 proved beneficial to the Forest Department since the yield of the forests in British Sikkim increased. Schedule no 4 gives information concerning the timber extracted from the Forests in British Sikkim during the year 1867–68, viz.:-

Logs	No. 5,580
Sleepers	No. 30,638
Planks	No. 1,503
Shingles	No. 4,70,110
Scantlings	Running Feet 36,484

Forest collections yearly were also increasing. Conservator of Forests reported, "It is satisfactory to observe that the collections on Forest produce are annually increasing, and there is very reason to believe that they will yet increase considerably, as they attract more attention before they attain to an average amount."[62] But the progress was not uniform in British Sikkim. In the Annual Forest Report for the year 1869–70 prepared by H. Leeds, Conservator of Forests, L.P., Bengal, it was noted "Two hundred and eighty seven logs and 5,567 sleepers were floated down from Ryeng, a forest depot above the rapids in the Teesta, to Sivok depot, situated at the exit of the river from the mountains into the plains; but of these only 81 logs and 5,355 sleepers arrived at Sivok. The loss in transit is therefore still very large, causing both waste of material and labour, the large portion of which falls upon Government. Until some better means of extracting timber from the forests above the rapids has been discovered, work in these localities must cease."

By 1870 the forest areas under the control of the British began to be reorganized. It has already been said that after reservation in the year 1865, the forests between the Mechi and the Tista constituted the Sikkim Division. In the year 1870, the forests of Darjeeling and Jalpaiguri districts were lumped together and put in one charge called the Cooch Behar Forest Division. Administration of this charge was felt to be difficult and in the year 1874, it was split up and the Darjeeling Forest Division was opened with the forests in that District. In 1877, Kurseong sub-division was opened under the administrative charge of the Divisional Forest Officer, Darjeeling Division, with the forest tract dealt with in this plan excluding Mahaldaram and Chattakpur Blocks. In the year 1890, the Kurseong Forest Sub-division was formed into an independent Division. In the year 1891, the Sivoke Hill forests which had been under the control of the Tista Division since 1881 was

transferred to Kurseong Division. In 1910 and 1919, the Mahaldaram and Chattakpur Blocks were transferred to the Kurseong from Darjeeling Division.[63] In the same way, for the better administration of forest operations in 1877 the Tista Division was formed from a part of the old Darjeeling Division. It comprised the forests in the Valleys of the Tista and Great Rungeet Rivers and in the Daling Sub-division of the Darjeeling District.[64] In 1878 A.M. Mackenzie, Secretary to the Government of Bengal wrote, "This division has not yet been fully formed. A large area in the Daling sub-division is about to be added to it, which will raise the area from the present figure of 61 square miles to 255 square miles. It will then be subdivided into two charges — (1) The Teesta division, with 132 square miles, and (2) The Daling division with 154 square miles."[65] If these two areas are added together the total square miles goes upto 286 square miles; but Mr. Mackenzie notes that the total area of the Tista division will raise to 255 sq. miles. It is short of 31 sq. miles. Where from these areas will be added to the Tista division is not clear from the report. Be that as it may, Dr. W. Schlich, Conservator of Forests, L.P. Bengal in his Progress Report of Forest Administration in Bengal for 1877–78, lays stress upon the necessity of dividing the forests into small manageable charges.[66] In 1879 the Tista division was renamed Kalimpong Division, and the Forest Department took over the charge of it between 1879 and 1881. The First working plan for the division was prepared in 1896 for a period of 10 years. In 1901 a separate plan was written for the forests in the Mal block which covered 6,107 acres. This was in force upto 1905 when the Second Working Plan was written for the whole division on the expiary of the First working Plan. The Second Working Plan (1906-1921) divided the whole division into 6 working circles, namely, Tista, Chel, Lish, Neora, Jaldhaka and Pankasari.[67]

Meanwhile a more comprehensive Indian Forest Act VII of 1878 was enacted in supersession of the First Forest Law of 1865 and fresh notification was issued notifying all the Reserved Forests under the Act. Under this Act attempts were later made to introduce regular methods of treatment in small sections of the forest. In 1882, Mr. Gamble prepared a working scheme for the Sukna working circle under Kurseong division which comprised only the following blocks: Chamta, Adalpur, Kynanuka, Rungdong, Sukna and Kuklong. The scheme prescribed "small thinning", "improvement thinning" and "selection felling", also cultural operations, such as freeing plants from climbers and artificially stocking blanks. No copy of this scheme being available the exact nature of the operations indicated by the above terms cannot be ascertained. The yield was fixed by volume combined with area, except for the "selection felling" for which the yield was determined by number of trees with an area check. Thus every operation was sought to be

rigidly controlled. The scheme was worked for seven years with certain modifications consequent on the realization that the yield had been fixed too high, and was abandoned in 1890.[68]

In 1887, Messrs. Chester and French jointly drew up a working plan for the Bamanpokri forests under Kurseong division. This plan divided the forest into two working circles. The steep hill in the north of the block formed a working circle to be treated by a so called "selection method" which consisted in the removal of dry trees only on a 9 – year cycle. For the rest of the forests successive regeneration fellings were prescribed. The yield was fixed by volume. The plan failed for lack of demand and was dropped after 2 years.[69] In 1882 Mr.Gamble drew up a scheme of working in Dhobijhora forest under Kurseong division, but it soon fell into abeyance because the demand was too small to make regular working possible.

Above experiments in small forest tracts show that the Forest Department was carrying on trial and error method even after the enactment of the Act of 1878. The department failed to estimate the demand of different timber and naturally the Forest Department was suffering from losses. This was because of the weakness of the planning which could not be termed as scientific. In view of this a regular working plan for the forests of Kurseong Division was drawn up by Mr. Hatt in the year 1902 which was carried out till 1918. The forests of the three Ranges were placed under two working circles — Eastern and Western Ranges under Sukna working circle and Kurseong Range under Kurseong working circle. The Sukna working circle was subdivided into two Felling Series, viz., Terai and Hill. Selection and improvement fellings were prescribed in the Sukna working circle with a felling cycle of 15 years. The yield was fixed by number of trees. The improvement felling also included removal of inferior species interfering with Sal or any other valuable species to meet the fire-wood and box-planking demand of neighbouring tea estates and the fellings were sought to be arranged so that they might extend, in about 5 to 10 years over the whole area capable of being worked to meet the demand in question. The result showed improvement. All work concentrated in one Range to the entire exclusion of the other during one-half of the felling cycle. Still, there was a fly in the ointment. Cultural operations that should have ameliorated to a certain extent the conditions engendered by heavy fellings were not effectively done. The prescriptions seemed wise but were not properly carried out.

Almost similar method was adopted in various circles in Kalimpong Division. The Second Working Plan for the division which was in force from 1906 to 1921 prescribed selection fellings combined with improvement fellings on a 15 – year felling cycle. This was applicable to Tista,

Chel, Lish, Neora, Jaldhaka and Pankasari working circles. Each working circle was divided into a number of annual coupes and the number of Sal trees over a minimum girth of 6 feet 4 inches which could be removed from each coupe was laid down. Selection fellings of miscellaneous species were prescribed passing twice over each working circle in 15 years. The above prescription for Sal were fully carried out in respect of the number prescribed for removal though there was a tendency on the part of the marking officer to take the required number of trees from that part of the annual coupe which was first visited. Improvement fellings were in deficit as before, due to a lack of demand. However, fellings were carried out upto the maximum limit where the demand was upto the supply. The result of these fellings was to increase the stock in certain localities where the subsequent cultural operations had been properly carried out, but, elsewhere, the areas were quickly covered by an impenetrable mass of creepers to the exclusion of all regeneration.[70] Such measures were taken in forests near Darjeeling, namely, Sinchal, Mahaldaram, Takdah, Tasiding, Posambing, Mim and Nagri working circles. All this was done in the spirit of the Forest Act of 1878 and Forest Policy of 1894.

After the passing of the Forest Act of 1878 a working plan was drawn up for the period 1880 to 1890. This was originated by Sir Dietrich Brandis, then Inspector-General of Forests, who visited the Darjeeling Forests in 1879, and embodied his recommendations in a pamphlet entitled "Suggestions regarding the management of forests in the Jalpaiguri and Darjeeling Districts, Bengal, dated Simla, the 1st November 1880." In official circle this was known as "Suggestions". Sir D. Brandis at the time of his visit found that the chief task of the officer in charge of the Darjeeling forests was to supply the station of Darjeeling and the cantonment of Jalapahar with timber, fire-wood, and charcoal. Accordingly, his suggestions were directed principally to this object. He did not profess to draw up a complete working plan: he did not even consider what rotation should be adopted, nor did he form a single complete working-circle. He simply made suggestions as to the method of treatment to be applied, the order in which the fellings should be made, and basing his calculations on the material required annually for Darjeeling and Jalapahar alone (Which he estimated at 500,000 cubic feet), he proceeded to discuss the arrangement of future fellings. Taking only into account the more accessible blocks (aggregating 12,257 acres), which he considered to be available for the supply of Darjeeling and Jalapahar, he estimated that this area, worked in accordance with his suggestions regarding treatment, would supply the above-mentioned demand for a period of 74 years, and within that space of time he expected other areas to be opened up by roads and so made available. He expressly states that this forecast is to be regarded "as merely approximate and subject to many changes as the work progresses."

As anticipated by Sir D. Brandis, changes soon became necessary. Difficulties in connection with the fuel-supply of Darjeeling and grazing brought about a revision of the scheme in 1882. In February of that year Dr. W. Schlich, Officiating Inspector-General of Forests, inspected most of the forests, and in his "Memorandum on the management of the forests in the Darjeeling Division, Bengal, dated Simla, the 21st April 1882", drew up a working scheme for the ten years from 1880 to1890. The suggestions it contained were the result of discussions between Dr. Schlich, Mr. J.S. Gamble, the Conservator and Mr. E.G. Chester, the Divisional Officer. Reference must also be made to the orders of the Government of Bengal on the scheme, contained in Mr. Mc Donnell's letter, Revenue Department (Forests), No 511 TR, dated the 2nd October 1882. These orders relate principally to the settlement of grazing, and further to the arrangements to be made for the supply of fuel to Darjeeling, in which matter the proposal for abandoning the business to private enterprise was approved. The regulation of grazing was subsequently dealt with in rules made by the Local Government under the Forest Act, and published in a notification, dated the 10th October 1885.

The problem of grazing which was ultimately solved was not itself so important. But on this issue there was a difference of opinion between Dr. Schlich and Mr. Wace, Deputy Commissioner of Darjeeling. The cattle-grazing was important since it was connected with the milk-supply in Darjeeling. Paragraph 17 of Dr. Schlich's memorandum shows that the Forest Department propose to set aside for cattle-grazing the11 blocks therein named, comprising 8,856 acres. Dr. Schlich calculated that he had to arrange 450 head of cattle, and the provision he made gave about 20 acres per head, and that was probably an adequate provision for the number of cattle counted upon. The Deputy Commissioner of Darjeeling, however, objected to Dr. Schich's proposal on the grounds – (1) that the number of cattle was under-estimated; and (2) that some of the blocks set aside for grazing were too far from the Darjeeling station. The Lieutenant Governor thought Mr. Wace's views on both these points reasonable, and he therefore approved his proposal to open the Rangbi, Sonada, and Nai Blocks to grazing but abstained from sanctioning Rishap and Sureil blocks open to grazing proposed by Mr. Wace since the opening would hamper the improvement of cinchona reserves.[71]

As this difference of opinion was neither healthy for forest administration nor for the general administration the Government formulated rules demarcating the area of functioning between the two sets of administration in 1891. According to the Rule 1. of the Government order (a) the Divisional Forest Officer to be Assistant to District Officer regarding all forest matters but to retain

his subordination to Conservator. (b) All operations to be under Divisional Forest Officer's control. (c) All correspondence on general and administrative subjects to pass through District Officer, who may direct Forest Officer to suspend action on any orders passed thereon by Conservator, reporting fact to Conservator and Commissioner, with reasons. Rule 5. said, "Differences between District Officer and Conservator not removable by mutual references to be submitted to Commissioner for settlement with Conservator; and if unable to do so, Commissioner to submit it to Government, informing Conservator." Rule 9. stated "Responsibility of Conservator to remain unimpaired. He to be informed of all orders passed by District Officers, Commissioners and Government, and of all business between District and Forest Officers, and, as a rule, to be consulted on all matters to be submitted to Government." Rule 10. noted — Subordinate Revenue Officers of all grades to assist in –

I. management of Government waste lands;
II. assessment and collection of Government dues;
III. management of all forests.

District Officer also to authorize Divisional Forest Officer to address orders to these officials direct in matters in which it may be convenient to act without the intervention of the District Officer. Rule 12. said:

(a) Forest Office to be near District Office.
(b) Formal correspondence between District Officer and Divisional Forest Officer to be avoided; original files to be interchanged as between District Officer and his Revenue Assistants.
(c) District Officer may direct Divisional Forest Officer to file in district record office forest records relating to forest settlements or revenue leases or matters affecting the use of forests and waste lands by the surrounding population.

Rule 13 – Proposals –

(a) for the formation of new forests;
(b) affecting the use of forests and waste lands by the surrounding population:

to be addressed, after consulting District Officer, by Conservator, to Commissioner for submission to Government.

Inter alia it was decided under Rule 4. – "Ordinarily the District Officer will record, after perusal, his signature under the word "forwarded" on the flying docket, or he may record remarks on letters from Divisional Forest Officer, and may return to Conservator for reconsideration any letter to Divisional Forest Officer, with reasons." Under Rule 7. it was stated — "Annual plan of operation prescribed in section 82 of the Forest Department Code to be submitted for Conservator's sanction on 1st June through District Officer, who will record his assent or dissent (stating reasons)." Differences of opinion must be dropped or dealt with under rule 5. Deviations from approved provisions of plan or additions thereto not permitted, except by consent of parties concerned. Responsibility for carrying out the plan rests with Divisional Forest Officer. Under Rule 6. – Conservator to control all matters of patronage among subordinate and of departmental discipline.[72]

These rules to regulate the official relations between Forest and District Officers struck a balance between the two sets of administrative machinery of the colonial Government. Hitherto there was no demarcation of the line of functioning, overlapping one another; as such the District Officer often clashed with the Divisional Forest Officer and vice versa. Now this was clinched once for all, and a healthy atmosphere was created between the district and forest administrations. Only subjects of a purely technical nature, namely, development of trees, sowing and planting, valuation surveys, data for working plan etc. were kept under Forest Department.

By this time the Forest Department decided to make a few working plans of the Upper Hill Forests in the district of Darjeeling. Of these Manson's working plan should be mentioned first. This plan for working the Upper Hill Forests of the Kurseong Division was introduced in 1892 and was in force till 1900–01. As the system of sale of trees by permits at fixed price per tree proved to be a failure in as much as it deteriorated the forest crop due to removal of all best trees, leaving only the defective ones to accumulate, it was stopped and the forests were worked under a rotation of 160 years distributed into five Periodic Blocks of 32 years each. P. B-1 was to be regenerated by taking out half the crop over one-sixteenth of the block annually in a regeneration felling. The remaining half was to be left as a shelter-wood over the young crop which, it was anticipated, would consist of natural seedlings supplemented by sowing and planting. This shelter-wood was to be removed later in a final felling. The Periodic Blocks II to V were to be worked under improvement fellings at the rate of one block annually in order to bring them into a more normal condition. The time that would elapse before the final felling was not specified in the plan but was anticipated to be less then 16 years and so a revision of the plan after 8 or 10 years was contemplated.

This revision was made by Osmaston and the revised plan was put to effect from 1902, that is, after Manson's plan was over which had a span of 10 years. In case of Mahaldaram only eight coupes worked in 10 years under Manson's plan and the revision prescribed for removal in the final felling of all the shelter-wood in succession but no new regeneration fellings were prescribed or undertaken. The amelioration felling was modified to the effect that only dead, fallen and hollow trees were allowed to be removed from P.B.S. II to IV and felling *approaching regeneration fellings* were prescribed for P.B.V where saplings both natural and artificially raised, were in abundance. The final fellings were followed by artificial restocking by planting and dibbling on which reliance had to be placed almost entirely. This shows that the British like a confused traveller working in the forests.

Osmaston recommended a revision of his plan after 10 years by which time his prescriptions that aimed to serve the purpose by experimentation would indicate a proper technic for future working. "By this time conscientious (sic) of opinion was beginning to veer towards a system of clear felling followed by planting, if it could be proved that planting was possible without shelter-wood."[73] It was apparent then that Manson's plan of regeneration under shelter-wood could not be worked with advantage because of retention of two-thirds of the original crop including all the biggest stems and wolf trees. Consequently, the regeneration suffered very much from the over-head shade of the shelter-wood trees as well as physical damage to the regenerated crop at the time of final felling. The prescription for laying out coupes was also defective as too much consideration was given to adequate seed dispersal from the mother trees and felling coupes were prescribed in long and narrow strips across the contours. This made the forests liable to landslips and inspection was rendered extremely difficult.

The error of the plantations made under Manson's plan was in having two successive fellings, originally to be at the long interval of 16 years, afterwards reduced to 10. Other mistakes were in attempting to plant a whole area partially, instead of smaller area thoroughly. As a result, 371 acres of plantation in Mahaldaram Block I was rather poor. The comparatively small proportion of the original transplants grew up in isolation in their earliest stages developed wide-spreading crowns owing to wide espacement. However, on the whole felled areas were successfully restocked.

Next Working Plan was undertaken by Grieve. It was introduced in 1912 and was in force till 1919. This plan was introduced mainly with the object of avoiding the second felling which had in so many cases destroyed the regeneration established after the first felling. Grieve excluded from

his scheme all the areas open to grazing as being unworkable. The areas previously regenerated under Manson's and Osmaston's plans were put into a separate "plantation" working circle and the remainder were divided into a coppice working circle and a high forest.

A 30 years' rotation was prescribed for the coppice working circle primarily for supply of fire-wood to the tea gardens. For the high forests (Darjeeling working circle), Mr. Grieve's original intention was to prescribe the selection system on a rotation of 150 years with 25 years' felling cycle, the possibility being determined by the number of trees for which purpose complete enumerations had been made over the whole working circle. During the felling cycle one-half of the class I trees were to be removed in groups, utilizing advance growth in the main, but supplementing it by planting where necessary. How this scheme would have worked is hard to say, for there were obvious difficulties. In the first place, it is believed that Grieve was far too sanguine about natural reproduction, and that, in practice, artificial regeneration would have had to be restored to almost entirely and for this, of course, the selection system whether by groups or by single trees, is not adopted. Secondly, although experimental groups had been made before the plan came into operation where two or three class I trees happened to be together in practice the allocation of one-half of the trees on a given area into anything that could be called groups would be extremely difficult because, as calculations showed the distance apart between class I trees averaged about 22 yards (in the best areas, senchal 2, 17 yards and, in the worst, Babukhola, 35 yards). Lastly, Grieve gave no indication as to the size of group intended. The use of word "group" was unfortunate and proved a stumbling block all through, in as much as it was misinterpreted as having something to with the group system of Europe. Mr. Hart (later Sir George) in an inspection note of December 1916 wrote: "The present Working Plan for the Darjeeling Forests has had rather a chequered career. The original proposal was to treat those areas by selection fellings in groups, the mature stems only being removed and natural regeneration mainly relied on. Further, as in areas open to grazing, regeneration of valuable species was entirely absent and held to impossible; it was proposed to confine the felling of green trees to the closed areas, from which all stems over 2 feet in diameter were to be removed in 50 years. When, however, the preliminary report was submitted to the Inspector-General of Forests for approval, the system of treatment proposed was altered from selection fellings by groups to regeneration fellings by the group method."[74] This was accepted and it was eventually decided, in spite of the protests of the compiler of the Plan, to regenerate the whole of the closed area in a period of 50 years, removing therefrom all first and second class trees. Seeing that class III and IV trees in these forests were represented partly by species which never grow to any size and partly by suppressed or misshappen stems of larger species, few of which

could hope to escape damage when the classes I and II trees were removed, the plan, as altered, contemplated the removal of what amounted to practically the whole of the crop in 50 years. In other words, when the plan was in the press, the method was changed by a stroke of the pen from the selection to the regular method, and the rotation was reduced from 150 to 50 years. The method of calculating the possibility devised to suit the selection system originally proposed was still retained, and the plantations, which under the regular method should have formed the last period were still retained in a separate working circle. It is possible that, at the back of these amendments was an idea that an area then open to grazing could subsequently be closed in exchange for an equal area opened elsewhere, but not a word to this effect occurred in the plan, and it was directly contrary to the very essence of the proposals made in the preliminary report already approved by the Inspector-General. In any case, owing to the extraordinary length of the regeneration period (50 years) it was not clear where the cattle could have already been accommodated.

The results of working of Grieve's plan show that such natural reproduction as existed had been on the ground before the "group" fellings were made, and the felling did not appear to have extended natural reproduction. As little or no planting had been done up to 1917 in the belief that natural reproduction would come in where there was no advance growth, some of the earlier groups looked rather bare. They would, no doubt, fill up eventually with less valuable species as did the coupes under Manson's plan. The method prescribed of removing mature stems in groups over whole compartments was unsuitable. When the groups had become very numerous it was found difficult to inspect, check and supervise the various operations. The selection in groups became practically clear felling in patches with all the attendant disadvantages in having the work scattered. Natural reproduction had not made its appearance, hence it was decided to prescribe the method of clear felling and planting in conjunction with *taungya* cultivation.

On the forest management in Darjeeling district between 1865 and 1919 two important things should be observed. First, whether due to the experiments upon the felling of woods rainfall was affected in the region. Secondly, whether extraction from the upper hill forests affected the conservation of soil resulting in floods.

The British argued that not for the felling of woods in the Khashmahal or reserved forests but due to the annihilation of forests for the cause of plantation of the tea gardens the forests began to be thinned out. With the phenomenal increase of the population which has taken place, and with the establishment of the tea industry, it was necessary to clear the land in order to support the people

and to allow of the cultivation of tea plant. As a result, "whole forests have been annihilated, leaving here and there only a solitary tree or narrow belts of trees in the ravines, as evidence of the magnificent woods which have fallen a sacrifice to advancing cultivation."[75] Nowhere have the forests been so effectively cleared as on the tea gardens, but there is no proof that the rainfall has been in any way affected thereby. O'Malley in 1907 wrote : "The records of the Meteorological Department do not afford grounds for the belief that the distribution of the rainfall has been materially altered during the last 20 years ...." The figures quoted below for the station of Darjeeling do not disclose any diminution of rainfall as compared with half a century ago.[76]

Year	Rain in inches	Year	Rain in inches
1851....	126.50	1901...	109.73
1852....	104.70	1902...	148.55
1853....	118.18	1903...	92.71
1854....	147.33	1904...	121.53
1855....	108.22	1905...	153.97
Average....	120.98	Average	125.30

Second problem is connected with soil erosion, land-slips and flood. No year passes without land-slips occurring to a greater or smaller extent in Darjeeling hills. The Divisional Forest Officer, Darjeeling observed that land-slips would have been far more numerous and serious if the hills were completely laid bare of trees. "The trees in the forest not only cover the soil and hold the force of the torrential rain but their roots bind the soil and keep it porous thus allowing the droppings from the crown slowly to percolate and feed the springs continuously. Where there are no trees, rain water strikes the ground directly and quickly rushes down the slope. The soil gets hardened, the springs cannot be fed due to lack of seepage and consequently dry up as soon as the rains are over. The streams in the neighbourhood are flooded after rain and become altogether dry once the rainy season is over. The surface soil from the cultivated slopes and from land-slips is carried down by rain water and deposited as a fine paste choking all the pores in the bed of the river. In course of time seepage is practically stopped and as further detritus is deposited, the bed of the river begins to rise and the volume of water that use to flow down the channel then over floods the banks causing great damage to cultivation."[77] These are the reasons for recurrent floods in north Bengal and scarcity of water in the hills.

For this O'Malley first blamed the influx of settlers and the advance of cultivation; and secondly, he accused the reckless deforestation of Sikkim and Bhutan. He writes that in the Khash Mahals or Government estates the forests have been widely cleared owing to the influx of settlers and the advance of cultivation. The population, especially in those areas lying to the east of Tista,

more than trebled within the last 20 years, that is, roughly between 1887 and 1907. Every year there has been a steady reclamation of waste land, which has not always been properly controlled. The bulk of the new settlers, particularly the Nepalese, have made their homes in lands where population was sparse or which were scattered in tracts of forests. Consisting for the most part of the poorer and more remote blocks, these tracts have been the last to attract settlers, but they are now eagerly taken up by those who can find no good land elsewhere, to the consequent destruction of the former forests. O'Malley notes that Government has directed that no new cultivation is to be allowed in a large number of blocks, and rules have been laid down to regulate the felling of trees. But in some parts the mischief has already been done, notably in the basins of the Chel and Lish rivers, which drain into Duars. He gives a caution to appropriate authority with the words that the clearing and grazing of these areas must, if not checked, eventually result in serious damage to the underlying tracts, owing to the erosion which sets in . This is an acute example to console a person after undoing him. The British policy was to encourage the Nepalese to come from Nepal and settle in adjacent to forest areas since they were the cheap labourers and used in forest operations for commercial purposes.

In the opinion of O'Malley the next danger was caused by the deforestation of Sikkim and Bhutan in consequence of the practice of *jhuming* or shifting cultivation. However, O'Malley formed his opinion from a note by Mr. J.W.A. Grieve, Deputy Conservator of Forests. The practice of shifting cultivation destroys the scrub jungle and herbaceous growth over large areas, which were then roughly hoed or ploughed for cultivation. The heavy rain of the hills falling on the *Jhumed* surfaces of the steep slopes in Sikkim and Bhutan runs off very much more rapidly than nature ever intended it to do, with the result that an enormous head of water reaches the main streams (Tista, Jaldhaka, Torsa, Raidak, Chel, Sankos) suddenly, instead of gradually, and causes abnormal floods. This is caused by reckless deforestation in Sikkim and Bhutan. The brunt of the damage falls on the plains below, into which the rivers debouch, and not on the countries in which the evil of *Jhuming* is most prevalent. The example of the "damage caused in this way is afforded by a stream running into the Tista about 10 miles above the Tista bridge, which has brought down silt to such an extent on the Sikkim side that it has caused that river to alter its course to the west bank, where it is now engaged in rapidly cutting away the most valuable *sal* forest of the whole Darjeeling district."[78]

But, for this Sikkim and Bhutan should not be blamed only. The Divisional Forest Officer, Kalimpong states, "The dangers of soil erosion are becoming more and more evident in those parts of the Kalimpong Khas Mahal which have been given over to cultivation." He further notes,

"Where the forest has been cleared away in the course of the last 80 years, the protective covering of the deep soil which was the legacy of the primeval forest has now all been washed away, sheet erosion is rapidly taking place and in many places, gullies and landslides have started so that the evils of erosion, at first insidious, are now forcing themselves upon men's attention."[79] Divisional Forest Officer, Darjeeling observes, "Though the wood-cutter on the hill hardly realises the effect of felling trees and laying bare the hill slopes, people hundreds of miles below suffer hardship."[80]

Thus, it is clear that the Forest Department of Bengal along with Sikkim and Bhutan were responsible for erosion in hills for which reckless deforestation was the only cause. Naturally, to avoid such erosion and recurrent floods in north Bengal a comprehensive scheme for protective measures against erosion was prescribed by the Divisional Forest Officer of Kalimpong.

The effects of the so-called forest reservation in Darjeeling district should be viewed from another angle. With what consideration the British treated the Lepchas, the aboriginal inhabitants of British Sikkim? Is the treatment of the Lepchas fair in Darjeeling during the period of forest reservation? About the Lepchas O'Malley wrote in 1907: "Formerly they possessed all the hill country of Darjeeling and Sikkim, but about 250 years ago the Tibetans invaded their country and drove them into lower valleys and gorges;" O'Malley thought that being driven out of their native land by the Tibetans the Lepchas took shelter in Kalimpong which was conquered and taken away from them by the Bhutanese. O'Malley, however, did not refer to his sources of information that the Tibetans drove them out from Darjeeling and Sikkim. But he informed us that the Lepchas were "never so happy when they are in their native woods". He further informed us that the Lepchas accustomed to shifting cultivation gradually learnt settled cultivation from the Nepalese and "with the introduction of settled cultivation and the reservation of the forests, they have had to give up their old nomadic cultivation, and have lost much of their jungle craft." He in an apologetic tone noted, "when we first acquired the hill territory of Darjeeling, there were practically no Lepchas in the land, and a contemporary writer says that the oppression of the Raja had forced 1,200 able-bodied Lepchas, who, he says, formed two-thirds of the population of Sikkim, to fly from Darjeeling and its neighbourhood." However, he came to the conclusion "that the Lepchas at any rate not decreased under British rule, largely no doubt as a result of the establishment of a reserve for them in Kalimpong."

Now the propositions are: First, O'Malley said that the Tibetans drove the Lepchas from Darjeeling and Sikkim into the lower valley and gorges; second, O'Malley said that Lepchas settled in Kalimpong which was conquered and taken away from them by the Bhutanese; third, O'Malley

on the basis of a contemporary writer reported that due to the oppression of the Raja of Sikkim the Lepchas fled their own country; fourth, the policy of the reservation of Darjeeling forests was not responsible for their ousting from Darjeeling forests since there was practically no Lepcha in Darjeeling and its neighbourhood.

It is obvious from above that the first and third points are self-contradictory. If the Tibetans already drove the Lepchas out of Darjeeling and Sikkim, then, whom the Raja of Sikkim oppressed? Moreover, if there was practically no Lepchas in Darjeeling during the acquisition of the hill territory of Darjeeling, then, how A *wanderer* paid a *visit to a Lepcha village* in Darjeeling in 1839? The writer wrote a letter on the subject dated March I, 1839 which appeared in *The Englishman* on 3rd March 1839.[81] It is true that the King of Bhutan occupied Kalimpong but it is not clear from the Gazetteer of O'Malley whether they oppressed the Lepchas. If so, why the Lepchas ultimately took shelter in the forests of Bhutan proper?

But the suppression and manipulation of facts have been exploded by the Deputy Commissioner of Darjeeling, a man on the spot, in 1869. W.W. Hunter noted, "The Deputy Commissioner is of opinion that they (*Lepchas*) are gradually *being driven out of the district,* owing first, to the increase of regular cultivation, and secondly, to the conservation of the forests by the Forest Department."[82] The quotation speaks for itself and need no elaboration. It is undeniable that the inhabitants of the hills relied mostly on forest and forest produce. Before the management of forests was taken up, people had absolute rights over them as if it was their personal property.[83] But, even after the first Forest Law was passed there was scope to keep the forest-dwellers adjacent to the Reserves. The Law provided that notification of the Reserve Forests should not abridge or affect any existing rights of individuals or communities. According to the subsequent Forest Act in Reserve Forests everything was prohibited unless specifically permitted and in Protected Forests everything was permitted unless specifically prohibited.[84] And it is known to all interested in forest protection that the tribal communities are not only forest-dwellers but also for centuries, they have evolved a way of life which, on the one hand, is woven round forest ecology and forest resources, on the other ensures that the forest is protected against man and nature. At this backdrop, the forest administration in the region of Darjeeling was at a discount cannot be denied. Incompetence, mediocre and inexperienced bureaucrats made matter worse. They suffered from a superiority complex and did not try to understand the psyche of the aboriginal inhabitants of Darjeeling district. Be that as it may, the Lepchas bid adieu to their motherland and the rivers Tista, Jadhaka and Torsa showed the Lepchas their destination to Bhutan forests. The silent snowcapped peaks of the Himalayas only witnessed to their tearful eyes.

JALPAIGURI

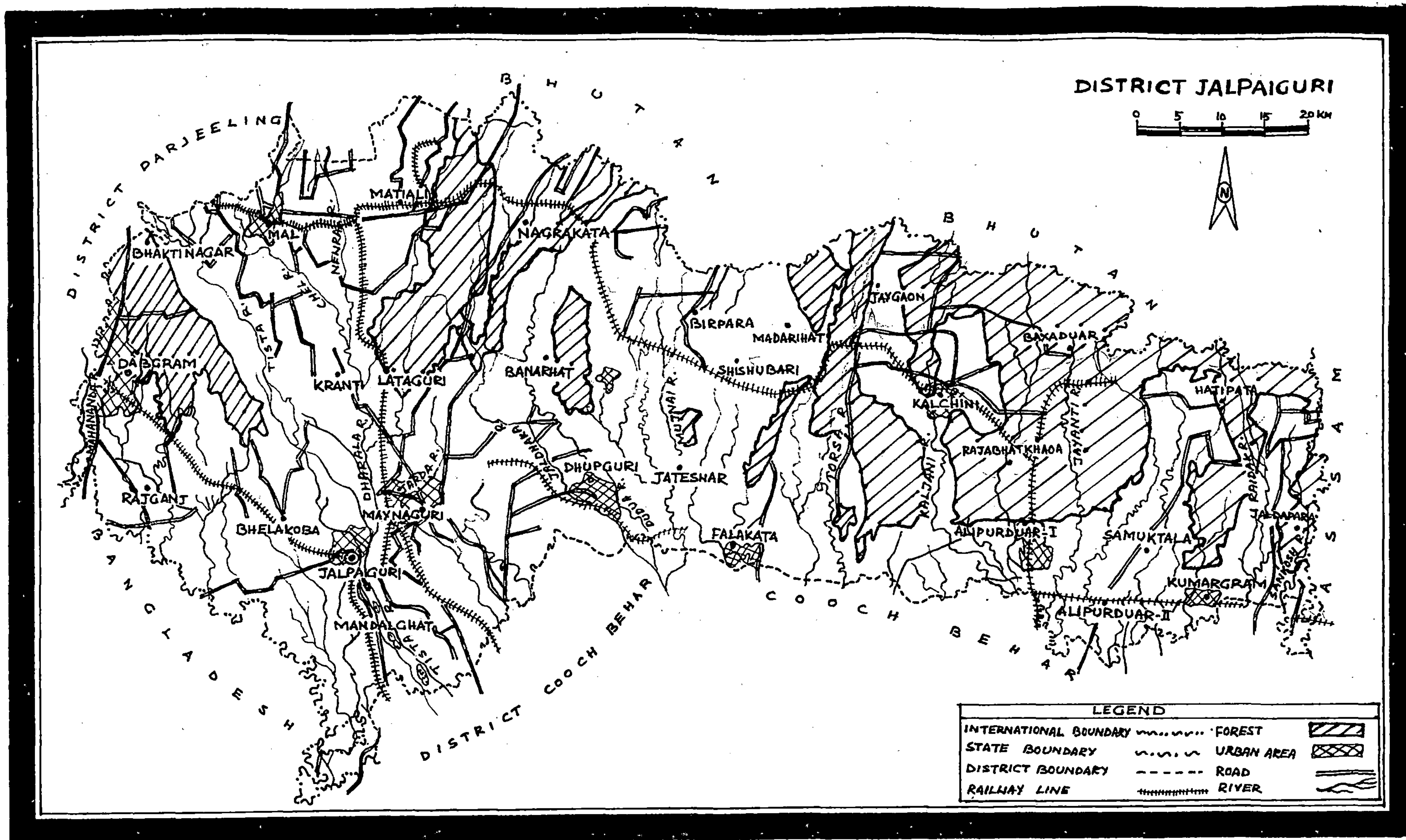
Jalpaiguri as a district stands supreme in the history of forests in West Bengal. John F. Gruning in 1911 in District Gazetteer of Jalpaiguri wrote, "All the forests in the district are at present controlled by the Forest Department, for the Baikanthpur Forest has been placed under the Deputy Conservator of Forests, Jalpaiguri Division, since the estate came under the Court of Wards." The reserved forests in the district of Jalpaiguri were divided for administrative purposes into two divisions, the Jalpaiguri and Buxa divisions. The Jalpaiguri division bears one of the best *Sal* forests of India and within its small compass of 182 square miles (1911 A.D.)[85] has various types of association of forest tree species, other flora and fauna. It has about seventy tea estates bordering the forests and a vast population is directly or indirectly dependent on it, and therefore, every fit of forest produce is salable. In this division even an insignificant tree would fetch good fortune.

Several tarred motorable roads and many metalled roads intersect the Division and make most of the areas easily accessible. One metre gauge and other broad gauge line and several branch lines have added to the facility of extraction and transportation creating a keen competition in the market. A drive through the smooth and wide National Highway and Lateral Route amidst the picturesque tea estates and high forests with wild life offers the visitors a rare calm and serene enchantment. There are also the lure of Chapramari and Gorumara wild life sanctuaries where the visitors can see elephants, rhinos, tigers, bisons, several species of deer and other animals with little effort.

The tall grasses and reed jungles, so favourite to the wild life are vanishing alarmingly owing to extension of cultivation of agricultural crop and tea. The reed forests in Gorumara within the Jalpaiguri Forest Division have the habitat for the rhinos and to casual and less opulent visitors this sanctuary is unique and more sought after than the much bigger and famous Jaldapara sanctuary (Cooch Behar Forest Division).

Owing to easy accessibility, springing up of many business centres and wood based industries and increase of population in the urban areas, the pressure on these forests has been exceptionally heavy.

The forests under this division comprise the whole of the Reserved Forests in the Jalpaiguri District west of the Torsa river, and lie between $26^{\theta}33'$ and $26^{\theta}58'$ North Latitude and $88^{\theta}35'$ and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RAJGANJ
BHELAKOBA
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MAYNAGURI
MANDALGHAT
DHUPGURI
JATESHAR
FALAKATA
BIRPARA
MADARIHAT
SHISHUBARI
JAYGAON
BAXADUAR
KALCHINI
RAJABHATKHAOA
HATIPATA
ALIPURDUAR-I
ALIPURDUAR-II
SAMUKTALA
KUMARGRAM
JALDAPARA
TISTA R.
MAHANANDA R.
JORSA R.
KALJANI R.
JAYANTI R.
RAIDAK R.
SANKOSH R.
MUJNAI R.
JALDHAKA R.
DUDUA R.
DHARALA R.
LEGEND
INTERNATIONAL BOUNDARY
STATE BOUNDARY
DISTRICT BOUNDARY
RAILWAY LINE
FOREST
URBAN AREA
ROAD
RIVER

$89^{\theta}20'$ East Longitude.) The division is bounded on the north by the Kalimpong Reserved Forests and the Bhutan State, on the east by the Torsa river, on the south by *Khasmahal* and private *jotes* and on the west by the Tista river.[86] Within this area Western Duars forms a parallelogram with a length, east and west, of 86.75 miles, and breadth, north and south, of 38 miles. It lies between the parallels of $26^{\theta}13'$ and 27^{θ} North Latitude, and between $88^{\theta}30'$ and $89^{\theta}55'$ East Longitude.[87] The boundaries of Western Duars are –

North - Darjeeling district and Bhutan.

East - The Sankos river and Goalpara district of the Province of Assam.

South - Kuch Behar and Pargona Bykuntpur of the Jalpaiguri district.

West - The Tista river.[88]

Another portion of Duars is known as Eastern Duars. It is extended from Sankosh river in the West to Manas river in the East. The Western and Eastern Duars are jointly known as Bhutan Duars and this whole area was ceded by Bhutias after Bhutan war (1864 – 65).[89]

Other portion of Duars was known as Bengal Duars, lying to the west of Tista, and bounded on all sides by the Bykuntapur pargana. It was annexed from Bhutan in 1865 at the time as the Western Duars. It is now known as Ambari Falakata.[90]

The configuration of the ground of Jalpaiguri Division is that the tract has a general incline from north to south; the elevation of the station of Jalpaiguri being 271 feet above mean sea level and the northern part of the district over 1,000 feet. The northern part of the Titi forest is in the hills-steep and precipitous land from 500 to 4,000 feet in elevation. The remaining, and by far the larger part of these forests is in almost flat country. The bulk of the forests of this division are in the true plains which like the plateau, slope towards the south but with an even more gentle gradient. The general level of the plains above the sea here is about 300 feet. As might be supposed, all water-courses flow from north to south. Those which rise in the hills are intermittent torrents in the rains and, when not in spate, they occupy only a small part of their wide beds, which are rocky, gravelly or sandy according to the distance from the hills. All except the largest disappear underground for some part of their length in the cold weather, giving rise to a waterless tract which may be anything upto eight miles in width. For the first few miles after leaving the hills, these streams are confined to some extent by the necessity of cutting their way through the plateau but, once in the plains, they spread out until land that is, or at some time has been, river bed almost equals in extent the slightly higher tracts which intervene. "It is on these, seemingly permanent,

higher tracts that *Sal* (Shorea robusta) grows. The streams which rise in the plains are, in almost every respect, the opposite of those which rise in the hills; they occupy the whole of their narrow beds, vary little at the different seasons and the vegetation near them is evergreen and moist in type instead of deciduous and dry."[91]

Regarding geology, rock and soil of this division it is to be noted that flanking the hills is a deposit of boulders, clay, gravel and sand extending for fully twenty-five miles towards the plains, the gravel becoming smaller as the distance from the hills increases. The deposit is cut up by and finally passes into, the alluvium of the existing river system. "The soil is often dark coloured from the ashes of repeated jungle fires and organic matter. The presence of sandy loam, well adopted to the growth of *Sal,* may account for the larger blocks of *Sal* forests."[92] The average day temperature varies from 15.5$^{\theta}$C to 21$^{\theta}$C during the cold weather, that is November to February, from 26.5$^{\theta}$C to 30$^{\theta}$C during the period May to September, and from 24$^{\theta}$C to 26.5$^{\theta}$C during the rest of the year.[93] The average annual rainfall in the plains is about 155 inches increasing towards north and decreasing towards the south. Along the foothills the rainfall varies according to the configuration, and on the outer ranges of the hills themselves as much as 200 inches falls annually.[94]

About river system it is to be noted that the tract is cut up by a number of rivers which rise in the distant hills on the north and flow southwards. The principal rivers are Tista, Chel, Neora, Murti, Jaldhaka, Diana and Torsa, the first and the last forming the western and the eastern boundaries respectively of the division. The rivers with tributaries ensure good drainage and before the communication was made modern these rivers used to transport timber. There is water almost throughout the year in these rivers, reduced to a minimum during February to April. Water supply is consequently adequate.[95] The following is an extract from Mr. Heines' Working Plan quoted in the Fourth Working Plan for the Jalpaiguri Division:

"In the northern part of the tract there are small hills and plateaux cut up by the rivers that descend from the Himalayas. Some of the plateaux are destitute of surface water, and water emerges from their bases in numeros springs at distances sometimes extending to twelve miles from the hills proper. The *Sal* tracts are for the most part situated below the plateaux. The forests are usually cut up by numerous *Khals* and *Jhoras* with a general north and south trend."[96] These streams which apparently rise in the plains are more important as a source of supply of water for labourers and plantation work than the big rivers mentioned above. These rivers often change their courses considerably creating troubles for transportation.

The second Forest Division in Jalpaiguri district is Buxa which was named after a tribe.[97] Buxa is a romantic name connected with our national movement where detenues had to wait behind the prison bars in complete loneliness and dreamt of an independent India which would take a pride place in the comity of nations. It was also known as a military cantonment. Its population in 1901 was 581 souls. It commands one of the principal passes into Bhutan and is two miles from Santrabari, at the foot of the hills and six miles from the frontier. The cantonment, which was established during the Bhutan War in 1864, consists of a rough fort with three pickets, called the right, left, and Magdala, on spurs at a higher elevation; it garrisoned in 1908 by a detachment of the 62nd Punjabis comprising three officers, and a double company of 200 men. Water is obtained from two perennial streams, one of which issues from the base of the plateau.[98]

The forests of the Buxa Division comprise the whole of the Reserved Forests in the Jalpaiguri district east of the Torsa River and lie between 26°29′ and 26°52′ North Latitude and 89°15′ and 89°55′ East Longitude. It is situated on a small gravel plateau 1,800 feet above sea-level. The Division is bounded on the north by the Bhutan State, on the east by the Sonkosh River (which separates Bengal from Assam), on the south by *Khas Mahal* lands and private *jotes* under tea or other cultivation, and on the east by the Torsa River.[99] The Forest Blocks lie mostly in a tract of Submontane and plains country, with a small area of outer hill forest.

The general configuration of the area is that the tract consists mainly of level, or slightly undulating land, with a general incline from north to south, but extends in some places into the outer ranges of the Himalayas and reaches an elevation of 6,000 feet above Buxa. The old military station of Buxa, which is the headquarters of the Division, is built on a spur of the Himalayas at an elevation of approximately 2,000 feet above mean sea level.

About geology, rock and soil it should be mentioned that with the exception of the Buxa hills, the tract is covered by alluvial deposits consisting of coarse gravels near the hills, sandy clay and sand along the course of the rivers and fine sand consolidating into clay in the flatter parts of the river plain. The soil generally is of excellent quality, good depth and great fertility. The temperature is rarely excessive. The average day temperature in the plains varies between 60°F and 70°F from November to February, between 80°F and 90°F from May to September and between 75°F and 80°F during the rest of the year. The highest recorded temperature was 102.5°F in 1899 and lowest 36°F in 1887. The rains are very heavy and general in June, July and August. The

average annual rainfall in the plains is about 167″ increasing a little towards the north and decreasing towards the south.

The tract is cut up by a number of rivers which rise in the hills to the north and flow southwards. The rise and fall with great rapidity and by frequently changing their courses, do much damage. The principal rivers are Torsa, Kaljani, Diana, Bala Jainti, Raidak and Sankos, the right bank of the first and last forming respectively the western and the eastern boundaries of the division. The forests are cut up by numerous *Khals* and *Jhoras* with a general north and south trend. These streams are more important as a water-supply for labour engaged in plantation work than the big rivers mentioned above. The Meches and Garos mainly inhabited the forest tract.

Implementation of the Forest Acts and Policy In the Jalpaiguri District

The history of forest management in the forest tract of Jalpaiguri, spreading over a period covering a century is a fascinating study. Dr. McClelland, who was the Superintendent of Forest in Pegu, submitted a report being compiled on his observations of Pegu forests to the Government of India in 1854 which resulted in the famous Memorandum of the Government of India of 1855. But that important document of Lord Dalhousie failed to influence the Government of Bengal. The Bengal Government did not take any step in the province on the prescribed lines of the Memorandum to stop indiscriminate felling of the woods which was going on for a long time even within the British occupied forest areas. However, on the basis of Dalhousie's declaration Dr. McClelland started a system of forest management in considerable parts of British India, but Bengal stood neglected. Dr. McClelland initiated a system but could not place it on a scientific basis. His system of forest management was transformed into scientific forestry by a German expert — Sir Dietrich Brandis. He toured some parts of Bengal forests and on consultation with Dr. T. Anderson drew up a note of his proposals dated 18th December, 1862.[100] This may be considered the first step towards the forest conservancy in Bengal. The British were pressed by circumstances and were obliged to consider two things. First, during this period no standard timber was coming to Calcutta, either from Burma or from northern India to meet the demands of Culcutta port. Second, price of timber and fire-wood was gradually increasing. Brandis in his report showed the ways of scientific forestry to overcome the problems faced by the province. Brandis was the path-finder, but it was Dr. Anderson who went forward along this path.

The Bengal government had entrusted to Anderson the work of carrying out preliminary enquiries and investigations into the forests. These were confined to an inspection of the forests in the north, that is, in the Eastern Himalaya, including Sikkim, in which Hooker had travelled and compiled valuable botanical reports; and to some extent the belt of the *Sal* forests in the Terai and Duars at the foot of the hills.

Meanwhile, politics entered the forests. It is known from the history of Mysore that both Hyder Ali and Tipu Sultan were all aware that trade and political control went hand in hand with East India Company extending its control all over India. This also came true in Jalpaiguri. In the 18th century and before, the forest tract of the present Jalpaiguri district[101] was within the territory of Cooch Behar Raj. "There were no doubt conflicts between the Kuch and the Bhutias about three hundred or four hundred years ago but these were struggles for supremacy in the Duars which ended in many of the Kuch leaders as Sidli and Bijni and other chiefs submitting to the Bhutias."[102] Bhutan's sustained interest in the affairs of Cooch Behar throughout the 18th century centred on ensuring her hold over the fertile tract now known as the Western Duars.[103] On the other hand, English merchant-traveller Ralph Fitch first wrote Cooch Behar's trade relations with the distant lands of Tibet, China and Tartary across the Himalayas. Ralph Fitch arrived at Cooch Behar in 1553. After the Dewani Grant in 1765 the East India Company entered into relations with Cooch Behar. According to British source materials (we badly off for Bhutanese primary sources) the aggression of the Bhutias was going on in increasing degree into this territory and by 1765 Bhutan was almost supreme in Cooch Behar. The Bhutanese King Desi Shidariva descended on the plains of Buxa in 1770. The British planned to participate in this conflict because of three reasons. Firstly, the Bhutanese occupied the plains of Buxa breaking down Cooch Behar's feeble resistance and took Maharaja Dhairjendra Narayan as prisoner. In the wake of this Nazir Khagendra Narayan of Cooch Behar on behalf of minor Dharendra Narayan appealed to Warren Hastings. It may be that Warren Hastings responded on this humanitarian ground and took steps to protect Cooch Behar from the onslaught of Bhutan. Secondly, the British Government understood that the Bhutanese by their activities were dangerously near the British district of Rangpur. This was the political ground to take decision in favour of the appeal of Cooch Behar. Thirdly, the prospects of commercial relations with Tibet and China through Cooch Behar and Bhutan kindled the imagination of Warren Hastings. This was the commercial ground of Hastings' Cooch Behar expedition. Thus the initial objectives of the British was to come in favour of Cooch Behar, and, if possible, take possession of that part of Bengal, but not to occupy Bhutan to make her a perpetual enemy of the British. This did not, yet, take a concrete shape in initial stage of relations with Cooch Behar and Bhutan. And the

amorphous design of opening Tibet and particularly West China to British trade through the backdoor crystallized in course of the First Bhutan War. The Anglo-Cooch Behar relations of 1772 ensured British paramountcy over Cooch Behar and promised half the revenue of the state for ever. In 1773 Cooch Behar became a feudatory state of the English who ejected Bhutia forces from Cooch Behar and forced Bhutan to sign a treaty concluded in 1774.[104] In the treaty the British did not demand a bone-crushing indemnity but treated the Bhutias mildly with an aim to secure commercial access in Tibet and China. In the First Anglo-Bhutan War the major British interests centred round politics and trade with distant lands but those were not the particular aims of the British in the Second Anglo-Bhutan War (1864–65). If the British were aware of the importance of forests in this zone at that time (1774) they would neither agree to the cession of Moraghat and Chamurchi Duar to the Bhutanese nor would allow Cooch Behar Raj to keep *de jure* possession over rest of the Western Duars. Certainly they would have taken away this area from the Cooch Behar Raj as a *reward*.

The British had to wait about a century to occupy this area permanently. Those who did reserarch work on Anglo-Bhutan Relations[105] have shown several common causes for the Second Anglo-Bhutan War (1864–65). First, after the treaty of Sagauli (1816) with Nepal and the treaty of Tetalya (1817) with Sikkim the boundaries between these two independent states and British India were settled. Now the British hoped to settle the boundaries between the Western Duars (on which the British had *de facto* control after the First Anglo-Bhutan War) and Bhutan. Second, there were no established means of intercourse with, and influence over the Government of Bhutan. In 1838 R.B. Pemberton, a British envoy, broached the subject of stationing a representative to the Court of Deb Raja of Bhutan. The Deb Raja instantly repudiated the idea, telling the envoy not to raise the subject any more.[106] This attitude of the King of Bhutan injured the British prestige. Third, as the paramount power in Cooch Behar after 1772 the British Government was under an obligation to protect the subjects of Raja in Duars. Undefined jurisdiction of the Courts of Cooch Behar no less than undefined boundary made the Duars a criminals' paradise. The British wanted to extend to the Western Duars the appellate jurisdiction of the Calcutta High Court.[107] Naturally, the British were driven by necessity to annex Western Duars. Fourth, so long Dr. Cambell, the Superintendent of Darjeeling was at the helm of affairs there was a tone of conciliatory gestures in relation between the British and the Bhutias. But after his relinquishing charge of the frontier in 1850 exponents of Forward Policy shaped the course of events to a great extent. Already the resumption of the Assam Duars in 1841 and taking over the management of Ambari Falakata (Bengal Duars according to Gruning) in the year following had given the Bhutanese a glimpse of things to come. Col. Jenkins,

an exponent of Forward School frankly urged that there would be no peace until the Bengal Duars (Western Duars of D.H.E. Sunder) were annexed.[108] The delinquent behaviour of Bhutanese frontier officials increased and so the list of complaints from Cooch Behar till the outbreak of the Duar war of 1864–65.[109]

The question now arises as to why the British planned to annex Western Duars (from Tista to Sankos river) and Eastern Duars (from Sankos to Manas river) from Bhutan as well as from Cooch Behar Raj in 1864 in spite of the fact that the latter was actually the legal owner of these forest tracts.[110]

The general causes described above were active for a long period but the British did not make up their mind before 1864 to annex this area permanently. The Moraghat-Chamurchi and Chakla Kheti disputes were nothing but *casus belli* to occupy these tracts. Secondly, the timing of the Second Anglo-Bhutan War. So long the British did not understand the importance of the forest wealth of Duars they put importance only on commercial transaction with Bhutan, and if possible, with Tibet and China. If the British were aware of the importance of forests in the later part of the 18th century they would not transfer Ambari-Falakata and Jalpesh to Bhutan in 1787. They snatched away this area from the *Raikats* (Zamindars) of Baikunthapur under Cooch Behar Raj just only to purchase friendship of Bhutan at the expense of Baikunthapur Zamindari. Added aim of this gift was to secure access to Tibet and through Tibet to China. Thirdly, J.D. Hooker the writer of 'Himalayan Journals' saw the forests in Duars in the forties of the 19th century but this could not move the British towards a war with Bhutan to occupy the area or to take over this area from Cooch Behar Raj since there was no major demand for timber at that time in British India.

The major break in the attitude of the British came along with the introduction of Railway in India in 1853. The introduction of railway for which there was a great demand for *Sal* sleepers and the dearth of good timber for Calcutta port put the British under pressure to fall in line with the Forward School headed by Col. Jenkins. The immediate circumstances leading towards the showdown speak for themselves. Perhaps in 1862 and onwards Dr. Anderson brought to the notice of the Government the potentiality of the forests between Tista and Torsa rivers. This assumption is not totally without historical relevancy. It is a known fact that from 1862 the Government of Bengal through Sir Brandis and Dr. Anderson was gathering knowledge and information about the forests of Bengal. This coincided with the renewed Bhutan War after 1774. The British proved in their activity the English proverb 'give a dog a bad name and hang him'. According to British sources of

information the Bhutanese were carrying depredations since the early part of 1863. The allegations now made against the Bhutias of theft of elephants were not new one. Year after year various types of complaints from Cooch Behar against Bhutan multiplied, but no step was taken. Similarly, British envoy Mr. Eden found a large number of Bengalee slaves in Bhutan but no immediate fruitful step was taken to release them. Moreover, the issue of run away criminals was as old as the first recorded British contact with Bhutan. It was not unknown to the British that the forests of the Duars were an ideal hide-out for criminals and gangsters. But no stern treatment was made to Bhutan before 1864. The British and the Bengal Government became conscious about forest wealth of Duars in 1862. The British Mission left Darjeeling for Bhutan on 4th December, 1863 ostensibly to settle accumulated disputes amicably in favour of Cooch Behar and British interest. On 21st September, 1864 Dr. Anderson put thirteen questions to Divisional Commissioners of Bengal through the Government to gather information about forests of Bengal. On 12th November, 1864 Government issued proclamation permanently annexing Western Duars. With the outbreak of the war in November, 1864, H.M. Durand, Secretary to the Foreign Department, communicated to the Bengal Government *inter alia* that the occupation of the country was not to be delayed on any ground. No overtures from the Bhutan Government were to be entertained unless the latter were prepared to surrender all the Bengal Duars and the hill country on the left bank of the Tista upto such points on the watershed of the lower range of hills as may be laid down by the British Commissioner. In the event the Bhutan Government was willing to comply with them British Government would be prepared to give them an annual grant of Rs. 25,000/- to be increased "with reference to the prosperity of the tract we now take ....." up to Rs. 50,000/-.[111] Future prosperity of the tract on what ground can easily be understood. It was nothing more and nothing less than the timber wealth of the forest tract of Western Duars referred to here as Bengal Duars. This will explain why the British went forward in great haste since 1862. In the treaty of Sagauli (1816) with Nepal the British took away from Nepal the area extended from Mechi to Mahananda river known as eastern Terai and returned this area to its legal owner Sikkim. Even after the First Anglo-Bhutan War legal ownership of Cooch Behar Raj over Duars was not denied. But this time there was an exception in the treatment.[112] Even the British were not grateful to Cooch Behar for her notable role in favour of the British in this Bhutan War. Apart from providing commissariat facilities, troops of the Maharaja actively participated in the Duar War under Capt. Hedayet Ali. But after the defeat of Bhutan during the treaty of Sinchula on 11th November, 1865 Cooch Behar was practically ignored. This treaty known by the Bhutanese as the Ten-Article Treaty of Rawapani[113] provides for the cession by the Bhutan Government in perpetual sovereignty of the "whole of the

tract known as the Eighteen Duars bordering on the district of Rangpur, Cooch Behar and Assam together with the *taluks* of Ambari Falakata and the hill territory on the left bank of the Tista upto such points as may be laid down by the British Commissioner appointed for the purpose ....." (Article II).[114] By this treaty "The eastern Duars, lying east of the Sankos River, have been incorporated with the Goalpara and Kamrup districts of Assam."[115]

This resulted in the formation of Western and Eastern Duars. The Bhutan Government thus ceded to the British Government comprised the Western Duars (Athara Duars of Claude White), a narrow strip of territory averaging about twenty-two miles in width and 250 in length, lying at the foot of the hills. The area covered 5,500 square miles. On their side the British Government, undertook to pay the Bhutan Government, from the revenues of the Western and Bengal Duars, an annual sum beginning with Rs. 25, 000 on fulfilment of the conditions of the treaty; on January 10 following the first payment Rs. 35, 000; on January 10 following Rs. 45, 000; on every succeeding January 10 Rs. 50,000.[116] Payment was made on the 10th January of each year by the Deputy Commissioner of Jalpaiguri at Buxa.[117] In 1888 on payment of Rs. 10,000 'Jainti lands' was purchased from the Bhutan Government. The area covered about 21.43 square miles.[118]

Thus by the policy of annexation and the policy of persuasion the British occupied 5,521.43 square miles presently from Bhutan but actually depriving Cooch Behar Raj who held it for centuries. The policies of persuasion and annexation were also applied in British Sikkim and adjacent areas. All this may be read at the backdrop of Hyder Ali and Tipu Sultan's assessment that there was correlation between political motives of the English backed by forest potentials. In Duars also a catalysis of all factors cannot be overlooked.

However, the British experts were working in these forest tracts even before the Second Anglo-Bhutan War. On 21st September, 1864 Dr. Anderson put thirteen questions to Divisional Commissioners of Bengal through the Government of Bengal to gather meticulous information about forests of Bengal. But during the Bhutan war the unstable political condition hampered the work of Dr. Anderson. The process of collecting information, however, continued. The information thus got from various administrative divisions through thirteen questions was not published immediately. The reason was best known to Anderson. He wrote to the secretary to the Government of Bengal, "The information obtained concerning the forests in Bengal is probably worthy of publication in a general report. It will be advisable to delay such report until I can inspect the forests of Bootan Dooars and Assam."[119] By this time in January 1865 office of the Conservator was

established in Calcutta. Meanwhile, the Government of India was considering a proposal for an extension of the railway in Assam. It needed considerable number of railway sleepers. Anderson proposed on the basis of the information of the Commissioner of Assam to meet this demand from the Sal forests of the Bhutan Duars, that is, the land occupied by Bhutan in Duars prior to the Second Anglo-Bhutan War. When the Government and Anderson were discussing the problem of transportation of the sleepers from Bhutan Duars to Assam the Forest Law of 1865 was passed. The Act No. VII of 1865 received the assent of the Governor-General on the 24th February, 1865. This was an act to give effect to Rules for the management and preservation of Government Forests.

During this period Jalpaiguri as a sub-division was within the district of Rangpur under Rajshahi Division. As answers to the thirteen questions put by Anderson to all the Commissioners of Bengal, the Divisional Commissioner of Rajshahi Division informed him about Jalpaiguri that there existed one forest of *Sal* wood in Baikunthapur pargana, bordering the Bhutan frontier, 20 miles in length and 10 in breadth.[120] He also informed the Conservator that there was a large bazar in Jalpaiguri from where timber was procurable. He further informed the Conservator that the Zamindar of Baikunthapur was the owner of Baikunthapur forests who "has leased his *Sal* forests to Messrs. Dear and Co. for ten years, and probably might lease it to Government when the leases of Messrs. Dear and Co. expires."[121]

From this answer of the Divisional Commissioner of Rajshahi three things are clear. First, before the initiation of forest management in Jalpaiguri by the Government there was a large bazar here and the timber merchant connected with leases used to come here for timber business. Second, the Zamindar of Baikunthapur was aware of the importance of forests as source of income which meant a commercial utility of forests. Contrary to it J.F. Gruning wrote, "The Baikunthapur forests, which received little attention from its owners and was until recently burnt through every year to ensure good grazing for cattle and buffaloes, contains hardly a tree which is not twisted and blackened by fire."[122] The assessment of the Baikunthapur forests by C. F. Campbell and J.F. Gruning is diametrically opposite. In view of this the question then automatically arises as to why the Zaminders of Baikunthapur would allow to destroy their forests which provided them wealth through lease-holders. And from the history of the Raikat dynasty (Zamindar of Baikunthapur) it is known that they had established forest offices at Salugara, Bodagunj, Shikarpur, Pantong and Farabari.[123] These forest offices were not established to keep the accounts of destruction of forests; it requires simply common sense to say that these forest offices were set up to protect forests and collect money from the sale of wood from the forest. It is not understandable why they would kill the goose that lays the golden eggs. Third, the Commissioner of Rajshahi Division repeatedly

referred to 'Bykuntpur' as adjacent to Bhutan frontier. By this reference did he want to draw the attention of the Conservator and the Government towards the forests under the control of Bhutan? Baikunthapur forests 'bordering the Bhutan frontier' — this hint was given in his answer paper. It should be kept in mind that first hint of *Sal* forests in Duars was given by J.D. Hooker in 1849–50 in his 'Himalayan Journals'. It is interesting to note that this was the period of Bhutan War when the questions were forwarded and answers were furnished to the Conservator. It is of further interest to add that the Commissioner of Rajshahi did not refer to any destruction of forests in the area under his supervision and control. Since the Commissioner did not report to any destruction of forests in his division E.P. Stebbing's wrath fell upon him. He wrote in indignation, "The Commissioner does not appear to have realized that by that time the forest would have been cut out and ruined."[124] What the Commissioner on the spot could not find in 1864-65, the historian of forests saw it in 1923! Virtually the Commissioner's report went against the pet theory of the historian that the Indians and the Bhutias prior to the British occupation of the area were indiscriminately destroying the forests. It is difficult to conceal truth for all the time to come. Mr. Stebbing all the way wanted to pose the British as saviour of Indian forests. But the picture of the forests changed between 1865 and 1871 when Western Duars was under the control of the British. Mr. Hunter collected reports on forests of Jalpaiguri from the Forest Department of Bengal (1871–72) six years after the report provided by the Commissioner of the Rajshahi Division. About Mainaguri or Tondu forest tract of Western Duars, adjacent to Baikunthapur, Hunter wrote, "It is very large tract, high-lying and without swamps, and no doubt would have good timber on it if jungle fires could be put down; but it is burnt year after year, and all the young *Sal* killed, and the half-grown trees so injured that many of them die, and some become stunted and grow up with a lot of little branches all round the tree. The leading shoot is very often killed when small, which makes tree almost useless."[125] Gruning almost echoed every word of Hunter after forty-two years. It may not be wild assumption that the forest resource of Jalpaiguri faced deterioration under the British since 1865. Uncontrolled commercialization of forests in initial stage led to reckless destruction of forests which was made up for in later period by the introduction of scientific forestry. Same thing happened and was done in British-Sikkim.

The first Progress Report of the Department of Forest Conservancy in Bengal for the year 1864–65 was submitted to Secretary to the Government of Bengal by Dr. T. Anderson. Since the Forest Department lacked information about the forests of the Lower Provinces the report was simply in the form of a long letter.[126] It dealt only with the forest conservancy of British-Sikkim. The next Progress Report of the Forest Department on the forests of the Lower Provinces of Bengal

for the year 1865–66 was also prepared by T. Anderson who sent it to the Secretary to the Government of Bengal.[127] In this report also he mainly dealt with the forests of British-Sikkim, but about other forests of the Lower Provinces he reported, "Although no forest operations have been undertaken in other parts of the Lower Provinces by the Forest Department, a considerable amount of forest revenue was collected during the year 1865-66 by the civil officers."[128] Secondly, in this Progress Report he gave a hint of his first budget of the forest administration in Bengal. He wrote, "In the budget for the ensuing year I have adopted the four provinces, Bootan, Assam, Chittagong and Cachar and Behar as the most convenient grouping of the districts from which forest revenue has been derived." Thirdly, since this was a trial and error period of forest management in eastern India, Dr. Anderson first proposed for four Forest Divisions on the basis of the grouping of the districts for revenue collection, namely, Bhutan, Assam, Chittagong and Cachar, and Behar. He wrote on 5th December, 1866, "When all the forests of Bengal are brought under the direct control of the Executive Officers of the Forest Department at least these four Divisions should be constituted Forest Divisions."[129] It shows how quick the British were in acquiring forest areas of Bengal in view of the fact that forest conservancy was inaugurated in Bengal only two years back. To quote Dr. Anderson "Forest conservancy in Bengal was inaugurated in August 1864 by my temporary appointment as Conservator of Forests."[130] It means that within two years and four months solving major legal problems all the forests of Bengal came under the executive control. Regarding the Bhutan Duars (Western and Eastern Duars) nothing was reported except the following: "The Deputy Commissioner of the Western Dooars granted a license to cut timber of a minimum girth in the Sal Forests of his district. The license remained in force for only six weeks. The amount of revenue obtained from this permit was Rupees 3,036, and was collected without any cost. In the Eastern Dooars, the collections from forests were Rupees 1,353, apparently after deducting 10 per cent paid to the Tehsildars. The total amount of forest revenue collected in Bootan during the year 1865–66 was Rupees 4,389."[131] It proves that neither the officer on the spot, nor the Conservator of Forests, nor the Government of Bengal had any workable knowledge about the forest operations in the Duars. To have that A. Eden, Secretary to the Government of Bengal wrote a letter to Dr. Anderson in March 1866[132] requesting him to submit a report in the way of Forest conservancy operations in the Duars.

Dr. Anderson in reply intimated to the Secretary that 'at present' it was impossible for him to submit a report as desired by him since he did not possess any satisfactory data regarding the forest of the Duars. He said that of Bhutan he knew nothing personally, although from the rich Botanical collections of Griffith and Simmons which existed in Herbarium of the Botanical

Gardens, he was familiar with the general character of the Flora, and knowledge of the timber trees likely to be found in forests of Duars. He wrote to let the Secretary know under what condition he was working as Conservator, "The important questions, however, of the extent of the Forests, their accessibility; the relation of the course of the rivers and of roads to the forests; the procuring of local labour for forest operations; the existence of local markets for timber are points on which no information exists."[133] He made these preliminary remarks not with any intention of magnifying the difficulties to be overcome, but merely to show that a Report, to which the operations should conform, could scarcely be submitted until a local Forest Officer had been appointed, and until he had travelled through the Duars. In order to get more accurate knowledge of the newly acquired district (Duars) Dr. Anderson gave some proposals to the Lieutenant Governor for his consideration subject to alteration if necessity arose. Just to understand the exact position of the Conservator vis-a-vis the future of forest operations in the Duars it is better to quote the whole proposal of Dr. Anderson. This will also show what he wants to do.

First proposal : "An Assistant Conservator of not less than Rs. 300 a month with the travelling allowance, according to his rank in the Department, should be appointed in time to accompany me in my tour through the Dooars, to start from Julpigooree about the first December, 1866. This officer should accompany me in my march from Julpigooree to Gowhatty. During this tour, the general character and extent of the forest should be examined, and by the time we shall have reached Gowhatty, the plan of forest operations would be decided upon.

Second proposal : "The forest operations will, of course, be commenced as near as possible to the course of the large rivers, and I think, that at first they should be confined to the Western Dooars, and thence to the vicinity of the Rivers Teesta, Manass, Torsa, and Guddadhar. The first and last of these rivers are 120 miles apart in the Bhootan Dooars, while their embouchures into the Berhampooter are separated by 40 miles. This convergence of the main rivers of the Dooars towards each other in their course to the Berhampooter, will prove valuable in the transport of timber, as, should it be necessary to have a Timber Depot on that river, one at a point below the junction of the Teesta would be sufficient for all the timber of the Western Dooars.

Third proposal : "The operations to be commenced in December or January next, would consist in the felling of Sal trees for Railway sleepers for the extension of the Eastern Bengal Railway to Goalundo. This the only demand that at present appears likely to arise for the timber from the Dooars. Probably timber merchants may after a few years, be induced to purchase timber

in the Forest themselves, so that the Forest Department may be spared the expense of a large establishment for working the Forests, and floating to Depots on the Berhampooter. Until it is shown that these forests can be worked with ease and security, contractors will not resort to them.

Fourth Proposal : "The conservancy operations should, for the first year, consist of putting down all destruction of the forests, and unlicensed cutting of timber by the villagers, and by arresting the spread of jungle fires. The supply of timber for local demands should also be brought under control. No rules can be framed for these purposes until I and the local forest officer become acquainted with the rights of the inhabitants of the Dooars, and the practices that may require to be suppressed. From my experience of the difficulties of organizing the Forest Department for British-Sikkim, I do not expect that much can be done in the Dooars in the year 1866–67; but in that time the local Forest officer will have made himself acquainted with the country, and from the data collected the Budget for the ensuing year will be submitted with some confidence in the results expected.

Fifth proposal : "The opening up of the forests of the Himalaya and the Terai, from the Mechi river in Sikkim to the Guddadhar in the Bhootan Dooars, suggests the questions of, where can the market for all the timber that could be brought from these districts be found. The local demand for timber is small and will never remunerate Government sufficiently; infact the revenue from sales of timber for local use, will hardly pay for the local forest establishment. Agents for the supply of Railway sleepers will probably require a large quantity of sleepers for some years, but they take only one class of logs and all of one species. Even the splendid trees of Sal in the forests of the valley of Teesta, and on the outer ranges of the Sikkim Himalayas, 13 and 14 feet in circumference, are far too valuable to be cut into sleepers. I am of opinion that a ready market would always be found in Calcutta for all the timber the Forest Department could bring down for sale. The late sale of timber destroyed by the cyclone in the Botanical Gardens shows that there is a great demand in Calcutta for Sissoo and other woods. Sissoo is abundant in Sikkim Terai and the Dooars, and cannot be found much nearer Calcutta. Large and small Sal logs and thinnings from the forests, would find a ready market here, as indeed all good-timber. It is not too much to expect that, even an export trade might arise in Calcutta of Sal and others of the better class of woods, where the supply to be constant and large enough. There would be little difficulty in bringing a raft of timber to Calcutta during the rains either down the Mahanuddee and the Bhagiruttee, or by the Teesta and the Berhampooter."[134]

Dr. Anderson solicited the sanction of the Lt.-Governor to the despatch of a raft of mixed timber from Siliguri by the Mahanadi (now Mahananda) and Bhagirathi to Calcutta. He also said that he would make arrangements for the storing of the timber in the Botanical Gardens. He informed the Lt.-Governor that one hundred trees of Sissoo had been felled in the Sikkim Terai in the hope that they would be sold locally. He further noted that these "trees along with the timber that would be cut for East Indian Railway in the temperate forests would make a full sized raft."[135] Dr. Anderson lived in hopes of better times. He wrote, "If the experiment is pecuniarily successful, then a large supply of timber could be brought to Calcutta from Sikkim and Bhootan in following year."[136]

The observation of the proposals of Dr. Anderson makes few points clear and some confusing. According to the first proposal Dr. Anderson had no first hand knowledge about the general character and extent of the forests of the Duars and he needed an Assistant Conservator to exchange views about the future plan of forest operations. But the second proposal showed that he had already a meticulous knowledge of the river system of the Duars and chalked a plan of the transport of timber by the river Brahmaputra. Thus some portions of the two proposals are in contradiction with each other since the knowledge of the river system of the Duars cannot be gathered without penetrating into the forests of the Duars. It is known to all that the rivers mentioned in the proposal are crisscrossing the dense forests. It seems that he gathered the indirect knowledge of the rivers from the Divisional Commissioner of Rajshahi Division who gave answer to the questionnaire on 17th February, 1865 set by Dr. Anderson in 1864. Those who gave information to the Divisional Commissioner of Rajshahi had, in fact, wide knowledge of the forests as well as rivers of the Western Duars. Major aim of Dr. Anderson was to gather personal knowledge. From the third proposal it seems that due to the demand of Sal timber for Railway sleepers the commercialization of Duars forests was possible and timber merchants might be attracted to the timber business. But the fifth proposal showed that he did not want to depend on the local demand and intelligently thought of bringing the timber by rivers to Calcutta where the demand of all sorts of timber existed. In fourth proposal he wanted to make the forests profitable one, and hoped to make a budget after collecting the necessary data. In all these proposals Dr. Anderson meant business, not conservancy which could only save the forests from the hands of the contractors. Dr. Anderson wanted to legalize the working of the contractors in forests by issuing licenses.

However, the proposal of Dr. Anderson for the appointment of an Assistant Conservator in the Duars was recommended for favourable consideration by the Secretary to the Government of Bengal.[137] Ultimately the post was granted on a salary of Rs. 300 per mensem for one year from 1st November, 1866 subject to the confirmation of Her Majesty's Government. Further, the Commissioner of Cooch Behar and the Duars has been called on to furnish, for Dr. Anderson's guidance, all the available information connected with the forests and the timber trade of the Duars.[138]

The aim behind this was to ensure steady supply of sleepers for any extension of Eastern Bengal Railway as well as for the doubling of East Indian Railway. At this stage the Government was not ready to give up forests to timber traders. Gustav Mann was already an Assistant Conservator of Forests. Now after Dr. Anderson's proposal Mr. Dale was appointed another Assistant Conservator of Forests. He, now, along with Mr. Dale began to examine the extent and position of the forests in the unknown areas of the Duars to have a careful and systematic management of the same. In this connection the Government desired that a sketch map might be prepared showing the different divisions, the principal trees growing in them, roads and also the chief timber stations.[139] Dr. Anderson's last important work was the third Annual Progress Report of the Bengal Forests for 1866–67. In this year Dr. Anderson left the job for research and Mr. H. Leeds, the Conservator of Forests in Burma joined as the Conservator of Forests in Bengal in the later part of 1867. In the same year Bhutan Duars was directly included in the Forest Department of Bengal.

In September, 1866 the Government of India had called for report on the forests of the Western Duars and Bhutan with a sketch map of the areas. This map was drawn by Leeds after visiting the areas and submitted to the Government of Bengal with his letter, no 15 A, dated 19th May,1868. He intimated to the Government that Sal forests of Western Duars in the plains consisted of twelve blocks of forest estimated to contain a total area of 40 square miles. The workable forests in the hills were estimated to cover an area of about 50–60 square miles only, as the outer hills only were at the time available for timber operations. The Report continues: "The forests on the plains bear the signs of having once been very rich in large timber, but with the exception of the Nathabaree (No. 8), Deema (No. 10), Buxa (No.11) and Naldabaree (No.12), no trees above five feet in girth remain, and these forests are only estimated to contain now some 5000 to 6000 trees above six feet in circumference at four feet from the ground. This height is taken as the most convenient in many respects for measurement. The Sal forests of the outer hills may be estimated to

contain about 5000 to 6000 trees of six feet in circumference, as above measured, at four feet from the ground." He further noted, "The *Sissu* forests of these Duars are properly only four in number, for although young *Sissu* grows about along the lines of old beds of rivers these latter can scarcely be reckoned as forests, though hereafter, if cared for these scattered seedlings may become valuable."

Meanwhile, the work of dividing Duars-forests into blocks was going on but no legal sanction was given to them. Under the order of the civil administration the work was being continued. The Forest Law of 1865 was not specific on the legal position of forest blocks. But the said Forest Law stipulated that the local Governments might frame rules for management and preservation of forests and other things in pursuance of the Laws. The Forest Department felt the need for legal sanction of the forest blocks. But they understood that further enquiries would be needed in forest areas (to verify the legal claims of the private owners of forests) before adopting legal position in forest blocks. At present, in fact, legal position meant transfer of a tract from civil administrative department to forest department. Mr. Leeds submitted such information about Western Duars. Mr. Gustav Mann was now requested to furnish such report about the Eastern part of Western Duars. The area included the tract between Sankosh river and Manas river bordering Assam. In 1869–70 Mr. Leeds gave a list of forest tracts proposed as 'Reserves' in the Western Duars (tract between Tista and Sankosh rivers) together with their boundaries as approved by the Commissioner of the Division, containing 3,398 square miles. Similarly, Mr. Mann proposed to bring the Eastern Duars (tract between Sankosh to Manas rivers) under the classification of 'Reserved' forests. From this time onwards the marking of 'Reserved' forests was going on uninterrupted. To collect revenue from forests, Revenue Survey Party was employed. Special stress was given on meticulous mapping of the areas concerned. Side by side, it was also noticed that the process of forest conservancy in Bengal was slow in comparison to other provinces in India.

The ground reality is that the work of forest administration in the tracts under Duars did not progress before 1874–75. By this time, we may look aside to know the nature of behaviour of the Bengal Government with the original forest-dwellers of Jalpaiguri and Buxa divisions. From time immemorial the Meches and Garos inhabited in the dense forests of Duars, and their livelihood was dependent on the products of forests. They were accustomed to *Jhoom* or shifting cultivation. Naturally, they did not live in particular place permanently. But it can be said that their habitat was the forests. There is no proof that the Raja of Cooch Behar or the Dharma or Deva Raja of Bhutan ill-behaved with them, and never ordered them to leave their habitat in forests. The British asked

them to leave the forests and told them to live in open areas outside the forests but adjacent to the forests. A large section of Garos did not agree to the proposal and went away towards the dense forests of Assam. But all the Garos did not leave the place was evident from the 'Survey and Settlement of the Western Duars' of D. Sunder who dealt with them in 1889–95. Those Garos who left the forest tract but began to inhabit outside it, perhaps, did not co-operate with the Government on terms and conditions offered to them. The Meches accepted the proposal and came out of the forests and began to live in open areas adjacent to the forests. In the Progress Report of 1868–69 Lt. W. Stenhouse, Officiating Conservator of Forests, Bengal noted, "Some of the tracts demarcated contain a few settlers and a little cultivation, but the Commissioner of Cooch Behar Division informs me that there will be no difficulty in inducing them to remove outside the reserves if the department wish it, and that in one case they have already done so. The requisite negociations (sic) for this purpose will be carried out by civil officers."[140]

Such a civil officer we see at Buxa who dealt this problem with the Meches and Garos of the area. These Meches, if not the Garos, gave trouble to the Forest Department. When Buxa was declared 'Reserves' the Meches and Garos were asked to leave the reserves and settle outside the prohibited area. Sub-divisional Officer of Buxa reported on 24th December 1876 that the Garo people went outside the reserves.[141] But the Meches of Boromali, according to British sources, demanded compensation and a suitable place to live on. The Meches selected Atrabaree as their new habitat. Some of the Meches squat at Atrabaree but some of them did not agree to leave the reserve without adequate compensation. To solve this crisis the Sub-divisional Officer, Buxa, was asked to furnish a report on it.[142] The said officer wrote in his report, "I went this morning with the Tehsildar of Buxa to the village Boromali and saw the houses with a population of about 200, and very good rice and mustard crops on the ground, and found the headmen willing to leave by April next, provided compensation is allowed. The annexed statement will show the names of the headmen, the extent of cultivation, with the compensation which, in my judgement and that of the Tehsildar should be allowed, amounting to Rs. 250."[143] He further reported, "The Dooar tax realized from the village last year was Rs. 42 and the tax for this year will shortly be recovered." The Sub-divisional Officer annexed to his report the statement showing the details of compensation to be given to the Meches living within the Reserved Forest in Pargana Buxa, in Taluk Boromali, for removing their habitation to Taluk Atrabaree.[144] Thus, by way of compensation the problem was settled up with the Meches in Buxa and they began a new way of life.

However, Jhoom cultivation was generally prohibited, "but is still permitted in the Jhars or places where it has been practised from time immemorial, and where the jungle consequently consists only of bushes, shrubs, and staunted trees".[145] The relevant order regarding the use of forests was as follows:

"The Meechees and Garrows living in or near the forests are permitted to take Sal and Sissoo and other kinds of wood as they have always done in time past for their own use solely, and not for sale, for the purpose of building their houses, for rice mortars, pestles, yokes and ploughs of the descriptions named below, and on the following conditions:-

1st. — "They shall not cut down any sal or sissoo tree."

2nd. — "They shall only use fallen timber or the stumps of trees remaining on the ground after the tree is felled, or such loppings as remains after the timber has been felled by the Forest Department or persons authorized to cut timber by the Forest Officers."

3rd. — "For house posts they shall only use fallen timber not more than two spans in girth."

4th. — "They at once report to the nearest Police Station any attempt to cut or remove timber by persons not having a purwanna, and if in their power shall detain any persons cutting or removing timber till the police arrive."

5th. — "They shall give all assistance in their power to the Forest Officer for the care of the forests."

Every Mech 'Sirdar' (no mention of Garo Sirdar) had been furnished with a copy of an order to the above effect, and its provisions had been made applicable alike to residents in the Eastern and Western Duars.

The Government further took some steps to improve the Forest Administration in grass-root level. The following order was issued by the Commissioner on the subject of permits to persons to remove for sale fallen timber of descriptions which the Forest Department did not undertake to remove, or to convert loppings and stools into rice mortars, pestles, yokes and ploughs :—

"It is the duty of Tehsildars to preserve all Government forests and timber in their districts, and to prevent the cutting of any sal or sissoo trees without the permission of the officers of the Forest Department."

"The Meechees living in or near the forests have already permission to remove certain fallen timber loppings and stools of trees for their own use only, as in time past, and not for sale."

"All other persons desirous of removing fallen timber may do so on obtaining permission of the Tehsildar, who will give them a pass on payment of duty at the following rates :—

For each	Rs.	As.	P.
Plough	0	0	6
Yoke	0	0	6
Rice Mortar	0	1	0
Pestle	0	0	3
Loppings for house posts, original length of the branch 1½′ in girth and under	0	2	0
Wooden stool made out of tree stool	0	0	6
Wooden bowls, & C.	0	1	0
Log of six feet in length	0	2	0

"But it is to be most clearly understood that the Tehsildars have no authority to grant permission for the cutting or removal of any growing sal or sissoo tree or any timber larger than that specified above, and that no other description of timber may be converted into ploughs, yokes, mortars, & C.

"Persons desirous of cutting down trees or removing timber longer than six feet can only do so by obtaining permission from the Forest Department."[146]

It was further noted that the Tehsildars were asked to keep Registers (of all permits given) open for the inspection of the Forest Officers, and the permit holder would be obliged to show his purwanna on demand. The officer in charge of the Bhutan Division was requested to report on the practical working of these arrangements. It was advised that the petty local demands of the population for sal timber should be met, and that permits for the removal of small pieces should be given for this purpose. The Offg. Conservator of Forests further advised that the revenue derived from this source should be collected by the Tehsildars and other receivers of public revenue. About over all forest administration in 1868–69 the Conservator observed "the control of the Forest Officers over these arrangements appears to be at present somewhat defective and susceptible of improvement."

However, by the local arrangement of protecting the Duars-forests the Forest Department was benefited much and W. Stenhouse did not conceal his joy. He wrote, "The Forest Department is like to benefit greatly by the assistance as forest watchers of men residing near the forests, whose local knowledge and means of obtaining information ought to render them much more efficient than

a highly paid stranger. The remnants of sal and sissoo trees which they are allowed to take gratis will secure the goodwill of the population without cost or loss to the department." From the sources served by the British it seems that the Meches did not create any problem. From the beginning the Commissioner of Cooch Behar was not ready to consider it as a problem at all. Perhaps the lure of vast waste land attracted the Meches and their population was not much. Short of cultivable land could create the crisis – but that was not the case here. It is a notable feature of the area since in other parts of India the problem was not solved so easily and amicably. It might be for the docile character of the Meches and Garos in comparison to the forest tribes of Upper India. It might be for the lack of leadership or the absence of outsider leadership to instigate the Meches and Garos to rise against the colonial policy of forest exploitation. In all other regions forest-settlement operations led to serious and general discontent. Villagers complained of the violation of their rights. History of this crisis in Kumaun and Garwal has been dealt with at length by Niladri Bhattacharya and Ramachandra Guha.[147] But Jalpaiguri and Darjeeling districts are exceptions to the rule.

Yet, the conditions on which the Meches were given permission to use forests deprived them of their traditional rights. When the local people could not procure timber according to their needs and choice they turned into timber thieves, and began to exploit the forests even for profits. Timber-theft, thus, became the major industry of the locality. Indiscriminate felling was the order of the day. Destruction of forests in such a way made the Forest Department wise, and it is easy to be wise after the event. It is now understood that the protection of the forests in Western and Eastern Duars was very difficult. H. Leeds, the Conservator of Forests noted on 31st July, 1871, "An insufficient and weak establishment here can only end in disappointment, and defeat the objects sought i.e. protection of forests. The mischief and depredation (sic) which can be carried unobserved for years in forests which cannot be inspected every year, yet from which produce can easily be taken down to market, may not be discovered for a long time. A native watcher will report everything going on well until a European going into the tracts discovers the mischief and robbery which has occurred. It would be better to abandon many tracts altogether, and confine protection to a few, well looked after than pretend to protect numerous tracts with an insufficient establishment which only brings all management into contempt."[148] This shows that at this stage the Conservator was at a loss what to do. Government made many rules to protect forests, yet, the condition of forests proved that, 'Regulations in a sense, create crime'.

Thus in Duars began the state intervention in the *Adivasi* relationship with the forest. The *Adivasis* worshipped this land and raised their children on its bounty. When the administration

blamed *Adivasis* for destroying the forest through practices like shifting cultivation and tried assiduously to stop them, it chose to ignore its own record of forest degradation. The colonial policy of managing the forest was for maximizing its own short-term profits, without respecting the rights of local communities to use the forests for subsistence. Around 1870 the *Adivasis* all over India were encouraged to stop shifting cultivation and settle down. Almost without exception, colonial administrators viewed shifting cultivation with disfavour as a primitive and unremunerative form of agriculture in comparison with plough cultivation. Influenced both by the agricultural revolution in Europe and the revenue-generating possibilities of intensive (as opposed to extensive) forms of cultivation, official hostility to shifting cultivation gained an added impetus with the commercialization of forest. Like their counterparts in other parts of the globe the British foresters held shifting cultivation to be the most destructive of all practices for the forest, not the least because it competed with timber operations.[149]

Moreover, from being an intrinsic part of peasant agriculture, forests came to be inserted into a commercial economy which sharply undermined the ecological basis of subsistence agriculture, hunting and gathering. While the *Adivasis* were being increasingly excluded from the forest and their customary use rights restricted, like here, in most places this was not justified by the British on grounds of environmental protection, for no policy of conservation was instituted. Land was leased to contractors whose activities turned vast tracts of forest in Duars and other areas into semi-barren land. In Duars these semi-barren areas were turned into tea gardens since the soil and climate were favourable for tea cultivation which also came within the fold of British commercial enterprise along with forests. All this was done at the cost of forests.

There was a great change in forest administration between 1871 and 1898 which also influenced the forest settlement in this area. When on 1st January, 1869 Jalpaiguri as a separate district appeared on the map, the British began to think about Jalpaiguri from various angles of vision. In the Progress Report of 1868–69 it is found that a proposal was in the air to create Jalpaiguri a forest division with its headquarters at Jalpaiguri. This forest division was ultimately proposed as 'Sikkim-Bhutan Division'. Besides, other four divisions were also proposed. When in 1872 Dr. Schlich, a German took over the charge as Conservator of Forests in place of Mr. Leeds, the Forest Department was inspired. He continued upto 1878 and during this period Forest Department marked a good progress. Although earlier proposal of forest divisions was not accepted but in 1872–73 Bengal forests were divided into five divisions, namely, Cooch Behar, Assam, Dacca (Sylhet and Cachar), Chittagong and Bhagalpur. Despite these five divisions, the forest

administration had, only really commenced in three divisions, that is, Cooch Behar, Assam and Chittagong. With the object of initiating an organized survey of the forest, Dr. Schlich temporarily closed down the Dacca and Bhagalpur Divisions, transferring the staff to the Cooch Behar and Assam Divisions. This proved effective. Moreover, the formation of Assam into a chief commissionership in 1874 relieved Bengal of the forests in that province. Naturally in 1874 there were actually two divisions in Bengal — Cooch Behar and Chittagong. The latter had no reserved forests, and in 1874–75 a separate circle was created for the Assam forests. During this period whole of Duars was within Cooch Behar Division, and the area under reserved forests was 120 square miles. At the end of 1875 under Dr. Schlich forest division of Bengal was again reorganized for better administration, and Jalpaiguri (probably in place of Cooch Behar Division), Darjeeling, Palamau, Sundarbans and Chittagong divisions were formed. From 1876 the Forest Department devoted greater part of its time in examining different forest tracts as a result of which 3,390 square miles of forests were gazetted as Government Reserved Forests. Within this Jalpaiguri Division included 390 square miles in Reserved Forest area.[150] In 1877-78 out of Jalpaiguri Forest Division Buxa Forest Division was created and by that time Moraghat was included in Jalpaiguri from Bhutan which brought five square miles to Jalpaiguri district. And when the plains of Buxa was included in Jalpaiguri district from Bhutan it further brought 110 square miles to the said district. In this way the selection of forests for reservation in Jalpaiguri district was begun in 1872-73 and from that time to 1878-79 various forests were gazetted as Reserved. Thus by the end of 1878 selected reserved forest area under Jalpaiguri district was 390+5+110 = 505 square miles. One wonders that even upto 1878 no forest tract was legally declared Reserved in Jalpaiguri district. However, when Buxa was declared as separate forest division in 1877-78 it covered an area of 1,41,942 acres as Reserved Forest.

This year coincided with the more comprehensive Forest Act of 1878. In the spirit of that Act the Provincial Government framed certain rules from time to time. According to the legal procedure the forest tract was selected as reserved from unoccupied waste. In the second stage the tract came under gazette notification, and in the third and final stage it was further notified under certain section of the Forest Rules of India and got legal position as 'Reserved Forests'. In pursuance of this procedural method the first reservations of forests in Jalpaiguri "were made in 1879 according to the Indian Forest Act (Act VII of 1878)". Rights were inquired into by the Forest Settlement Officer during the years 1890-1896 and a revised notification was issued in the year 1895 (notification No. 3147 – For, dated 2.7.1895).[151] During the reservation, according to the rule, the Forest Department was asked to declare that the reservation was made from unoccupied waste.

To follow the Act the Jalpaiguri Forest Division solemnly declared, "The forests have been reserved from unoccupied waste." It was a travesty of truth since many reserved tracts of Jalpaiguri Division were inhabited by the Meches and Garos from a period not known to the British. The Legal Position of the reserved forests and date of gazette notification, name of forests, area in acres and other relevant information connected with the Jalpaiguri Forest Division are shown in Appendices – B & C. The documents speak for themselves. A sketch map attached, Appendix – D shows the geographical position of the 'Reserves' in Jalpaiguri Division in 1918-19. It has been noted in the working plan that the notifications Nos. 7308 to 7318 – For, dated 23rd May, 1927, give amended and more accurate descriptions of the boundaries of all blocks and their areas except Tondu, Diana, North Chengmari, South Khariarbandar, Murti Extension, Ramshahi Extension, Extension to Lower Tondu, Torsa and North Borojhar Reserves. The areas given in the above notification (shown in Appendix – C) have been used in compiling the statements given in paragraph 8 and Appendix VI of the Fourth Working Plan for the Reseved Forests of the Jalpaiguri Division. Where amended notifications were not published, the areas given in the 4-inches — to 1-mile Reserved Forest maps of 1918-19 were used.[152]

The Forest Policy of 1894 expedited the process. Taking cue from the Act of 1878 and Policy of 1894 the Jalpaiguri Forest Division thought of working plan to make scientific forestry a success. The working plan for the whole of the Jalpaiguri Division was drawn up in outline in 1892-93 by Mr. Manson and a working plan, completed by Mr. Haines in 1896, was sanctioned in 1899 for ten years with retrospective effect from the date of its completion. This working plan remained in force until 1905.[153] Thus the first regular working plan in Jalpaiguri Division was that of Haines (1898-1905) which prescribed coppice with standard system with a coppice rotation of 25 years and rotation of 100 years for standards to apply to the whole division except Dumchi and the *Khair* and *Sissu* forests. The former was to be put under selection fellings and the latter were to be managed under 'silvicultural rules tending to remove old trees and improve the crop'. It is to be mentioned that in 1892 in a rough working plan and in 1898 Haines in his regular working plan prescribed coppice-with-standard system for *Sal.* Owing to doubts as to the suitability of the 'coppice-with-standard' system for *Sal,* Mr. Trafford's revision of Mr. Haines' Working Plan was published in 1905. This plan differentiates between *Sal* and mixed working circles "prescribing improvement fellings on a 15-year cycle and 2-foot (sic) exploitable diameter in the former and coppice-with-standards (the standards being promising trees of certain named species) on a 20 year rotation in the latter."[154]

The outstanding feature of Mr. Trafford's working plan, however, was the provision for annual cleanings to be made for five years after the coupe with the object of freeing *Sal* seedlings. These cleanings aroused a great deal of discussion but gradually the opinion of local officers began to turn against them and by 1914 they had few, if any, supporters in the province. They were finally condemned by Mr. Hart, the Inspector-General of Forests, in his inspection note of 1915. Before definitely deciding to abandon them, Mr. Muriel, the Conservator of Forests, had an enquiry made as to their cost and results which showed their expense to be quite disproportionate to their results. But most foresters who knew the locality were of the opinion that conditions affecting Sal reproduction "have been rapidly deteriorating since successful fire-protection was achieved, and it is therefore possible that the results attained by these cleanings were more promising when they were prescribed in 1905 than when they were abandoned ten years later."[155]

The Fourth Working Plan of the Jalpaiguri Division (1926–27 to 1945–46) noted that natural regeneration of Sal was absent, "and it was realized about twelve years ago that the restocking of the forests by means of natural reproduction is impossible." In view of this the Forest Department thought that artificial regeneration in Jalpaiguri Forest Division was the only way to save the forests in Jalpaiguri. In fact, experiments in artificial regeneration were commenced in 1910 and continued in subsequent years and the results had been sufficiently promising to justify these methods being prescribed in E.O. Shebbeare's plan. This came into force in 1919 – 20 and in his working plan he prescribed the artificial regeneration of clear-felled areas by means of *Taungya* plantations. Thus, natural regeneration of *Sal* was known to have failed and the *Taungya* method of regeneration appeared to be the only satisfactory solution. This plan worked from 1919–20 to 1924–25. All these plans and their trials made Bengal as well as foresters of Jalpaiguri wiser.

The Jalpaiguri forests which contain River Forests, Plain Forests, The Plateau Type, Hill Forests and Savannahs thus travelled a long way towards Scientific Forestry. These forests came under British rule in 1866, before which time, according to Mr. Shebbeare, most of the best timber had been cut out. The British sources could not enlighten us about what the wood-cutters did with so many mature and best timber-trees. However, the British sources speak eloquently that they continued to be open to indiscriminate felling and were described as 'Open Forests' up to 1874 when the first blocks were reserved. From this date onwards reservation was extended until 1884 the whole of the open forests were reserved. After reservation it was decided to allow them a period of rest and only such timber as was urgently required by Government was cut. The theme of Scientific Forestry began to work in Jalpaiguri Forest Division.

Forest Settlement of Buxa Forests

The past history of Buxa is inter-related with the history of Kamrup, Cooch Behar and Bhutan. It is assumed that before the rise of Cooch Behar Raj this area was under the nominal control of the Khen Dynasty of Kamrup. Due to the simultaneous weakness of the Khen Dynasty and the rulers of Gauda there was a political vacuum in this part of North Bengal. Taking this opportunity Viswasingha carved out a kingdom on the ashes of Kamrup Empire in and around Cooch Behar. This was an event of the sixteenth century. Viswasingha extended his control from the Karatoya river in the west to the Baranadi in the east.[156] At the beginning the Koch dynastic kingdom founded by Viswasingha acted as a feudal kingdom under the nominal sovereignty of Kamrup, but with the passage of time it was transformed into an empire. Under Maharaja Naranarayan (1554–1588) this empire was extended in the west upto the Koshi river of Bihar and Morung of Nepal; in the east it touched the Dikuravashini river (Dikari river) of Arunachal; in the north the hilly tract of Bhutan; and in the south it reached upto the river Brahmaputra. But this extended empire did not last long. The royal dynasty of Cooch Behar, yet ruled over the area between the Sankosh and Manas rivers for a considerable period.[157] In the middle of the 18th century the hey-day of Cooch Behar was over and Bhutan was the ascendant power. The relations of the British Government with Bhutan commenced in 1772, when the Bhutias invaded the principality of Cooch Behar, a dependency of Bengal. The Cooch Behar Raj applied for help. The assistance came immediately in the form of military operations and the invaders were expelled. A treaty of peace was concluded between the East India Company and the Bhutan Government in 1774. It has already been mentioned how the kick and kiss relations ultimately led to the occupation of Western Duars by the British on the 11th November, 1865. Buxa was within the forest tracts of Western Duars.[158]

Before 1867 Buxa was under Jalpaiguri sub-division. In 1867–68 Mr. W. M. Clay took charge of Buxa, which was then created a regular sub-division. His head-quarters were at Buxa, but he also worked at Alipur. When in January 1869 head-quarters of Jalpaiguri were removed from Maynaguri to Jalpaiguri, simultaneously the head-quarters of Buxa sub-division were removed to Falakata. Towards the end of 1876 head quarters of Buxa were again removed to Alipur, but at the same time Government authorized the sub-divisional officer to recess annually at Buxa during three of the most unhealthy months of the Duars.[159] This system continued for a long period, but ultimately the system was discontinued. The fate of Buxa forests was tagged on to Cooch Behar division, and then, Jalpaiguri division till 1877–78.

The forests of Buxa had been in charge of the Forest Department since 1866, but up to 1874–75 the working was very irregular and the records are incomplete.[160] But the process of the formation of the Buxa Reserved Forests are available in the report of Mr. H. Leeds, Conservator of Forests, Lower Provinces, Bengal. He forwarded the Annual Forest Report for the Lower Provinces of Bengal for the year 1869–70 to the Secretary to the Government of Bengal, Fort William on 27th July, 1870. In this report he gave a list of reserved tracts of forests then under the Forest Department. According to the said list Buxa sub-division was comprised of the following places; and he also noted area in acres against each place.:-

Names of Places	Acres
1. Ateabaree Doldahree	1. 7,018.25
2. Borojhar Satalee	2. 26,400
3. Chokakbeetee Pasteesal	3. 436
4. Chooarpur Jaganjee	4. 15,522.50
5. Natabaree	5. 7,000
6. Neemtur Domohone	6. 2,248
7. Oodlagoree	7. 6,718.51
8. Raimatong	8. 8,567.13
9. Patkaparee	9. 1,200
10. Boromallee	10. 21,208.08
11. Chokeerbos & Chokeerbosjhar	11. 3,001
12. Mynagaon	12. 6,974.31
13. Painalgooree	13. 624
14. Panbaree	14. 26,497.10
15. Sunniasijhar	15. 4,706.05
16. Salbaree	16. 8,343
17. Mahakalgooree	17. 72
Total	**146,535.93**

W.W. Hunter published his 'A Statistical Account of Bengal' in 20 volumes in 1875-77. In his volume X he noted, "In 1870, the Deputy-Commissioner returned to me the various forest tracts in the Western Dwars, together with their respective areas ....." Here about the composition of Buxa pargana he submitted a list of places with area in acres. The list was as follows:-

Names of places	Acres
1. Mainagaon	1. 6,526
2. Sanyasi Jhar	2. 4,510
3. Baramali	3. 19,448
4. Panbari	4. 25,517
5. Panialguri Chhotmala (Part of)	5. 624
6. Chuapar Jhajangi	6. 15,272
7. Raimatang	7. 8,171
8. Natabari (Part of)	8. 7,344
9. Atiabari Dhuldabri	9. 6,638
10. Nimtar Domohani (Part of)	10. 2,098
11. Odlaguri	11. 6,182
12. Patkapara (Part of)	12. 1,360
Total	**1,03,690**

The two lists prepared almost during the same period mentioned above do not tally — neither in number of forest tracts nor in acreage against the name of the tracts except in solitary case of Panialguri. In Leeds' list we find the number of places as 17, whereas in Hunter's list the number is 12. Total amount of acreage also differs. To provide acceptable explanation of this difference between the official records, at this stage, is beyond our reach. E. P. Stebbing gives information that 110 square miles forming the Buxa plains were added to Jalpaiguri Division, but that was, it seems from Stebbing, done in 1874–75.[161] If we take it for granted that 110 square miles were added to the Jalpaiguri Division in 1870 after the annual report was prepared, only then, a possible explanation can be propped up. Then, we may be allowed to say that the places like Borojhar Satalee, Chokakbeetee Pasteesal, Chokeerbos and Chokeerbosjhar, Salbaree and Mahakalgooree which were not present in the list of Hunter were taken away from Buxa pargana and added to Jalpaiguri Division in 1870. The total acres of those five places in acreage, after summation, comes upto 38,252 acres. If those 38,252 acres are added to 103, 690 acres shown by Hunter, then total area comes to 141, 942 acres which are about to tally to Leeds' total acreage of 146,535. Thus we by an exercise of permutation-combination, are in a position to say that the plains of Buxa was added to Jalpaiguri Division in 1870 just before the Deputy Commissioner despatched his report of forest settlement to Hunter. Be that as it may, the British in order to show the legal position of the forest tracts noted that the forests have been reserved from unoccupied waste land, and they kept in record a list of notifications showing the progress of reservation. This list along with other forest tracts included the information of the progress of the forest reservation in Buxa (Vide Appendix — E).

However, the First Working Plan of Buxa was incorporated by Dr. William Schlich in his Administration Report for 1874-75. Under this plan Sal trees over 5 feet in girth were removed

departmentally over one-eighth of the Rajabhatkhawa block annually from 1875-76 to 1882-83 and the same procedure was carried out in the Poro block from 1882-83 to 1887-88. From 1888 onwards the exploitable girth was raised to 6 feet and the same system continued in parts not previously worked over except that the size of the annual coupe was fixed by the anticipated demand and the timber was extracted by purchasers.

In 1900 departmental operations were again started and sleepers sawn for the Eastern Bengal Railway until 1912. Meanwhile, the programme for the year (1902–03) as approved by the Lieutenant-Governor, in the Government order No. 3852, dated the 5th December, 1901, was carried out, and in addition working plan for the Buxa Division was taken in hand.[162] According to this plan 35 square miles of Reserved Forest in the Buxa Division were opened to grazing as an experiment in expectation that the admission of licensed graziers would prevent fires in this area. In 1902–03 it was reported that in places reproduction of *Sal* continued to suffer from the luxuriant growth of creepers, but *Sissu* and *Khair* continued to reestablish themselves on areas formerly stocked with these species which had been successfully fire protected for some time. This was notably the case in the southern part of Borojhars. During the year in Buxa it was reported that 12,084 acres over which creepers cutting was carried and it cost Rs. 1,051, and average cost per acre was 1.39 annas. In the next year (1903–04) creeper-cutting areas were increased to 29,546 acres of this division which suffered greatly from neglect of the operations in the past. In the Progress Report of 1903–04 it was reported that in the Buxa Division an area of 18 square miles adjoining Bhutan was notified under section 4 of the Forest Act, the Deputy Commissioner, Jalpaiguri district, being appointed Forest Settlement Officer, but little progress was made in settling the tract before the close of the year. In other field of activities the Forest Department in Buxa faced some difficulties like protection of forests from fire. But in such forests difficulties almost disappeared as tree growth established itself.[163] At the end of Dr. Schlich's working plan in 1906 under the selection system, and from 1906 onwards Buxa came under Mr. Hatt's Working Plan which was in force up to 1920. This prescribed selection fellings on a 15 year cycle with a 6 feet 3 inches exploitable girth combined with improvement fellings. The improvement fellings bore on inferior *Sal* and other species interfering with promising *Sal* and also on *Sal* which was so obviously defective that it could not grow into a good tree of the exploitable girth.

At first trees of other species were felled at considerable cost, often in the interest of a few saplings. As there was then no demand for them they were allowed to lie where they fell. About 1911 A.D., as it was found that these fellings tended to increase the already dense evergreen

undergrowth, it was decided to deal with only such trees as were actually interfering with established *Sal* and these were girdled instead of being felled.

Practically, in 1906 the bad effect on *Sal* regeneration of the evergreen undergrowth induced by fire-protection led to clearings being started to free Sal seedlings. These were to be continued annually for five years after the coupe, but were not undertaken so thoroughly in Buxa as in Jalpaiguri Division where these were under prescription of Mr. Trafford's Working Plan. There was a good deal of discussion as to the efficacy of these clearings which were abandoned in 1910.[164] Results in Jalpaiguri, where these were not abandoned until 1915, showed that those were of little value in comparison with their cost. In Buxa Division departmental sleeper-work was also abandoned in 1912, and from that time all *Sal* timber were being sold by auction. Mr. E.O. Shebbeare's working plan for Buxa Division (1920–21 to 1925–26) for the first time prescribed artificial regeneration by *Taungya* and provisions were more or less similar to that of Jalpaiguri working plan drawn up by the same author. One thing needs to be noted here that perhaps due to want of funds no progress was reported in the settlement of the Hathipotha extension to Sachaphu in the Buxa Division. Proclamations under section 6 of the Indian Forest Act were issued for the proposed Torsa Reserve in Buxa Division, and all this remained incomplete after the final notification under section 19.[165] However, in Buxa 1½ miles of the eastern boundary of the Buri Basra extension to South Borojhar Reserve were demarcated.

In implementing various Forest Acts in Buxa Forest Division many experiments were made under trial and error method. Ultimately natural regeneration of *Sal* was replaced by artificial regeneration by *Taungya.* Moreover, it seems that due to the dearth of funds, negligence on the part of administration and highly expensive creeper-cutting policy the progress of Buxa Division was not upto the mark till 1919–20. The financial constraint was such that though the Buxa Timber Company Ltd., cleared an area of 898 acres during the year 1919–20 the Forest Department could not pay royalty till July 1921.[166] Since there was no demand for timber and the Government was unsuccessful in creating more markets, the Buxa Forest Division failed to be profitable Division. But there were signs of future profit after the implementation of Mr. Shebbeare's working plan and later on other working plans on the lines devised by the Government of India from time to time.

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160. Working Plan for the Reserved Forests in the Buxa Division of the Bengal Forest Circle for Five years (1920-21 to 1925-26) by E.O. Shebbeare, Deputy Conservator of Forests. Chap. III, B 436, N.A.I., New Delhi.

161. E.P.Stebbing, op cit., Vol. III, P. 195.

162. Progress Report of Forest Administration in the Lower Provinces of Bengal for the year 1902 – 1903 by A. L. McIntire, Offg. Conservator of Forests, Bengal, B–43 – R, N.A.I., New Delhi.

163. Annual Progress Report of Forest Administration in the Lower Provinces of Bengal for the year 1904 – 1905 by A. L. McIntire, Conservator of Forests, Bengal, N.A.I., New Delhi.

164. E.O. Shebbeare's Working Plan for the Buxa Division , op cit.

165. Annual Progress Report on Forest Administration in the Presidency of Bengal for the year 1919 – 20 by H. A. Farrington, Conservator of Forests, Bengal. N.A.I., New Delhi.

166. Ibid.

CHAPTER - IV

COMPARE AND CONTRAST : COMPARATIVE STUDY BETWEEN THE FOREST POLICY OF THE COLONIAL GOVERNMENT AND NEIGHBOURING NATIVE STATES.

This chapter is an attempt to make a comparative study between the Forest Policy of the colonial government and neighbouring native states. A well known native state of this region is Cooch Behar and in Imperial Gazetteer of India, Provincial Series, volume one (Bengal) Bhutan and Sikkim have been discussed under the heading of 'native states' in broad sense of the term. We have followed that method and spirit and before discussing the approach of these native states towards the forests and their Forest Policy, if any at all, we are going to have a look on the management of forests by the British in adjacent areas of our area of study including Assam, Bihar and Baikunthapur. The last one was a Zamindari under the Permanent Settlement and it possessed rich forests.

In the Lower Provinces of Bengal and Assam, scant attention was paid to forest conservancy prior to 1863. In the middle of the 19th century with the advent of the Railways in Bengal the British were attracted to the rich forest resources of Assam. A light levy at the rate of Rs. 15 on every 100 logs was imposed on the export of timber outside the province.[1] Forest lease was introduced in 1852 in the Goalpara and Kamrup districts. Similarly, the forest management in the areas which today constitute the State of Bihar including Jharkhand started in 1855 with the laying down of the Forest Policy by Lord Dalhousie. Dr. Anderson was the only forest official controlling the present States of Bihar, Jharkhand, Orissa, West Bengal and Greater Assam in 1864. S.S. Negi noted that Anderson's 'efforts led to the introduction of forest conservancy in Chhota Nagpur in 1864 itself'.[2] But the Deputy Commissioner of Hazaribagh in 1864 wrote, "No forest conservancy exists in the jungle, (for I can not call it forest,) Government property. The right of cutting trees in the Government jungle was leased to the Raja of Koderma on an annual lease for the sum of rupee 1 per annum, but the lease has been lately broken."[3] In this letter he further noted, "with the exception of a very small tract of jungle *valueless* in Koderma the whole of the jungle is private property."[4]

But the Commissioner of Chhota Nagpur was not satisfied with the report and he thought that the "information generally is so vague and unsatisfactory, but in the absence of surveys it

could not well be otherwise". However, he held, "There are doubtless Sal forests in Palamow which are worth preserving", but new roads must be opened before the Palamow timber can be made of use. He instructed the Revenue Survey to survey tracts where preservation of forest can be effected. He had also information of private forests of Zamindars. He wrote, "In Chota Nagpore there are still great stores of sal forest, but remotely situated, and therefore not as yet utilized. They will become of importance as the more accessible forests are exhausted, and I am endeavouring to induce the Zemindars to take measure for preserving them." But the private owners either of 'jungle' or forests did not take any positive measure for their improvement through planning.

This was practically not in the minds of private holders of forest tracts or zamindars. A case may be cited here. Regarding the gradual clearance of the Sal forest in the Burdwan Division described in Mr. Seton-Karr's letter to the Government of Bengal, No. 1 of April 1867, reference was made by Mr. Leeds to the Commissioner of that Division, asking for information on the following points:-

1st. – Whether the holders of the forest tracts could be induced, it being otherwise feasible, to exchange them for other waste lands more valuable and fit for agricultural purposes?

2nd. – Could the tracts, or certain portions of them, be leased by Government under certain conditions which would ensure conservancy and a refund to Government, hereafter, of all expenses incurred?

3rd. - Could certain portions of the tracts be purchased outright, their present value being appraised by arbitrators to be appointed by all parties concerned?

4th. – Could the present owners be induced to stop the cutting of the fire-wood in certain tracts, and to adopt a system of conservancy in them?

Replies to these questions were received from the District Officers. A zamindar in the Burdwan District, in reply to the queries put to him on this subject said, "I preserved for a long period many trees in this jungle, in order to see if they could be made fit for building purposes, but failing in the attempt, I see that this jungle gives trees only fit for fire-wood and for no other purpose. I think that to sell and use the trees of this jungle for fire-wood, is more lucrative for me than to use it in any other way. Therefore I am not willing either to exchange it for other waste land more valuable nor to lease it out to Government under certain conditions, nor to sell it at once, nor to stop the cutting of fire-wood."[5]

Although the overtures made were more favourably received by some of the zamindars, still the Conservator believed that the above reply expressed the opinion and feeling of the generality of land proprietors in the Burdwan Division. In this perspective the Conservator observed and analysed the motive of the owner of the private forests in Burdwan vis-a-vis the interests of the Government which was applicable to almost all private owners of the country. He noted that there could be no doubt that in such localities a forest properly managed under the coppice wood system would give a quicker and larger return to the owner than it would if treated as a timber producing forest. "It is evident then that if private individuals follow the dictates of self-interest, by which people are generally influenced, they will not, as a rule, invest their capital in the production and re-production of timber trees, nor will they preserve the timber forest which they may happen to possess, when, by cutting it down and treating the new growth as coppice woods, they can obtain a much larger return, present and prospective." He further held "Private enterprise can not, therefore, be safely relied on in the matter of timber production, and the natural law of demand and supply here generally fails." He thought, "It is the state only which possesses interests sufficiently wide and permanent and common resources sufficiently ample to enable it to undertake the rearing of timber producing forests at a large immediate outlay, and receiving only a moderate and frequently very tardy return."

Regarding the Burdwan private forest the Conservator suggested to the Government to adopt, with a view of restoring some of the Sal forests or suitable patches of land of the district under the Act vi of 1857 for the purpose of planting or sowing. And as no timber forest is safe in the hands of private individuals left to their own discretion the Conservator suggested, "in all deeds of sales, by which the proprietary right of Government in land containing forest is conveyed to private individuals, a clause should be inserted, reserving the right of Government in the timber and forest produce, or at least stipulating that the proprietary right is conferred, subject to any rules that may be made in the Forest Department".[6] In future the Government worked on these lines.

This reveals that the private holders of forest area had no interest to improve their forests and in this they were not influenced by the Colonial Forest Policy in India, at least in initial stage of the Forest Policy of the Government. We have instances that neither the Raja of Koderma nor the zamindars of Burdwan had any policy to improve the potentiality of forests in their locality. Extraction of fire-wood from the forest and its sale were the aims of the private holders. Even the Raikat of Baikunthapur or native state of Cooch Behar had no forest policy to be compared with the native state of Cochin, let alone the British. The native state of Cochin understood the importance of forests and the native Government was perhaps initially influenced

by the attitude of Hyder Ali and Tipu Sultan and later by the British, and particularly the British Residents in Cochin. At the initial stage the forest administration of the Cochin State was managed in a way to extract the resources as much as possible. The early practice was leasing the forests to contractors for specific periods for a lump sum.[7] Since this system did not bring the expected revenue, the British Resident Col. Munro in 1813 abolished this practice and appointed Superintendent of Forests, and began to introduce a method which the British thought fit. The appointment of Lieutenant Lethbridge as the Chief Superintendent in 1818 led to large extraction of teak from the forests to tide over the financial problem. The Cochin Government created the post of forest managers who were asked to extract and store enough timber when there was much demand. The Government also created the post of Conservator of Forests and in 1835 J.A. Kohlhoff was appointed Conservator of Forests. He divided the forests into seven districts and each of which was placed under a superior officer assisted by other staff. These administrative measures helped the Government to extract the resources on a large scale. However, it can not be said that the system was efficient. Since they followed the British policy deforestation automatically came along with it; and the system of conservancy on the line of the British was not influenced by ecological considerations but by commercial motives. In fact, the native rulers in colonial period had no different approach with regard to forest policy and conservancy.[8] It is true that the rulers of Cochin State had no innovative power but they had mind to improve the forests and as such they, to some extent, copied the British system of forest treatment.

But the native state of Cooch Behar did not show any interest of any sort about the forest. Before the First Anglo-Bhutanese War in 1773 the whole of Western Duars and Baikunthapur were under the state of Cooch Behar, and the whole area was full of forests. But no document is available so far to prove that the Cooch Behar State had any forest policy. Perhaps the state considered forests inexhaustible in the region and steady destruction of forests coupled with negligence the forests depleted. Secondly, Cooch Behar State could not understand the importance of forests as a source of revenue. Thirdly, the Cooch Behar State depended much on the traditional source of revenue and naturally the state cleared lands for cultivation. Perhaps, the Cooch Behar Government did not prevent the encroachment of forest areas by the cultivators. And after 1774 A.D. the areas retained by the Maharaja of Cooch Behar had no forest to be called so. The statistics of 1901-02 show that Cooch Behar forest area was only of 9,845 acres.[9] Harendra Narayan Choudhury in 1903 wrote about Cooch Behar, "Although bushes and brush-woods are plentiful, there is no forest worth the name. Some patches of land containing *Sal* trees are, however, in existence in different parts of the country. A few *Sishu* and teak plantation have also been made by the state, and there are moreover some good *Sishu*

avenues grown along the important roads. The area under these patches of forests and plantations does not, however, exceed 30,000 Bighas or about 10,000 acres."[10] Naturally, in such a small so-called forest area there was no forest policy of the Cooch Behar State. However, to determine the right to valuable trees the state noted, "Timber trees (Sal, Sishu and Teak) growing on any land belong to the State and the occupants have no title to them. If, however, any jotedar grows such trees on his land he is entitled to exercise absolute right to them and also to get a reduction of jama of Rs. 2-8 per Bigha for land so planted; but this reduction is only granted to the extent of one Bigha for every hundred in the jote."[11] This shows that the Cooch Behar State did not encourage the jotedars to plant even valuable trees.

Gone by in time in Jalpaiguri, once connected with the Cooch Behar Raj State there was a large forest measuring 77 square miles, west of Tista, which belonged to the Raikats of Baikunthapur.[12] The forest is practically situated on the Tista river and forms a long narrow strip stretching from the boundary of the Darjeeling district to within a few miles of Jalpaiguri town. Buchanon Hamilton gave an account of this forest as the woods of Batris Hazari of Baikunthapur. But this forest of 77 square miles was the skeleton of the forests preserved by the Baikunthapur Estate before the inroads of the Bhutias and the coming in of the British. J.D. Hooker in 1848 found Baikunthapur, "Hemmed in as it is on three sides by a dense forest."

It is true that initially Baikunthapur Estate was under the Cooch Behar Raj State but for a long time it had a separate entity, and the ruler of Baikunthapur Estate was known as the 'Raikats' who used to hold umbrella over the Raja of Cooch Behar at his coronation. Before the aggression of the Bhutias and the coming in of the British in the 18th century the Baikunthapur Pargana was bounded in the north by Darjeeling (in fact Sikkim) and Bhutan proper, in the east also Bhutan, in the south by the Boda Pargana and Cooch Behar, and in the west by Purnea and Darjeeling i.e. Sikkim. The total area of the pargana was 2,78,779 acres or 435.59 square miles. It was triangular in shape and mostly wide plains. North-eastern part of the pargana was full of forests and naturally it was known as "Jangal Mahal" or Forest area.[13]

From the 16th century Baikunthapur was under the control of the 'Raikats' but they showed allegiance to the Raja of Cooch Behar. The information collected by J.A. Milligan from the report of Mr. R.N. Reid, I.C.S., Joint Magistrate of Jalpaiguri and from Harendra Narayan Choudhury's book on "The Cooch Behar State and its Land Revenue Settlement" informed us that from 1621 the Raikats signified their independence by ceasing to hold the umbrella over the Raja of Cooch Behar. Even they maintained their independence during the Mughal incursions over Cooch Behar which commenced from 1687. Glazier wrote, "Bykuntpore, otherwise

Battishazari was never subject to the Moguls",[14] but according to Milligan some other accounts said that "it transferred its allegiance to them and agreed to pay a nominal tribute" to them.

From that time upto 1765 there is little to record of the history of Baikunthapur. In 1765 the Dewani of Bengal, Bihar and Orissa was conferred on the East India Company and it was not long before the Company entered into relations with Cooch Behar which ushered in a new era. Taking the advantage of the weakness of the State of Cooch Behar Bhutan launched aggression on Cooch Behar and by 1765 Bhutan was supreme in Cooch Behar. Finding no other alternative to check the Bhutias the Raja of Cooch Behar in 1772 appealed to the Company, and in 1773 a treaty was concluded whereby Cooch Behar became a feudatory state of the English and latter immediately ejected the Bhutia forces from Cooch Behar. A treaty was made by the Company with Bhutan in 1774 (Anglo-Bhutan Treaty), and the Raikat of the time, Darpa Deo (Dev), who was according to Dr. Buchanon Hamilton, at the bottom, of the whole of the events that led upto those troubles, was confirmed in those parts of Batrish Hazari, or Baikunthapur, as had not been already ceded to Bhutan; but a revenue was assessed on his lands, and he was placed on exactly the same footing as an ordinary zamindar while being deprived of all authority in Cooch Behar proper.[15]

It seems from the British records that Darpa Deb was not quite willing to accept this position. First, in a petition of remonstrance addressed to the Collector of Rangpur he wrote against the heavy revenue assessed on him; secondly, in the said petition he called himself Raja of Batrishazari. Although he was nothing but a simple zamindar in the eye of the British, he was popularly called Raja. Fit in with this J.D. Hooker in 1848 called the zamindar of Baikunthapur as "Rajah of Jeelpigoree".

Further, greater British politics refrained the British Government from paying any respect to the Raja of Baikunthapur. This led to the further curtailment of forest area of Baikunthapur. When the British found that the Bhutias did not rest satisfied with the terms of the treaty of 1774, and soon set to work to wrest still more land from the unfortunate zamindar of Baikunthapur, whose interest suffered from the fact that the British Government, "being desirous of reaching Tibet through Bhutan, were apparently more anxious to carry out this policy and conciliated Bhutan than to scrutinize very carefully the merits of either party's claims."[16] The result was that by persistent application on the part of the Deb Raja of Bhutan to the Governor-General, the Bhutias obtained a large tract of Baikunthapur lying east of the Tista, containing the celebrated temple of Siva at Jalpesh, and a village west of the Tista, named Ambari-Falakata, right in the centre of the zamindari.

At the background of Tibetan interest the British Government had no soft corner for the Baikunthapur zamindar, but justice was made to them before the Permanent Settlement. When Baikunthapur was annexed in 1772 the zamindar was asked to pay an annual tribute of Rs. 10,000, but after an enquiry was made into the resources of the country in 1774, the revenue payable was increased to Rs. 25,000, which was further increased to Rs. 30,000 in 1775. In 1779 the revenue was enhanced to Rs 32,000/- and since then the estate "was known by the name of Batrishazari."[17] This gradual increase of revenue brought the estate to the verge of rebellion. A court judgment of 1879 passed opinion, "In 1779, as we learn from Mr. Glazier, page 19, the settlement of the estate and the enhancement of the revenue led to a quasi rebellion."[18] In 1780 a deduction of Rs. 6,238 was allowed on account of lands made over to the Bhutias, and the revenue paid in that year was Rs. 25,935. On this basis the Permanent Settlement was made.[19] Thus, the relation between Baikunthapur and the British Government was making fast progress through thick and thin which had ultimately influenced the forest management of the Baikunthapur Estate.

The history of the Raikat family in the 19th century was chiefly a record of frequent and protracted litigation which ultimately led to the management of the estate by the Court of Wards. The estate was under the Court of Wards between 1800 and 1812 during the minority of Sarba Dev, and again between 1857 and 1863 during the minority of Chandrasekhar Dev. When Phanindra Dev Raikat died in 1895, and was succeeded by his minor son Prasanna Deb Raikat, the estate was again managed by the Court of Wards from 1904 until Prasanna Deb Raikat attained his majority (legal age of reaching manhood) in 1914.

When the Baikunthapur Estate was under the management of the Court of Wards the British got first hand knowledge of the condition of the Baikunthapur forests. But first information of Baikunthapur forests was given by J.D. Hooker in his 'Himalayan Journals'. He described the forest as "Hemmed in as it is on three sides by a dense forest." Somewhere he found forest which was dry and unproductive and somewhere he found *Acacia Catechu* (Khair in Bengali) belted by *sissoo.* He passed sometimes through dense forest of sal timber which was quite perpendicular and river banks were forest-clad. He also gave information of indiscriminate felling of woods.

Next information about the condition of Baikunthapur forest was given by H.Leeds in his report of 1871. It reads "The Bycunpore forest on the Teesta, the property of the "Rycot" of that name has this year been delivering its last stock of small timber, little over saplings in size. This forest extended over 90 square miles of country, and was favorably situated on the Teesta below the dangerous rapids, where the river issues from the Himalayas into the plains." About the

future of this forest he drew the attention of the Government and wrote, "Attempts were made during the past three years to arrest the destruction of the forest, and to obtain charge of it by transfer or otherwise, but a continued lawsuit as to right of proprietorship has rendered all efforts unavailing. It is now destroyed as a timber-producing tract, and will probably be let out on pottahs for collection of fire-wood and charcoal, unless some influence be brought to bear on the owners. If closed for a period of sixty years, it would again become a source of valuable supplies. Possibly, when the lawsuit referred to is decided, it may be possible to obtain possession of this property by exhange."[20]

This report of H. Leeds showed that the Conservator was willing to take up this private forest, as WM. Stenhouse was willing to take up the private forests of the zamindars of Burdwan. In Burdwan since 1867 the foresters were trying to bring forest tracts of the zamindars of Bardwan under Governmental ownership in exchange for other waste lands more valuable, and fit for agricultural purposes. Some method and proposal were under consideration in Baikunthapur. About Burdwan WM Stenhouse reported that no timber forest was safe in the hands of private individuals left to their own discretion, and about Baikunthapur H. Leeds held the same opinion. Thus, it seems, that the forest officials made a plan to impress the Government of the potentiality of the private forests if those forests were nursed under the governmental supervision. In fact, Seton-Karr's letter of April 1867 to the Government of Bengal was the initiation of this policy and plan.

The British foresters thought that in the absence of any Forest Policy and proper management on scientific lines the forest of Baikunthapur gradually deteriorated. In the eye of J.A. Milligan the Baikunthapur forest during 1906 and 1916 was "composed of tree jungle interwoven with cane, and was impassable except by narrow paths known to the dacoits". He did not refer to any tall sal tree of good quality except in the northern corner of the estate consisted of compact forest with much sal timber. And he hoped that this forest "will become a very valuable property when it recovers from the denudation which it suffered for many years."[21] Hurry Mohun Sannial, overseer P.W.D. Bengal shared this view and corroborated the opinion of H. Leeds and held that the owners of Baikunthapur destroyed the whole forest tract due to their greed for money. He assessed that within 25 to 30 years the sal trees would not be useful since the sal tree took 60 to 80 years for its maturity.[22]

More pathetic picture of ignorance of this forest by its owner was given by J.F. Gruning, who was once the Deputy Commissioner of Jalpaiguri. He wrote, "Baikunthapur forests, which received little attention from its owners and was until recently burnt through every year to ensure good grazing for cattle and buffaloes, contains hardly a tree which is not twisted and

blackened by fire; at the same time this repeated burning has destroyed the soft wood trees and dense herbaceous undergrowth which spring up faster than *sal* and choke and kill the young trees, so that the natural reproduction is excellent and young *sal* plants abound in every direction."[23] He made a comparison regarding the method of fire-protection in Baikunthapur and Government forests of the area and remarked that in the Government forests the work of fire-protection was carried out more carefully. But that was not without flaws. As a result of this controlled fire-protection though the larger trees were preserved, the dense undergrowth was seriously interfered with the growth of the young plants and natural reproduction had not been as satisfactory as could be wished. He urged the Government to some new methods to be evolved so that adequate protection from fire should be given with out discouraging the natural reproduction of sal. Naturally the perfection of fire-protection between Baikunthapur and the Government was in degree not in kind. It causes much surprise why Mr. Milligan and Mr. Gruning gave a different view about the appearance of the Baikunthapur forests although they depicted the forests almost in the same period. While Mr. Milligan found northern corner of Baikunthapur Estate 'compact with much *sal* timber', Mr. Gruning found 'hardly a tree which is not twisted and blackened by fire'. In fact, even at the beginning of the 20th century Baikunthapur forests was not in a state of being morbid as Mr. Gruning made us to believe.

This needs to be verified further. As answers to the thirteen questions put by Dr. Anderson in 1864 to all the Commissioners of Bengal, the Divisional Commissioner of Rajshahi Division informed him about Jalpaiguri that there existed one forest of *Sal* wood in Baikunthapur Pargana, bordering the Bhutan frontier, 20 miles in length and 10 miles in breadth. The area of forests in Baikunthapur was, thus, 200 square miles in 1864. He also informed him that there was a large bazar in Jalpaiguri from where timber was procurable. He further informed Dr. Anderson that the zamindar of Baikunthapur was the owner of the Baikunthapur forests who "has leased his *sal* forest to Messrs. Dear and Co. for ten years, and probably might lease it to Government when the leases of Messrs. Dear and Co.expires".[24]

Thus two points are revealed about Baikunthapur Forest management from the answer of the Divisional Commissioner of Rajshahi. First, before the initiation of forest management in Jalpaiguri by the Government there was a large timber market here and the timber merchants connected with 'leases' used to come here for timber business. Secondly, the zamindar of Baikunthapur was aware of the importance of forests as sources of income which meant a commercial utility of forests. The question then automatically arises as to why the zamindar of Baikunthapur would destroy his forests which provided him wealth through lease-holders as held by Mr. Gruning and Mr. Milligan. And from the history of Raikat dynasty it is known that

the Raja of Baikunthapur (Raikat) had established, forest offices (Kachari) at Shalugara, Bodagunj, Shikarpur, Lantong, and Farabari.[25] The forest offices were not established and allowed to continue only to keep the accounts of the degree of destruction of forests. It is interesting to note that the Divisional Commissioner of Rajshahi did not refer to any destruction of forests under Bhutan and Baikunthapur. Since the Commissioner did not report of any destruction of forests in his division E.P. Stebbing's wrath fell upon him. He wrote in indignation, "The Commissioner does not appear to have realised that by that time the forest would have been cut out and ruined."[26] What the Commissioner on the spot could not find in 1864-65, the historian of forests saw it in 1923. It is difficult to conceal truth for all the time to come. In fact, it is all a tissue of lies. The Raja of Baikunthapur can not preside over the dissolution of the forests which were sources of lots of money. A Court judgment of 1879 noted, "Though encumbered by a large debt to the Raja of Cooch Behar, the estate is still a very fine one, and possesses among other things an extensive sal forest."[27] This was the opinion of the judge about Baikunthapur forest. Naturally, it requires simply common sense to say that the forest offices of Baikunthapur Estate were set up to protect forests and collect money from the sale of timber of the forests. The British always tried to prove native rulers inefficient in all respects including forest management only to grab at the area, and Baikunthapur Estate was not an exception. They drew a picture of mismanagement of Baikunthapur forests with a view to making a grab at the forests of Baikunthapur Estate. This attitude of the British is applicable in colonial scenarios of India in general and particularly against private owners of the forest tracts.

The Divisional Commissioner of Rajshahi Division gave the initial hint at this in 1865 who saw a probability to enter the Baikunthapur forests through the door of 'leases' for commercial interest. The Divisional Commissioner drew the attention of the Conservator of Forests in Bengal by pointing out that the zamindar of Baikunthapur "probably might lease it to the Government when the leases of Messrs Dear and Co.expires". To bring Baikunthapur forests under British sphere of influence it was proposed in 1901 to extend the Forest Act of the colonial government to this forest and it was provisionally placed in charge of the Deputy Conservator of Forests, Jalpaiguri Division. At the time the Manager of the Estate was strongly opposed to the transfer, and this opposition was maintained, till at last the Raikat clinched the matter by refusing to agree to surrender his forest.[28]

The attitude of the Forest Department from the first was that unless continuous control over a long period of years, say sixty years, could be guaranteed, it was useless to take over this forest.[29] No guarantee could, of course, be given beyond the date of Prasanna Dev Raikat's attainment of majority in 1914. But it was anticipated that Prasanna Dev Raikat would then

agree to continue the arrangement of improving the forests of Baikunthapur under the guidance of the Forest Department. With such a feeling of expectation the Government proceeded. Since 1906 the Survey and Settlement operations in the Jalpaiguri district was in progress which ended in 1916. J.A. Milligan, the Settlement Officer took up his office in 1907 who was requested by Mr. Gruning, the then Deputy Commissioner of Jalpaiguri to extend this settlement to Baikunthapur. Mr. Milligan now found that so many encroachments, trespasses and alleged rights would be met with that nothing could be done until the Cadastral maps were ready. In 1909 he took up the work on the spot, but progress was exceedingly slow owing to the necessity of investigating a multitude of claims, and as the estate had no one at that time to accompany him and present the landlord's side of the case, Milligan postponed further work with the approval of the Director of Land Records. Meantime the Raikat formed definite opinion on the subject and was very anxious that the forest should not be reserved but should be left to his own management. In 1913 the Forest Department gave up their control of it – a control which in the absence of the Forest Act and of any whole-hearted support from the Manager of the Estate, had never been effective, and subsequently in accordance with Raikat's wishes all idea of reserving it was abandoned.

But the influence of British method of Forest Management could not be avoided in Baikunthapur forest area. At intervals Baikunthapur Estate was under the control of the Court of Wards and during these periods British system of forest management was introduced in Baikunthapur. It is known from the poorly maintained records of the Baikunthapur Raj Estate that there were the posts of Chief Forest Officer, Rangers and Deputy Rangers. It is also found that there was a post of Deputy Forester and an establishment of survey of the land of the estate.[30] From the records of the said Raj family it is also known that there were five ranges in Baikunthapur forest area, namely, Shikarpur, Sarogara (modern Salugara), Bodagunj, Nadimahal and Tanta Nadi. In 1933 Range Officer of Shikarpur and Deputy Ranger of Sarogara were Mr. Amarendra Nath Chakraborty and Mr. Sudhirendra Nath Chakraborty respectively. In the same year the Deputy Ranger of Bodagunj was Mr. Ananta Kumar Bandyapadhya. The Chief Forest Officer of Baikunthapur Estate was Mr. K.P. Roy and Deputy Forester of Tanta Nadi Range and Nadimahal was Prasanna Kumar Das (1933). Not only that by 1933 it is revealed that written statement of charges for forest goods delivered or services rendered (Bills) were prepared in British method. The trend of the adoption of this method can be traced back to the beginning of the 20th century. The Baikunthapur Estate thus willy nilly accepted the influence of British system of Forest Management.

The history of the Forest Policy and Forest Management in Bhutan is connected with the arrival of the British in Cooch Behar, Western and Eastern Duars and Baikunthapur. However, there is nothing on record to show that previous to the year 1772 the Government of India had any political cognizance what ever of Bhutan. In that year the Bhutias drew the attention of the British when they set up a claim to the district of Cooch Behar which was full of forests. They invaded and took possession of a large portion of that country and carried off the Maharaja Dhairjendra Narayan and his brother, the Dewan Dev, with the intention of placing on the throne of Cooch Behar a Raja of their own. The Raj family of Cooch Behar solicited the aid of the East India Company, which was at once accorded, and a detachment of four companies of Sepoys with two guns was despatched under Captain Jones for the purpose of driving back the Bhutias to their own frontier. This duty was efficiently performed and the Bhutias were not only driven beyond the frontier, but were pursued into the hills and completed their dismay by carrying three fortresses including Dalimcote at the close of the same year. The Bhutias were so pressed that they were compelled to invoke the aid of the Tibetan Government at Lhasa. In consequence of the appeal the Teshoo Lama, the Regent of Tibet wrote a very friendly and intelligent letter to the Governor General Warren Hastings and sued for peace on behalf of the Government of Bhutan. He reprimanded the Deb Raja and denounced the Bhutias as a 'rude and ignorant race'. He noted that henceforth the Bhutias would desist from evil practices, and to be submissive to the British in all things. The request was favourably received, and after some negotiation, a treaty of peace was entered into and ratified on the 25th of April 1774, between the British and Bhutan Governments. The British Government agreed to sign this peace treaty, inter alia, on two considerations. First, the letter of Teshoo Lama unexpectedly opened a source of mutual advantage, and a means of establishing an extended commercial intercourse with Tibet through Bhutan.[31] Secondly, the provision of the treaty permitted the East India Company to cut timber in the forests under the Hills, and to protect the wood-cutters.[32] Now there seemed to be no reason why Anglo-Bhutan hostility should not be succeeded by Anglo-Bhutan friendship. And on the whole the Bhutan policy of the British Government after the peace treaty was one of conciliation. The atmosphere of conciliation was facilitated by the return of the possession taken during the hostility to Bhutan.

But there was fly in the ointment. Throughout this entire period of an apparent conciliatory policy towards the British Government, there was constant trend in Bhutan to take reprisals of the humiliation. The Bhutanese interest in forest area of Cooch Behar was deep-rooted and was based upon an interest in resources rather than in market. It had always been made clear by the Bhutanese Government that it was determined to maintain the rights acquired in Cooch Behar district in the past, no matter what the effect of this determination should be on

Anglo-Bhutan relations. The reason for this determination is to be found in the conception, which had been fixed in Bhutanese thinking, that Cooch Behar district was economically indispensable not merely to the well-being, but even to the extension of Bhutan territory. There were eighteen Duars mean doors or passes[33] to enter Bhutan of which seven from Assam and eleven from Cooch Behar territory.[34] These Duars formed the most vulnerable portion of the Bhutan territory; through them and from them were procured, either directly or indirectly, almost every article of consumption or luxury which the inhabitants of the Hill possessed. Their principal trade was with them; the priests and higher classes of the laity subsisted almost exclusively upon their produce. The silks of China and the woollens of Tibet were purchased in barter for the cotton, rice and other products of the plains; and the British policy which would exclude the Bhutias altogether from these possessions would severe one of the strongest ties by which they might be constrained.

George Bogle's mission to Bhutan in 1774 was aimed to form trade relations between British India and Bhutan and to get permission of Bhutan Government to sell Indian merchandise to Tibet through the Bhutan territory from Bengal. During this period Bhutan claimed the districts of Ambari Falakata and Jalpesh as its territories. To settle this issue Dr. Hamilton was deputed to lead the second mission to Bhutan in 1775 and on his recommendation the British Government ceded to Bhutan in 1784 the regions of Ambari Falakata and Jalpesh at the cost of Baikunthapur Raj Estate. Still, boundary question remained unsettled. The British Government did not want to severe relations with Bhutan. Naturally, with the purpose of settling some boundary disputes with Bhutan Krishnakanta Bose mission was sent in 1815, but no tangible result was found except some details about the society, administration, religion, agricultural products etc. Since then for a decade the relation between the two countries did not improve, on the contrary, both the countries drifted towards hostilities. Neither Pemberton mission of 1838 nor Ashley Eden's mission of 1863 could put a stop to aggressive attitude of the Bhutan Government. Colonel Durand's letter No. 493, dated 11th August 1863 described the tensed situation in the following words:[35]

"Outrages, extending over a series of years, which have been committed by subjects of the Bootan Government within British Territory and the Territories of the Rajas of Cooch Behar and Sikhim, have, rendered it necessary that measures should be taken to revise and improve the relations existing between the British Government and Bootan." At this juncture the Ashley Eden's mission was nothing but to force Bhutan to be a friend of the British. Ultimately the Eden mission was humiliated and failed which at the close of 1864 culminated in Anglo-Bhutan or Duar War of 1864-65. The Government of Bhutan gave in and the treaty of Sinchula was

signed on November 11th 1865. The main provisions of the treaty were the annexation of all Assam and Bengal Duars and an area on the left bank of the Tista to be fixed by a British Commissioner: a subsidy of 25,000 rupees to be paid the first year subject to the fulfilment of all treaty terms and the return of the two guns lost in the war. This would be raised to 35,450 and finally 50,000 in successive years. In future all disputes with Cooch Behar and Sikkim were to go to the British for arbitration. Under pressure the Deb Raja ratified the treaty. It is not clear whether Bhutan desired or showed any inclination to accept the treaty.

Peter Collister observed, "These were stringent terms and have been understandably criticised for their harshness by Indian historians. Nevertheless, it is difficult not to accept the conclusion that Bhutanese methods of diplomacy largely contributed."[36] Shifting the responsibility on to somebody else is a British colonial form. The British records are exaggeratively offensive and turned to one side since no British records had so far been given access to Bhutanese source materials. Be that what may, Peter Collister found two major long term benefits of this Bhutan War. First, for the inhabitants of the Duars the quality of life was enormously improved as they no longer lived in constant dread of cross-border raids; secondly, the British Indian capital became available for investment in tea plantations and other forms of agricultural improvement. But he did not count that the Meches, Garos, Totos who were the original inhabitants of this region and who were not disturbed by the Bhutias were driven away from the reserved forests initiated by the British Government depriving both the Rajas of Cooch Behar and Bhutan which reminded us the proverbial monkey who in the name of distributing equal share to both the cats gobbled up the hole cake. Being ejected from homestead how they could enjoy the benefits; benefits, if any, were enjoyed by the outsider labourers brought by the British for their own benefit. But the second point of tea plantations should be given much attention because in addition to much discussed commercialization of forests, they thought of tea plantations in Duars long before the Anglo-Bhutan War of 1864-65. In fact, since the First Anglo-Bhutan War of 1773-74 the soil and sylva of this area attracted the notice of the British for the tea plantations. Sir Vidia Naipaul 'carps at colonial clique'[37] had advised us to treat colonialism as dead issue. But can Bhutan and Cooch Behar forget their political and economic oppression by a colonial frame of mind? How can Bhutan and Cooch Behar think that colonialism is irrelevant or that its influence on the life of a people is insignificant? In their treatment with Bhutan, it seems that they had three points in mind in driving out Bhutias to the hills and depriving Cooch Behar of the Duars. First, to use Duars to commercial purposes by exploiting forest resources; second, to make direct trade relations with Tibet through Bhutan; third, to use Duars for tea plantations. The first two issues have already been discussed but the

third purpose behind the Duars war of 1864–65 should be dealt with particular emphasis on the issue.

After the occupation of Bengal by the East India Company's servants, the practical mind of Warren Hastings clearly realized that if the company were to prosper it must promote industrial development. Silk, cotton cloth, indigo and several other commodities received his attention and at the same time he devoted particular efforts to the promotion of trade with Tibet and other neighbouring countries. In 1774 he made provision by treaty for the duty-free sale in North Bengal (Northern part of present West Bengal and northern part of present Bangladesh) of Bhutanese goods. In the same year it is not, therefore, surprising to learn that when China tea's seeds began to arrive in India Warren Hastings had a selection of them sent to George Bogle, the British emissary then in Bhutan.[38] No practical result seemed to have followed. In 1778 Sir Joseph Banks was asked to prepare a series of notes for the East India Company on the cultivation of new crops, and in them he advocated the cultivation of tea in India. He gave priority to tea as an article of the greatest national importance to Britain. Banks himself pointed out that Bhutan then seemed to be a more hopeful area than India for tea cultivation,[39] but plains of Bhutan was not then British territory.

It must be borne in mind that the total annual fall of rain will not indicate the most suitable area for tea growing. Many parts of India have a heavy annual fall down in a few months, and with long droughts before and after. "What is needed is a steady monthly fall from, say, March till October, and it will be seen from *Sir Charles Lyell's Principles of Geology, Dr. Hooker's Himalayan Journal* (sic), & c., that Eastern Bengal peculiarly fulfil these conditions."[40]

The above mentioned point of favourable climatic condition was noted by 'a thinking and able man' and a tea planter of upper Assam. He further pointed out that each maund of tea requires a cubic foot of timber to pack it in, and each acre of tea requires 1½ maunds of charcoal to manufacture it. To manufacture 70,000 maunds of tea per annum require huge forest area since an acre of ordinary forest produces only about 66 maunds of charcoal. Supposing the forest to reproduce itself fit for cutting in ten years for this purpose, as only small wood is used, something like 27 square miles of forest are perpetually required to furnish charcoal for the manufacture of 70,000 maunds of tea.

Naturally tea planters require land with forest upon it, not only because forest-covered land, when cleared, is the richest, but because a proportion of forest is required near at hand for charcoal. This renders selection of such tracts as should be retained for tea planting necessary.[41]

Due to this favourable conditions of tea plantations in North-Eastern part of India H. Leeds in recommending tea plantations wrote, "This cultivation has a future in Assam, and all along the line of the North-Eastern Frontier as far as Nepal, which will probably, ere many years are passed, almost oust China tea from the Home markets. Tea is being grown over many parts of India; but here, by reason of climate, due to peculiar situation, it will probably be found that tea cultivation will chiefly flourish and be a success."[42]

This view of H. Leeds was of 1870–71. But in fact, the potentiality of Duars as a tea growing zone was discovered eleven or twelve years earlier. Colonel Jenkins in his report of 1859 categorically emphasized the need for immediate occupation of the Bengal Duars from Bhutan because of its favourable conditions for high-quality tea plantations.[43] On the basis of authorities Ranajit Das Gupta wrote, "That the Duars had considerable potential as a tea growing area was noted as early as 1859; that is, several years before the annexation of the Duars."[44] This view has been supported by A.C. Sinha who also writes that the Duars was annexed 'to initiate tea cultivation'.[45]

At the backdrop of this panoramic picture of the frame of mind of the British it can be safely concluded that the British thought of annexing Duars from the Bhutias and Cooch Behar Raj to make an experiment on the tea plantations in addition to forest exploitation on commercial basis. That was implemented by Dr. Brougham who started Dhutaria tea garden in Darjeeling in 1859 and now the first tea garden was opened by him at Gazaldoba on the left bank of the Tista in the western portion of the Duars in 1874 followed by Fulbari and Bagracote.[46] The same mind worked in occupying British Sikkim and annexing Duars. All through they had hidden agenda.

The British, thus, in their colonial method stripped Bhutan of her rich forest and forced her to take it fait accompli. The cessation of the Duars and its subsequent annexation, which used to generate a sizable revenue for the Bhutanese government, made the Bhutanese government economically vulnerable, and thereby retarded her economic development.[47] The Bhutias were pushed to the Hill where they began to think about forest as a source of revenue for the well-being of their country. E.P. Stebbing in many places of his book alleged the Bhutanese of indiscriminate felling of trees. J.F. Gruning wrote, "There was very little mature timber in the forests at the time when they were reserved as all big trees had been cut and removed previous to the annexation of the Western Duars." In British records in general the Bhutias have been stigmatized as a curse for the forests who lop and fell the trees mercilessly.

There is no reason as to why the Bhuddhist Bhutan would fell trees mercilessly and why the Bhutias would involve themselves in indiscriminate felling of woods. There are no known records of the British to prove that the Bhutias had any timber trade with the neighbouring countries. Then, what they did with those felled big trees as alleged by J.F. Gruning and E.P. Stebbing? Moreover, they have inherited high culture or great tradition from Tibet. Buddhism never provided moral support for the total ascendancy of man over nature which Christian theology supplied. Buddhist religious percepts contribute to environmental issues. These include tribal and folk insights into ecosystems that ascribe divinity to nature — earth, river, forest, rain and even animals. The Buddhist approach views human beings as part of the cosmos and its creator. Buddhism renounces material enjoyment and thus advocates minimization of worldly possession and non-violence. Buddhist religious books are probed in the light of nature protection, emphasizing that forests should be protected by the king and people.

Michael Aris recalls a tradition of the Bhutias to show how much soft-hearted they are towards the trees: "In Bhutan there is now a school textbook called *Kezang and Wangmo* (Thimphu, 1980) with illustrations of scenes drawn from village life. In place we see a boy shooting an arrow at a tree. The tree is caused needless injury and the action is described as 'sinful'. This is not a modern attempt to instill the virtues of conservation but rather the expression of a traditional moral attitude still found in some villages to day."[48] Thus, there had been symbiotic relationship between man and forest in the traditional societies such as Bhutan.

After the annexation of Duars the British encouraged the private entrepreneurs to enter into Bhutan's peripheral economy as advance party. But due to the resistance of Bhutan the British private enterprise failed to invest capital for organized exploitation in the name of developing Bhutan. As a result, Bhutan could preserve two-thirds of its land covered with rich forests in Hill area. This had given the Bhutanese enough scope in future to plan their own national forest policy and pohcy for forest management. Forests in Bhutan are spread over 31,000 square kilometres out of its total 46,000 square kilometres. From this it is suggested that Bhutan is one of the most forested countries of the world. J.Claude White in missions to Bhutan from 1905 to 1907 found a variety of trees in Bhutan which include Rhododendrons, *Pinus Longifolia,* Fir etc. He often passed through very fine forests. He wrote, "For a great part of the way there were magnificent forests of *Pinus Excelsa, Abies Brunoniana*, and Silver Fir, many of the trees exceeding in size anything I have ever seen."[49] In another place he noted that Hills on the northern slope of the Himalayas are densely clothed with forests.[50] He also criticized the British Government for destroying forest along the Bhutan border. He wrote, "The loss during the last twenty years from the wholesale cutting of their forests along their boundary in the

Duars alone amounts to many lacs."[51] The upper elevation of Bhutanese forests, above 8,000 feet are dominated by broad-leafed evergreen forests consisting of oak and rhododendron species for which the Himalayas are famous. At the highest elevation, near passes such as Pele-la and Yatong-la, this broad-leafed forest is replaced by indigenous conifers of Himalayan fir and hemlock. These are ancient relic forests which evolved on extremely steep slopes of highly weathered, unconsolidated bedrock. Their growth form indicates considerable age, slow growth and sporadic natural regeneration.[52] Claude White has made a bit mild but frank criticism of the Bhutanese attempts at the utilization of the timbers of forests. He found that enormous beams were used in Bhutanese construction. "They also use a quite unnecessary amount, and make their floors far to thick."[53] However, in Bhutan in cool Inner Himalaya one kind of trees and in the Tundra type of the Great Himalaya another kind of trees are found. And in the hot and humid foothills forests are abound in sissoo, khair, simul, sal , birch etc. Naturally, Bhutan after 1865 had enough forests for conservation and management on British lines. Khenpo Phuntshok Tashi's viewpoint shows that Bhutan knew the conservancy in the 18th century. He writes,"According to our belief, killing boars, for example, only causers them to multiply, assisted by local nature goddesses, leading to even more damage. And in our religion (Buddhism), there are well-defined spiritual rites to provide protection. A Bodhisattavas never kills or harms others, provides whatever help is needed. For example, in the 18th century,Rigzin Jigmelingpa gave many funds to his disciples from Bhutan. In this way he purchased, or 'leased' for a number of years whole areas of mountainside in Rolam, Dugti and Thragom eastern Bhutan, on the understanding that no one should then kill any animals, birds or bees in those areas."[54] This reminds us of Asoka who prohibited his subjects from killing even the eggs of ant.

But the British planned to bring Bhutan proper under their sphere of influence. With this end in view J. Claude White was sent to Bhutan at the end of 1913. He put forward three proposals to the king for favourable consideration, namely, (a) lease of land near frontier of India for cultivation of tea, (b) development of mineral resources of the country and (c) extraction of timber and bamboos.[55] The Maharaja of Bhutan ultimately rejected the proposal since his government was not eager to take help of the European agents in developing his country. However, Bhutan showed strong desire for development of forests and requested the British Government to depute a forest officer to get to know the areas of Duars under Bhutan where forest could be reserved. The Government selected Mr. Jacob, the Deputy Commissioner of Jalpaiguri in 1911 to perform the scheme. On the recommendations of Mr. Jacob the Bhutan Government decided to take certain actions towards the preservation of forests. The Bhutan Government agreed to the demarcation of all areas where forest was scanty but could not accept the proposal for afforestation along the streams because of the paucity of money. Secondly, the

Bhutan Government agreed to stop grazing in the hills, bordering on plains, for two years after every four years; and in implementing this different areas will be selected in terms for closing. But this rule will not be applicable to the cattle of the Bhutanese chiefs; they were exempted from the set rules. Thirdly, they will also make use of most of the timbers after clearing the forests for cultivation. Fourthly, none of the reserved timbers like sal, magnolia, tun, lampati, mulberry, paniraj, walnut, nagesar, malligiri are even to be felled where the trees are less than 6 feet in circumference; and the Government will protect the rubber-tree from the thieves. Lastly, the Bhutan Government agreed to take steps to improve paths and to make use of rivers for floating timber. They will lay special emphasis on organizing an increased staff, if funds permits, for management of forests as soon as possible.[56]

There are some differences in framing rules for conserving forests between Bhutan and Native States of India proper. Rules for the Conservancy of Forests in Native States of Central India show that those rules were harsher than the rules framed for Bhutan. One such rule in Native States of India mentions that all parties found felling trees or removing timber from jungles and forests, in breach or disregard of all prescribed rules, will be liable to punishment for theft, mischief, or trespass, as the case may be, and to the confiscation of the timber, &c. There is also difference regarding the girth of the felled trees. It was stipulated in the rules of the Native States of Central India which reads "None of the reserved timbers (except satin-wood) are even to be felled, when the tree is less than 3 feet in circumference at 3 feet from the base."[57] The initial forest rules in Bhutan was rather soft in comparison to the initial forest rules applicable to the Native States in India in 1866 which runs: "As one of the chief objects of conservancy is to preserve saplings and young trees, and to restrict felling to such trees as have come to maturity, it is ruled that, when the reserved trees are found cut, or being brought out of the forests of a less circumference than 3 feet, the license-holder shall be subject to the forfeiture of his license, and to the confiscation of the timber."[58] In forest rules of Bhutan it was not stipulated that the portion of the forest in which the felling is to take place shall be specified in each license, as well as the Thana Station or village through which the timber is to pass. That was incorporated in the rules of the Native States of India.

Be that what may, Bhutan began to move on the line of scientific forest management, and her forest policy was on its way of learning. Whatever may be the ulterior motive the British in fact had apparently a paternalistic attitude to Bhutan and lent Bhutan a hand with full of experience in scientific forestry. In 1921 the famous evangelist John Graham of Kalimpong with the blessing of the British Government went to Bhutan and planned, inter alia, to train the future foresters of Bhutan in India.[59]

With the passage of time Bhutan understands that forests are one of the most important resources of the country. Naturally, concerted efforts by the government and the people were taken to protect and preserve the forests of Bhutan which was endowed with a large forest cover, at least, 72 per cent of its geographical area. In view of this, the King of Bhutan (Druk Gyalpo) promulgated a tentative Forest Act in 1959. To implement this Act a separate forest department was established in 1962. A comprehensive and formal Forest Act was passed in 1969. This Act consolidated all the previous laws and customs. Bhutan felt that land was not a mere economic factor. Only through the deliberate social regulation of land — often through public ownership could natural resources be preserved. Thus, the more comprehensive Act of 1969 transferred all forestland into the Government Reserve Forests to be controlled absolutely by the Government. All inheritable and transferable rights in the forests were abolished, and the people were denied any access to them. Shifting cultivation at the cost of forests was strictly prohibited. Felling of the trees and the grazing were brought under the control of the Forest Department. By the provision of the Act the Government 'acquired all the rights for itself of absolute ownership on all the trees and forest products'.[60] The draft Forest and Nature Conservation Act of Bhutan, 1995 had been prepared based on the existing Bhutan Forest Act, 1969. The National Assembly of Bhutan, after carefully considering the said Forest and Nature Conservation Act, page by page and incorporating the additions and changes as proposed by the members, approved the Act for implementation. Bhutan, thus, with ecological awareness and social concerns stands as a member of the comity of nations to control global ecological crisis and environmental degradation. She is now on the look out for saving this vulnerable planet along with others.

Sikkim is another neighbouring state adjacent to Bhutan, Nepal and West Bengal. 'The land of Rice' is how Sikkim or Dejong is often described.[61] But, in fact, it is the hidden valley of rice since Sikkim is a hidden treasure of so many things of which forest is the major treasure. At present, the forest area of Sikkim covers an impressive 80 or 81 per cent of the total geographical area of the state, and all are under the control of the Forest Department.[62] This is much higher than the country's average. This has not been achieved in a day. Sikkim became conscious of forest wealth with the passage of time. But she had respect for forests from time immemorial. Concern for forests is part of their social, cultural and religious ethos. This is a tradition of Sikkim where the settlers were Buddhist Lepchas, but a few British officers depicted Sikkim and her people otherwise.

It has been alleged by J.F. Gruning that owing to the practice of *juming,* or shifting cultivation the large areas of Sikkim and Bhutan have been deforested.[63] It has also been said about Sikkim forests that The forests have suffered much from promiscuous cutting, and also

fires caused by villagers when clearing ground for cultivation.[64] These are, however, not facts as it is plainly evident from British records that appreciable areas of land of British Sikkim covered by forest were included in many tea leases of which the produce was utilized by lease-holders. The timber was used for the manufacture of tea boxes and charcoal, for bridge and house building and as fuel both for domestic purposes and for the drying of tea, a half and half mixture of wood and coal being commonly used for this last purpose. Terai or Morung forests which were once under the Sikkim Government were also exploited, inter alia, for railway sleepers. As a result of these commercial activities of the British the area of these forests was diminishing. "Prices of both fuel and timber had greatly increased with gradual deforestation of the areas nearer to towns. Government therefore decided to fall into line with other provinces in India, introduce measures of conservancy against over-exploitation and save the remaining forests from total destruction."[65] Gustav Mann, Assistant Conservator of Forests, also warned the Government about 'wanton destruction' of forests in British Sikkim.[66]

This proves that the forests of British Sikkim, when these were under the King of Sikkim, were not destroyed indiscriminately. The British records contradict each other. One kind of British records further show that the area first taken over in 1835 from Sikkim, that is, the hill tract between the Kyal and the Balason on the east and the Rangu and the Mahanadi or Mahananda rivers on the west, was entirely covered with forests and was practically uninhabited. So also were the hill areas between the Mechi and the Balason and between the Tista and Mahananda which were taken over in 1850. The latter were under Kurseong sub-division. The Kalimpong sub-division was annexed in 1865 which also came under rapid clearance of forest and a considerable extension of cultivation followed an influx of settlers.[67] The rest of the area of Sikkim, henceforth, was known as Independent Sikkim, and it came under a British protectorate in 1890.

The boundaries of this Independent Sikkim are between Nepal and Chumbi (Tibet) west and east, and Tibet and West Bengal north and south. Total area is 2,745 square miles. Sikkim occupies the upper basin of the Tista river with an altitude range from under 700 feet in the south to 28,146 feet in Kanchanjangha on the Nepal border. Rainfall is over 130 inches in the south, but falls below 20 inches in some of the more sheltered northern valleys. The snow-line is about 15,000 and the tree-line about 14,000 feet; down to 7000 feet is dense forest, largely broad-leafed evergreens (oaks, chestnuts, rhododendrons) with conifers at the higher levels.[68]

Sir J.D. Hooker, who is the greatest authority on the vegetation of Sikkim, in his Introductory Essay to the Flora Indica divides the country into three zones. The lower stretching from the lowest level upto 5000 feet above the sea, he called the tropical zone; thence to 13,000

feet, the upper limit of tree vegetation, the temperate; and above, to the perpetual snow-line at 16,000 feet, the Alpine. In describing the aspect of the country he says that up "to an elevation of 12,000 feet, Sikkim is covered with a dense forest, only interrupted where village clearances have barred the slopes for the purpose of cultivation".[69]

When J.D. Hooker left East Nepal and crossed the Islumbo Pass over Singalelah into Sikkim, the elevation being 11,000 feet. Above his camp the trees were few and stunted. Around this area he found grassy ridge covered with withered saxifrages, umbellifers, parnassia, hypericum etc. Here he did not find coniferous tree of any kind, except a few yews, covered with red berries. On the top of the Islumbo Pass he saw dwarf bamboo, rose and berberry in great abundance. At Pemiongchi towards Yoksum he found oaks, chestnuts, and magnolias. He further noted that deep in the valley the river-beds were but 3000 feet above the sea, and were choked with fig-trees, plantains, and palms; to these succeeded laurels and magnolias, and still higher up, oaks, chestnuts, birches etc; there was, however, no marked line between the limits of these two last forests which formed the prevailing arboreous vegetation between 4000 and 10,000 feet, and gave a lurid hue to the mountain. Fir forests succeeded for 2000 feet higher, when they gave place to a skirting of rhododendron and berberry. Hooker on his way from Yoksum to Kanchanjangha reached Ratong valley and found thick forest ten thousand feet above the river-bed of the Ratong. At Buckeen(alt. 8,650ft.) he encamped in a forest of *Abies Brunoniana* and silver fir, yew, oak, various rhododendrons, and small bamboo. In higher altitude around this area he saw dwarf juniper and brushwood. On his way, elevated 13,080 feet he saw the abundant growth of Himalayan heather (Andromeda fastigiata) along with rose, berberry, alpine rhododendrons. At Yoksum Hooker found a variety of ferns. Thus, in short, Independent Sikkim housed over 400 species of flowering plants, 300 species of ferns and its allies, 11 species of oaks, 8 species of tree ferns, 40 species of primulas and 20 species of bamboo.[70] So, Sikkim is endowed with a variety of natural flora and is a paradise of nature lovers, botanists, environmentalists, conservationists and trekkers.

The British wanted to exploit this forest-wealth of Independent Sikkim since 1864. Their first target was the area adjacent to British Sikkim. In April 150 sleepers of sal were cut near the banks of the Great Rangit with the view of testing the capabilities of that river for transporting timber. This exploitation of forests was on the British side of the river. But they did not stop there. Perhaps the British put pressure on the Sikkim Government to allow them to cut timber from the Sikkim side of the river. Dr. Anderson informed the Secretary to the Government of Bengal, "Tehelm Lama, the Envoy at Darjeeling from the Sikkim Durbar, allowed (30) thirty trees of *pinus longifolia* to be felled on the Sikkim bank of the river. It is intended to use

the light wood of this tree in floating out the heavier sleepers of sal. The forests of *pinus longifolia* belonging to Independent Sikkim are very valuable, and endeavor will be made to obtain a favorable lease of them."[71] This policy of the British continued and shortly they induced the King of Sikkim to sell timber to them and hoped to persuade the King to lease his forests to the British for a term of years or in perpetuity. WM. Stenhouse in the Progress Report for the year 1868–69 wrote that in the Tista and Rangit valleys they occupied an area of 23 square miles which was full of sal and chalawnee trees fit for felling. "The forests belonging to the Rajah of Sikkim are probably of greater extent and equally rich in sal. They also contain abundant supplies of Pine timber (Pinus longifolia), a considerable quantity of which was purchased from him by the Department during the year before last." He continued "It is said that the Sal trees can be had on payment of a royalty of rupees 2 each. It may be possible to lease these forests from the Rajah, in perpetuity or for a term of years, and, at the above rate, it would certainly be advantageous."[72]

But this proposal was neither accepted nor rejected immediately by the Government. According to the British records the Lieutenant-Governor was unable to pass any order on the proposal to take over on a lease the sal forests belonging to the Raja of Sikkim. The Government wanted much more detailed information than appeared in the report of W. Stenhouse, offg. Conservator. The resolution adopted by the Government on the subject reads, "This subject must be treated separately, and it should be clearly shown what the cost to Government, per tree, would be in bringing the wood to market, and the price which it would fetch when taken there."[73] The Government also considered the said proposal from another viewpoint. The Government resolved, "It should also be definitely reported whether the same advantages cannot be secured from lands which are already the property of the state."[74] However, the previous report of Stenhouse was based on supposition, not on definite knowledge. In another report of 1869-70 he informed the Government that on the 25th of November, 1869 a portion of the Raja of Sikkim's sal forest situated on the left bank of the Rangit river was inspected and a valuation survey of it made. The result of this counting measurement showed, "the Rajah's forest is rich in sal of all sizes, but it is of limited extent. Very little pine forest (pinus longifolia) now exists on the banks of the Rungeet."[75]

But the British Government did not stop there. They assessed pros and cons of the problems of exploiting the forests of Independent Sikkim. Ultimately the British made a deal with the Raja of Sikkim to sell timber, fire-wood and charcoal to them. Full information is not obtainable, but the following has been ascertained regarding the description and quantity of produce exported from Sikkim in 1890.[76]

Description	Approximate Quantity Exported		Market supplied
	Sale measurement	Cubic feet solid	
Timber	1,000 c.ft	1,000	Darjeeling, 1890
Firewood	5,000 mds.	8,750	Lebong tea company's annual demand on the Rajah's forest
Charcoal	3,500 mds.	24,500	
Total		34,250	

The British took a portion of the Sikkim Forests on lease under certain conditions, and Rates paid by the lessee show that the Raja got an advance of Rs. 5,000 on granting the lease. The royalty on charcoal was 2 annas a maund and fire-wood 1 anna a maund from dead trees. The lessee was not allowed to cut good trees. The Raja was unable to give details of the outturn of his forest, but was credited with Rs. 3,500 for last year. That was considerably more than the value of the produce shown in the above statement.[77]

However, this is not the first time that the British purchased timber from Sikkim. H. Leeds in his Annual Forest Report for the year 1869-70 noted, "No attempt was made to bring out any of the pine logs extracted from the Rajah of Sikkim's forests and launched into the Great Runjeet, a tributary of the Teesta, the former year. As this timber will float, no great difficulty need be apprehended in getting it down to Sivok; the Assistant Conservator should therefore have turned his attention to it."[78] Again, in the Bengal Administration Report 1877-78 it has been reported that during the year Sikkim sold timber to the British and transported to Darjeeling which amounted to Rs. 7,08,708.[79]

Be that what may, all these activities of the Raja of Sikkim do not reflect that the Raja was aware of the forest-wealth of Sikkim. Sikkim was not interested beyond the traditional trade with the neighbouring countries. The Raja's peculiar relation with the British ultimately made him conscious of the forest-wealth as a source of revenue for his country which was soured by poverty. Still, the Raja of Sikkim on his own did not take any step towards the scientific forestry in Sikkim. Perhaps, the British political officers like J. Claude White and Sir Charles Bell inspired him to methodical management of the large forest area of Sikkim as was done in Cochin by the Residents, and same thing was done by the British officers in Baikunthapur during the periods under the Court of Wards.

As a result Forest Department was constituted as early as 1893. Subsequently, in 1902, the reserved forest was demarcated, the *Khas mahal* forest in 1905 and the Gaucharan (grazing or browsing area) forest in 1911.[80] Sir Charles Bell as political officer in charge of Sikkim wrote

that between 1908 and 1918 "We conserved large areas of forests, which were being rapidly felled, and introduced rules for their management."[81] Thus, the first decade of the 20th century marked the beginning of the forestry organization in Sikkim. In point of fact, Shri Dilu Singh Ghale "organised the Forest Department from scratch and gave it a strong and stable foundation both organisationally as well as technically."[82] He was born in 1872 in Darjeeling and had his forestry training in Dehradun. After successful training he joined the Bengal Government. In 1905 he was deputed to serve the Sikkim Darbar which he did till 1925. During this period Mr. Ghale under the regime of the Chogyal Sidkeong Tulku organized the Forest Department in Sikkim which was hitherto non-existent. His foresight and planning skills contributed to the forestry base being laid on a firm footing. During his tenure as the first Forest Manager of Sikkim, classification and demarcation of Forest land into three categories of Reserve Forest, Khasmahal and Gorucharan were done and notified during 1908 to 1912. The basis of scientific forest management was thus initiated by him. His other outstanding contribution was the publication of the first Forest Manual in 1914 which is available till to day. He organized and took care and gave attention to forest-wealth for bequeathing to the present generations. He is truly the father of modern forestry in Sikkim along with his ruler Chogyal Sidkeong Tulku.

This does not mean that at this stage Sikkim adopted any forest policy. There was no Working Plan for the development of forests in Sikkim, no policy was taken for fire protection, no strict measures were taken against shifting cultivation, no method was planned or evolved to ascertain the revenue and expenditure annually, and over all, no statement of financial results was prepared. That expected forest management in Sikkim dates back to the late 1920s. One of their Chogyals (kings) who graduated from the Royal College of Forestry in England, developed scientific but indigenous methods of forest preservation.[83]

Till 1956, one forest manager was given charge of forests. It was in this year that demarcation of ranges and blocks was made for better administration. This pattern shows that Sikkim's forest management followed the tracks left by the British and pursued by the Government of India. In 1976, the Indian Wild Life Act extended to Sikkim. Soon it was followed by the creation of the Sericulture Sub-Division in 1978 to promote rural economy and the Remote Sensing Cell in 1987. In 1988, the Sikkim Forest Water Conservation and Road Reserve Act was enforced and in 1989, the Indian Forest Act was extended to Sikkim. The Directorate of Land Use and Environment was merged with the Forest Department. Thus, Forest Department is one of the pioneer Department of the Government of Sikkim. At present, the major objectives of the Department are:

(a) Protection and management of forests, water bodies, alpine pastures, snow covered areas by implementing the policies of the Government of Sikkim as well as of the Government of India in co-ordination with other sister Departments.

(b) To carry out afforestation activities in forest as well as in non-forest and private wastelands with active participation of the local people and to provide fuel-wood, fodder and timber to the villagers for their bona fide use.

(c) To prevent illegal felling of trees, illegal movement of timber and other forest produce, regulate felling of trees in private forests, prevent and control grazing in Reserve Forests and plantation areas and prevent encroachment of forest lands through implementation of different Forests Acts.

(d) To carry out research in forestry, wildlife and other related subjects.

Besides, the Forest Department maintains Parks, Gardens, National Park, Sanctuaries; promotes pisciculture; protects wildlife, medicinal plants and monitors pollution of every kind. To conclude, it may be said that Sikkim's State Department of Forests and Environment is performing well and its implementation of the various schemes in the state is satisfactory.

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Versus

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CHAPTER – V

COMMERCIALIZATION OF FORESTS

From the policy formulation and activities of the Government in general and particularly of the Forest, Public Works and Revenue Departments it is evident that the major aim of the colonial government was to commercialize the forests all over India, and the Bengal Government taking a cue from it worked to gain profit from forests. Before the commencement of the conservation of Darjeeling (British-Sikkim) forests in 1864 and after for a considerable period the felling operations were done by the contractors of private companies under lease. We have dealt with it in details in chapter No. VI. The British documents show that there were several important revenue-yielding forests in Darjeeling district, which were conserved and placed under charge of the Forest Department. The total area of these reserved forests was returned by the Deputy Commissioner of Darjeeling in 1870 at about 120 square miles.[1] In a memorandum of 1882 Dr. W. Schlich to recapitulate operations of the past in Darjeeling noted, "Until the year 1876 the forests were worked by private enterprise, the Forest Department selling selected trees at certain rates and firewood at a fixed rate per 100 maunds, the purchasers undertaking the cutting and carriage. Under this system the Forest Department had to see that only trees properly marked were cut and that the royalty on firewood was paid, the latter being then Rs. 5 per 100 maunds. The effect of the system was, that all large and sound trees in the vicinity of Darjeeling were removed, while what remained in the forests was composed of hollow or otherwise diseased and crippled trees. While the Department was considering how the system could be improved, a decided change was introduced by the Deputy Commissioner of Darjeeling. Owing to repeated complaints on the part of the residents of Darjeeling as to the difficulty of getting firewood, and of a good description especially, the Deputy Commissioner, who then held charge of a part of the Goompahar forest, commenced in 1876 to supply the residents of Darjeeling with firewood by direct agency. He employed contractors, who cut the firewood, burnt the charcoal, and delivered the material at Darjeeling; the *tahsildar* and other subordinates being made use of to supervise the work. The fuel was sold at comparatively low rates, and the effect produced was that all private contractors, who had so far supplied Darjeeling closed or considerably reduced their operations."[2]

The poor management of Darjeeling forests had not happened in one day. In fact, the British did not know how to manage forest administration. From the outset they failed to chalk out a plan to make forests a profitable one, but they had a wishful aim to use forests for financial gain. The British, for a considerable period, were not so much efficient to take the burden of

forest operations, and they were dependent on the contractors and private enterprises. From the very beginning they worked haphazardly and had no belief in their own abilities. In spite of these, various operations and conservancy carried on by the Forest Department. The haphazard working of forests is evident from the Progress Report of 1865-66 prepared by Dr. Anderson. He wrote, "One thousand sleepers have been felled in the temperate forests, and have been stored close to cart-road. These sleepers cannot be removed until slip leading from the cart-road to the Terai is opened, or until the cart-road below Kurseong is completed." This shows that the Forest Department had no plan at all. They cut the trees for railway sleepers but did not know how to transport these immediately to the plains. Operations of such type of working carried on by the department may be described as to put the cart before the horse. At this stage, their main buyer was the Railway Department and they hoped to commercialize the forests on the basis of the demand of the railway sleepers. The said report noted, "The Eastern Bengal Railway Company have agreed to take 500 sleepers of Oak and Chesnut (sic) on trial delivered at Goalundo, at the rate of Rupees 3 per sleeper. Samples of the timber nine of the best kinds of temperate trees were sent to Calcutta and were submitted to the Agents of the East Indian and Eastern Bengal Railway Companies. The Agent has ordered some tons of Chesnut (sic) and Magnolia for the experiment of making Railway Wagons from these woods." In fact, there was no infrastructure to transport the railway sleepers to any destination; still, the department made experiment and failed in its attempt. The report narrated the event as follows: "In April 1865, 160 sal sleepers and 40 sleepers of cheer, *Pinus longifolia*, were felled in the valley of the Great Runjeet, a short way above the junction of the river with the Teesta. The attempt to float these sleepers down the Runjeet and the Teesta failed in consequence of the very insufficient nature of the rope used to secure the sleepers to the floating material, bamboos, and all the sleepers started became disengaged from the bamboos before even reaching the Teesta." To avoid the repetition of the same and damage resulting from the inexperience Dr. Anderson suggested, "Were the sleepers fastened by a strong rope of cane, such as is used in making the cane-bridges, I am certain that they could be easily and cheaply floated for many miles." Regarding forest exploitation with commercial purposes and problems associated with it Dr. Anderson reported that the cutting of sal sleepers in the Teesta valley was commenced in November. The site where felling operations were carried on, was a fine forest close to the bank of the river about eight miles above the exit of the river from the hills into the plains. 4,482 sleepers were cut in this valley during the season by sawyers, who contracted to deliver a large number of sleepers before the expiry of the working season. He added, "The Assistant

Conservator has received the greatest annoyance from these native contractors; none of them would commence work without an advance, and one or two have absconded without fulfilling their contract." As to the further forest operations and problems of commercialization he informed the Secretary to the Government of Bengal that "In the Terai and the outer hills 3,403 sleepers of sal were cut. Part of these sleepers were brought out of the forest and were stored, but from the great unhealthiness of the season a number were left in the forest; these will, however, be removed in the next working season. 100 trees of Sissoo were felled on the banks of the Balasun in the Terai, and will be brought to the depot next year."[3]

This shows that timber depot was constructed to store sleepers and actual beginning of timber trade, however small in quantity proved that every cloud has a silver lining. The report noted, "Five maunds of wood of *Cornus Species* were sent to the Gunpowder Agency at Ishapore, as it was supposed that it might be a good substitute for the Dogwood of Europe, *Cornus sanguinea Linn* which affords the best charcoal for the manufacture of powder for Enfield Rifles." To facilitate this trade the British in 1865–66 laid weight on the construction of roads. The Government was informed that eight miles of a most important road intended to be passable by carts in the cold weather were completed by the end of the working season. "This road extends from the cart-road near the Punchnaie River to the Teesta; about a mile more will finish the road when it will be joined to the fair-weather road from Siligoree to the Teesta Valley in course of construction by the Public Works Department. These roads, when completed, will much facilitate all operations of forest conservancy and working."[4]

The financial result of the working of the Sikkim forests during the year 1865-66 shows that the Government was running on losses, and it was impossible thoroughly to organize a system for collecting revenue during the year. Another hindrance was that the forest rules which Dr. Anderson drew on the basis of Forest Laws of 1865 had not received the sanction of the Governor General before the expiration of the year, and accordingly some valuable sources of revenue were unavoidably neglected. As a result none of the timber felled and sawn by the Forest Department could be brought to the sale depots during the year, and accordingly no return was obtained during the year on the timber felling operations of the department. It is interesting to note that the revenue collected by the Deputy Commissioner of Darjeeling within the forest boundaries had been, by the sanction of the Governor-General-in-Council, credited to the Forest Department. The amount was Rs. 3,259, to which was added Rs. 634, the amount realized by the Forest Department. The value of the timber felled by the department, and part of which was stored on the side of the cart-road in the hills and near the forest roads in the Terai and the Tista Valley was estimated at its value, at those places the amount was Rupees 11,606. The

Conservator hoped, "Some of this timber will probably be sold at the temporary depots, but the greatest part of it must be transported to the main depot at Siligoree on the Mahanuddee." The expenditure in the Sikkim Division necessarily much exceeded the income since important works were undertaken in order to open up the forests. These works included plantations, fair-weather roads to render the forests accessible, boundary pillars, and boundary lines. These were absolutely required under a sound system of forest conservancy, "and the capital expended on them will certainly be repaid with interest." The expenditure in the Sikkim Division during the year amounted to Rs. 28,916, of which Rs. 23,237 were spent on purchase of tools, such as saws, furwahs, pick-axes, blasting tool etc. on plantations, communications, salaries, establishments and sundries, such as office furniture etc.

Many of these were preliminary expenses which did not incur again. The sum spent on timber operations was Rs. 5,679.

Statement showing financial results of the working of the Forests in British Sikkim in 1865-66[5].

Heads of Disbursements	**Amount**			**Heads of Disbursements**	**Amount**		
	Rs.	**As.**	**P.**		**Rs.**	**As.**	**P.**
Timber expenses	5,679	0	3	Sale of timber, firewood, bamboo and charcoal	604	12	0
Purchase of tools, plants, & c.	5,386	2	4	Fisheries	1,033	12	0
Plantations	814	11	11	Land Revenue	510	0	0
Experiments to test the value of timber of different kinds	57	8	0	Grazing Dues	1,716	0	0
Communications, & c.	7,543	5	1	Miscellaneous Receipts	29	14	0
Office Establishments, & c.	7,837	8	5				
Travelling Allowances	848	5	1				
Office rent, carriage of tents and Office records	612	0	0				
Sundries	137	12	0	Total of Receipts	3,894	6	0
Total of Expenditure	28,916	5	1				
Total of Receipts	3,894	6	0				
Excess of expenditure over Revenue	25,021	15	1				
Deduct estimated value on 1st May 1866 of sleepers felled during the year 1865-66	11,606	4	0				
Estimated loss to Government	13,415	11	1				

The above table shows that estimated value of sleepers stored in temporary depots or in forests was Rs. 11,606 and 4 annas. 1,000 of these sleepers in the temperate forests were valued at Rs. 1-8 per sleeper according to local rates for sawn timber sold in the forests.7,885 Sal sleepers in the forest and temporary depots were valued at Rs. 1-4 each and 200 sleepers of *Pinus longifolia* at the same rate.

In the Great Runjeet (Rangit) Valley 160 sal sleepers and forty cheer (*Pinus longifolia)* were cut out for an experiment of floating out timber by this river. The cutting of railway sleepers in the Tista Valley was commenced in November 1865, and eight native contractors agreed to deliver by the end of March 30,900 sleepers, and received an advance on this account. In some cases part of the advance was lost, as none of these contractors had no property to seize, and took every opportunity to get across the frontier in a few hours. Only 4,482 sleepers were cut during the season, out of which number 1,095 were rejected and not paid for, because they were below the measurement agreed on. "The latter timber", wrote Gustav Mann, Asst. Conservator of Forests, Sikkim, "is in most cases sound, and although short of measurement will fetch a price sufficient, I hope, to cover the losses incurred by having made advance to men who were too ill to fulfil their contract."[6] In fact, because of fever prevailed to such an extent that most of the men were unfit to fulfil to the contract. On the outer hills, immediately above the Terai, even more sickness prevailed, and of 34,500 sleepers which four native contractors agreed to deliver, only 3,403 sleepers were cut, of which 372 were rejected falling short of measurement. In the Tista Valley all the sleepers were got out of the forest and stored on the banks of the river ready for floating out. Of the Terai sleepers only 375 could be brought out of the forest before the end of the season, as sickness prevailed to such an extent that within a fortnight all men were unfit for work and had to hurry back to the hills to save their lives.

However, taking into account all the activities of the Forest Department in 1865-66 it was to be expected that while the department is so young and so much has to be done in the way of organization before profits can be realized, the expenditure should for some years be increasing, and much in excess of receipts. Therefore, progress in snail-pace may be excused. And no amount of praise is adequate for Anderson's imagination and creation of basic infrastructure.

Next Conservator of Forests, Lower Provinces was H. Leeds and he was the first permanent Conservator. He in his Administration Report for the year 1867-68 informed the Secretary to the Government of Bengal concerning the timber extracted from the Forests in British-Sikkim during the past year:

Logs	.....	.....	No	5,580
Sleepers	.....	.....	,,	30,638
Planks	.....	.....	,,	1,503
Shingles	.....	.....	,,	4,70,110
Scantlings	.....	.....	Running Feet	36,484

In this report he gave a valuation statement of timber in hand on 31st March 1868.[7]

Description of timber at different depots	No. of logs, sleepers or pieces	Rate			Estimated Value		
		Rs.	As.	P.	Rs.	As.	P.
Sal and Sissoo Logs	4,724	16	0	0	75,584	0	0
Sal and Oak Sleepers	31,104	1	8	0	46,656	0	0
Sal Planks	1,113	1	8	0	1,669	8	0
Shingles	3,01,860	4 Per Thousand			1,207	7	0
Oak and Magnolia Scantlings, running feet	865	8 Per Hundred running feet			69	3	2
Total Rupees	.....	.....			1,25,186	2	2

The Government of Bengal was not satisfied with this valuation statement and observed that the mode of pricing the trees without reference to their size was a rough and provisional expedient adopted by the Forest Department on the first introduction of measures of conservancy.[8]

By 1868 the Forest Department observed that certain collections on Forest produce other than from timber in *Unreserved Forests,* were made by the Civil District Officers. These collections were finally incorporated into the Forest Revenue; but as no expenditure was incurred by the Forest Department on account of them, the amounts which were considerable, were set apart from Departmental operations when considering expenditure and receipts. In short, it meant that the collections by civil officers were excluded in estimating financial results of the Forest operations.

The following statement gives the results of financial operations for the last three years:-[9]

Financial results during past three years —

1	2	3	4	5	6
Years	**Expenditure**	**Receipts**	**Cash deficit.**	**Difference of assets at commencement and close of year**	**Net deficit**
	Rupees	**Rupees**	**Rupees**	**Rupees.**	**Rupees**
1865-66 ...	35,773	3,894	31,879	11,606	20,273
1866-67...	1,04,429	8,866	95,563	80,003	15,560
1867-68...	1,65,605	19,649	1,45,956	1,09,241	36,715
Collections on Forest Produce by Civil			1865-66	1866-67	1867-68
Officers			34,691	41,690	56,039
Deduct yearly net deficit			20,273	15,561	30,278
Net Forest Revenue.			14,418	26,129	25,761

These results appeared unsatisfactory, for they showed a considerable cash deficit and also net deficit, after valuing the difference of assets at the beginning and close of the year. By setting off the collections on Forest produce in all divisions against this deficit, which was the result of past operations in Sikkim alone, a net yearly revenue from Forests in the Lower Provinces as shown in the above statement, was obtained. The results shown above were capable of some explanation. Expenditure was too great; but that it was impossible to avoid at the commencement of operations when great difficulties had to overcome, and the cause of the apparent unsatisfactory results lay chiefly in that; the real value of timber brought to market was not properly considered and thus it was sold and made over to Public Department at very low and unremunerative prices. The Forest Department thought that a fair valuation of timber was absolutely necessary and Government was moved with a schedule of proposed rates. Even, against these heavy odds the collections on forest produce were annually increasing and the Forest Department was making every effort to balance receipts and expenditure.

With this end in view the Forest Department of Bengal thought of exploring the Calcutta market in 1867-68. But the result of the experiment of transporting Sal logs to the Calcutta market direct by this Department was not very encouraging as shown in the statement below,[10] but the cause of pecuniary loss on that transaction was that the timber despatched was not of large enough girth or scantling to suit the Calcutta market:-

Quantity and description	Rate	Amount		
		Rs.	As.	P.
40 Logs of Sal Timber	Rupees 30 each	1,200	0	0
15 Logs of Sal Timber	Rupees 25 each	375	0	0
41 Logs of Sal Timber	Rupees 21 each	861	0	0
167 Logs of Sal Timber	Rupees 20 each	3,340	0	0
04 Logs of Sal Timber	Rupees 16 each	64	0	0
267 Total		5,840	0	0

Expenses incurred in sending the above 267 logs from Siligoree to Calcutta.[11]

	Rs	As	P
Felling and removing, at Rs. 10 – 8 – 6 each	2,811	13	6
Carting , at Rs. 8 each	2,136	0	0
Floating , at Rs 8 – 8 each	2,269	8	0
Jute for lashing , at Annas 4 per log	66	12	0
Expenses of superintendence	86	12	0
Charges and commission of Messrs. Mackenzie, Lyall and Company	520	0	0
Total	7,890	13	6
Deduct amount realized by sale	5,840	0	0
Loss sustained by the Department	2,050	13	6

To get the better of the business the forest officials thought that it would be practicable to introduce with advantage and profit to the Department certain classes of Sal timber of large size into the Calcutta market by careful selection of the most suitable scantlings, and by a reduction of the cost of production and transport. They further held that the attempt might also be made to send timber to Calcutta by the Tista and Brahmaputra rivers, offering it for sale at the chief marts on the way. "The supply of timber, however, for many years to come will not probably be more than sufficient to meet the demands of places much nearer the sources of supply than Calcutta."[12]

Further, the Forest Department could not improve its timber trade because of peculiar Railway rule. The Railway Companies did not, as a rule, deal directly with the Forest Department. This Department was compelled therefore to sell the Railway sleepers to contractors who could only afford to pay such prices as would leave them a fair margin of profit when the sleepers were again sold to the Railway Companies. The profit to the Department on such transactions was not more than one Rupee on each sleeper, and this profit was almost, if not altogether nullified by the quantity of rejected sleepers always left on hand. Under this system the Department planned to carry on sleeper cutting operations only so far as was necessary to utilize timber, which owing to its situation was not available for conversion into scantlings of more general utility. The Forest Department was desperate in all hands in their attempt to improve the timber trade. That was reflected in the establishment of forest depots in important places. By 1869 the principal forest depots in the Sikkim Division were Sukna on Mahananda and Sivok on the Tista at the points where these streams emerge from the hills. Logs were occasionally floated down the Mahananda and stored either at Siliguri or lower down that river, at a depot established at Bokamari near Kishangunj. In the Western Duars a timber depot was established at Domohoni where the Dolla stream joins the Tista, but it was proposed to remove it to Jalpaiguri, the Head-Quarters of the Civil as well as of the Forest Division, and the principal mart for timber. The department intended to have a depot at Falakata on the river Mujnai and one near Alipurduar on the river Kaljani. These places are situated near the line of timber transport from the richer forests. During this period the streams available for floating timber in the Western Duars were the Tista, Jaldhaka, Mujnai, Torsa, Kaljani and Sonkosh rivers. The Forest Department further held that Goalanda situated at the junction of the Ganges (Padma) and Brahmaputra and the proposed terminus of the Eastern Bengal Railway would probably be the best place for the establishment of a main depot for Government timber from the Assam and Bhutan Forests intended for the Calcutta market. As a result of making such sustained efforts the Forest Department first time saw a little profit in timber trade.

The following figures show the actual financial results of the transactions of the Forest Department during the year 1868–69:-[13]

	Rs.	As.	P.
Receipts	1,71,184	7	1
Expenditure	1,26,256	7	0
Surplus, Rs.	44,928	0	1

To this balance, in favour of the Department, was added the difference between assets and liabilities at the commencement and close of the year, amounting to Rupees 68,586-1-1. The sum of these amounts (Rs. 44,928-0-1 + Rs. 68,586-1-1) Rs. 1,13,514-1-2 represented the net revenue realized by the operations of the Forest Department during the year 1868-69. It was usual at this stage to give Forest Department credit in the provincial accounts for the collections of forest revenue made by the District Officers in the various Divisions of Bengal which during the year amounted to Rupees 53,362-4-1. The sum obtained by the addition of these figures to those of the annual departmental account (Rs. 1,13,514-1-2 + Rs. 53,362-4-1) represented the total surplus revenue derived from the forests of Bengal during 1868-69, amounting to Rupees 1,66,876 – 5- 3. In other words, this was the grand total of net surplus revenue of the forest produce of Bengal during the year 1868–69. On this Rivers Thompson, Offg. Secretary to the Govt. of Bengal noted "this large surplus is satisfactory."

But this satisfaction lasted for a very short time. The financial results of the Departmental operations during the next year (1869-70) were as follows:-[14]

	Rs.	As.	P.
Receipts	40,200	0	0
Expenditure	95,874	0	0
Deficit Rs.	55,674	0	0

The difference between assets and liabilities at the commencement and close of the year was Rs. 18,942, which reduced the deficit to Rs. 36,732. The Collections made by civil officers on account of forest produce amounted to Rs. 73,552 during the year. Thus, the net revenue received from the forests in the Lower Provinces during 1869-70 was therefore (Rs. 73,552 — Rs. 36,732) Rs. 36,820.[15]

The financial position of the Forest Department improved a bit in the year ending 1st April, 1871, but it was trailing much behind the financial results of 1868-69. The results of departmental operations during the said year were:-[16]

	Rs.	As.	P.
Collections by officers of the department	61,143	6	6
Forest produce collections by civil officers.	58,534	2	5
Total	1,19,677	8	11

Deduct

	Rs.	As.	P.			
Charges of the department	84,359	9	10			
Difference between assets and liabilities	13,820	5	0			
				98,179	14	10
Showing a total profit on the year's operations of				21,497	10	1

The causes of this unsatisfactory result were many and various. First, increase of expenditure on account of establishment without any increase of remunerative works; added to this, in the Lower Provinces almost all accessible and remunerative timber disappeared and to remove those which remained was very costly. Second, three thousand sleepers were burnt at Sukna by a jungle fire in March 1870. One thousand four hundred and seventy six sleepers were carried away in July 1870 by the strong floods on the Mahananda during the storms which then occurred. However, many were recovered after the river went down. Third, eighty-eight thousand shingles, the remainder of a batch of 4,70,110 Shingles which were cut for Public Works Department in 1867-68, but which the Executive Engineer refused to take over. These were kept on the Rungbee road about four miles from Darjeeling. As no one purchased them, they became useless and were struck off stock. The value of the losses incurred, estimated at former years' rate, and amounted to Rs. 11,309-12. Fourth, the amounts realized by sale were at much lower rates than those estimated for the timber since the timber brought out of the forests was of very inferior to that sold in previous years. Last but not least, negligence and errors committed by the newly appointed Forest Officers caused loss to the Department. As a considerable quantity of timber felled during previous years, and sleepers, remained in the forests, instructions were issued forbidding the felling of any timber during the year, and desiring that all work should be concentrated in bringing in the felled timber to station depot.

The Assistant Conservator was also desired to inspect all the places where stock of timber were lying in the forest depots and ascertain the quantity. This very necessary inspection was ordered in 1868-69, but was neglected by the officer who relieved Mr. Mann on his transfer to Assam (Mr. Oakley). He neglected it again in 1869-70. His supineness in this and irregularities in other matters caused his removal from the Cooch Behar Division, and ultimately he left the department, but mischief had already been done to the department. Another Assistant Conservator, then newly appointed, committed the error (common to all who had no experience) of cutting timber without considering cost of removal, believing he had done great work when the timber was felled, whereas it had better have remained standing in the forests. As a result of all this the department suffered and incurred heavy loss. However, miscellaneous collections on bamboos, fire-wood, cattle-grazing et al, amounted to Rs. 5,771 during the year ending 1st April, 1871 was an improvement over previous years.[17]

H.Leeds in his concluding remarks raised the question of the utility of maintaining a large forest establishment. In the first place, he informed the government that depending on the demand of Calcutta the timber trade could not be improved in Lower Provinces of Bengal since Calcutta and neighbouring markets were supplied by sea from all parts of the world, and the prices of timber were regulated by these markets.[18] In the second place, he wrote that the districts up-country were supplied for the present either from Calcutta or Nepal, as they contained no forests, and plantations could not yield supplies from eighty to hundred years; other divisions, such as Assam, Cooch Behar, Dacca, and Chittagong contained forests enough to supply timber for all local purposes. He continued "Under these circumstances it may be asked whether it is necessary to maintain a large forest establishment to watch over the forests. Could not the civil authorities collect all revenue on forest produce at little cost for extra establishment?"[19] He hoped that the views he had formed should be subject of discussion by those who were authorized to decide upon the future operations of the Forest Department in Lower Bengal.

During the year ending 1st April, 1872 the financial results did not show any improvement. Total surplus was Rs. 31,429 including receipts by civil officers, but the Forest Department alone, with its heavy expenditure on fiscally unremunerative establishment, showed a cash deficit of Rs. 29,779.[20] This slow progress was a source of constant anxiety to the Conservator, but the growth of forest administration was to a certain degree necessarily slow. The Conservator again found some hindrances to accelerate motion, namely, dearth of experienced officers, disadvantage of division large and at great distances, immense extent of the territories was being traversed, and the tardy communication by post, tended to create delays

and defeated the most anxious desire for quicker progress. Over and above, markets were all supplied more cheaply from Nepal and by sea that could be done from the government forests . Moving timber from British forests was very costly, and also accompanied with many risks of loss. As a cumulative result of all this return was very little. Thus only experimental and limited operations could be opened out with advantage.

It is true that the activities and possibilities of the Forest Department in Bengal were not equal to what was hoped for, still the department took it as Marrengo to reach Waterloo. The Department knew that the future must always be uncertain but the plantation scheme was not neglected. Expenditure on plantation in Sikkim (Cooch Behar Division) during 1871–72 was Rs. 3,470, as detailed in the Statement below.[21]

Bamun Pokree Plantation		**Rungbool plantation**		**Miscellaneous**		
Description of work	**Amount** Rs. A. P.	**Description of work**	**Amount** Rs. A. P.	**Description of work**	**Amount** Rs. A. P.	**Total**
Clearing jungle and hoeing	1,446 6 0	Clearing jungle and hoeing	530 15 0	Collection and Carriage of seed...	51 9 0	
Transplanting...	409 13 0	Transplanting...	778 12 0	Salary of watchers, coolies and others....	137 11 0	
Purchase of seed and seedlings.....	.....	Purchase of seed and seedlings.....	115 2 0			
Total.....	1,856 3 0	Total.....	1,424 13 8 (sic)	Total.....	189 4 0	3,470 4 0

Sustainable effort on this line was going on for a long time. In the early stage after reservation, a great many exotics were experimented with from time to time. These are of both historical and practical interest and so a list giving their names and the degree of success attained in each case is reproduced from the second working plan (Darjeeling) and Hatt's working plan (Darjeeling).[22]

Another aspect of Forest Administration should be noticed. It is seen that the regular budget estimates did not tally with the actual Receipts and Expenditure. For example, the regular budget estimates for the year 1873–74 were —

	Rs.
Receipts	1,47,400
Expenditure	1,33,888
Surplus	13,512

But the actuals of the year were – [23]	Rs.
Receipts	1,79,366
Expenditure	1,37,498
Surplus	41,868

As compared with last year's results the figures stood as follows :- [24]	Rs.
Receipts in 1872 – 73	1,49,852
Ditto in 1873 – 74	1,79,366
Increase in 1873 – 74	29,514
Expenditure in 1872 – 73	99,617
Ditto in 1873 – 74	1,37,498
Increase in 1873 - 74	37,881
Surplus in 1872 - 73	50,235
Ditto in 1873 - 74	41,868
Decrease in 1873 - 74	8,367
Net results of work in 1872 – 73	39,986
Ditto ditto in 1873 - 74	47,937
Increase in 1873 - 74	7,951

It is seen that the receipts increased by Rs. 29,514, the expenditure by Rs. 37,881, causing a falling off in the cash surplus of Rs. 8,367; but at the same time the net value of the year's transaction increased by Rs. 7,951, so that the results stood more favourable than those of last year.

During this year receipts under Cooch Behar Division was Rs. 51,684 and expenditure was Rs. 56,147, and naturally, the deficit was Rs. 4,463. The deficit in the Cooch Behar Division was not only of a temporary nature, but it might also be called an artificial one. In the first instance the accounts of a former contractor, Mr. Kruger, were adjusted during the year, showing a sum of Rs. 7,074 against the year under expenditure; secondly, an officer and establishment were entertained for the examination of the Eastern Duars sub-division, which however yielded

no revenue at all. But thirdly and chiefly, owing to the commencement of the Northern Bengal State Railway, the Government of Bengal prevented the Conservator from satisfying numerous applications from private parties for timber. There was not the slightest doubt that the falling off during the year 1873-74 would be more than made up for in 1874-75. Sleepers and beams were already under preparation for the Railway, and the Buxa forests would be worked up to 3,000 Sal-trees per year at once, and up to 5,000 trees gradually. The Conservator expected that Cooch Behar would henceforth yield a net revenue equal to that of Chittagong (Rs. 72,042) — but with this difference, that the Cooch Behar forests would be worked so as to increase gradually in yielding capacity, whereas it appeared more than probable that the Chittagong forests were being worked out gradually.[25]

This is to be mentioned in the same breath that in one head the health of the Forest Department improved. The outstanding amount of the Department had been decreased during the year from Rs. 17,924 to Rs. 8,842. The Conservator hoped "A further reduction will be attempted in 1874-75."[26]

However, the Bengal Government observed and expressed satisfaction in 1875 on the Progress Report of 1873–74 and resolved, "The work is meanwhile progressing steadily, if slowly"[27]; the Government held, "In the present state of Forest Administration in Bengal, the financial results of the year are of secondary importance. What is required in the first instance is to demarcate the Government Forests under the control of the Forest Department, to define or commute any adverse rights or privileges of third Parties with which they may be burdened, and to collect such statistical data regarding their capabilities as are required to regulate their working."[28] The said Resolution further noted "The Lieutenant-Governor is glad to observe that steady progress has been made during the year in the formation of "reserves" in the Cooch Behar Division." The Resolution further included the opinion of the Conservator regarding the yield. The Resolution runs, "concerning the yield of the forests in the Cooch Behar Division, the Conservator remarks that owing to large quantities of timber having been felled in former years and left lying in the forest, although shown in the books as lying in so called depots, the department is still occupied with the sale and clearance of these old cuttings, at prices generally much below the rates at which they are entered in the stock accounts."[29] The Conservator informed the Government of Bengal "that the value of timber in stock at the beginning of the year 1872-73 was Rs. 2,65,431, and Rs. 1,66,439 at the close of it; Rs. 1,66,439 and Rs. 1,47,531 at commencement and close of the year 1873 – 74".[30]

The financial results of the working of the Forest Department in Bengal since 1871 are given in the table :-

Year	Receipts	Charges	Surplus Profit	Area of reserve forests
	Rs.	Rs.	Rs.	Sq.miles
1871 – 72	87,260	67,506	19,754	106
1872 – 73	1,16,690	62,554	54,136	106
1873 – 74	1,23,732	81,068	42,664	120
1874 – 75	1,85,914	98,654	87,260	1,467
1875 – 76	1,98,274	1,39,086	59,188	2,585
1876 – 77	2,22,401	2,11,689	10,712	3,390
1877 – 78	4,32,363	2,61,112	1,71,251	3,430

The above working of the department was treated as a whole. The financial results in connection with each of the forest divisions of our area of study may now be briefly noticed.

The Darjeeling Division — The division known in former years by this name was by this time sub-divided into three forest charges, styled the Darjeeling, Tista and Kurseong divisions. In 1878 in the division of Darjeeling proper there were 26 sq. miles of gazetted reserves. The receipts of this division in 1877–78 were altogether Rs. 49,790 and the charges Rs. 36,692; the result being a surplus of Rs. 13,098.[31]

The Tista Division — This division by 1877–78 was not fully formed. At this stage it was only 61 sq. miles in area. This was not however, as yet a paying division; its receipts being only Rs. 1,946, against an outlay of Rs. 10,188. But it was expected that the demand for timber, fire-wood and charcoal, likely to arise from the opening out of tea gardens in the Daling sub-division, would very soon bring the balance to the right side of the account.[32]

The Kurseong Division — This division comprised the reserves lying on the outer hills from Kurseong downwards and in the adjoining Terai. According to the Progress Report of 1877-78 the total area after adjustment with the Tista division, and including certain blocks purchased from private parties since the close of the year would amount to 75 sq. miles. This division supplied during the year large quantities of timber for the construction of bridges on the Ganges and for the Northern Bengal State Railway. The Conservator was of opinion that these forests were over worked and needed rest for a few years. The receipts of the division were Rs. 98,451 and the charges Rs. 45,930, showed a net surplus of Rs. 52,520 or Rs. 543 per square mile of the area actually worked.[33]

The Jalpaiguri Division — This division was created by the end of 1875. This division consisted of the forests between the rivers Tista and Torsa in the Western Duars. The area was at

the close of the year 1878 amounted to 169 square miles. It stood at 140 square miles on the 1st April 1877 and 12 sq. miles were added to it in 1877-78. These forests were much exhausted when taken up and it was intended not to work them for large timber for at least 25 or 30 years. But the demand for sleepers for the Northern Bengal State Railway compelled the cutting of Sal both in 1876–77 and 1877–78. The receipts of the division in 1877–78 were Rs. 12,580 and the charges Rs. 16,546. It was hoped to make it pay its expenses in future by the sale of fire-wood, charcoal etc, to the tea gardens in the neighbourhood.[34]

The Buxa Division — In 1877–78 from Jalpaiguri Forest Division Buxa Forest Division was created. The Buxa reserves covered an area of 250 square miles between Torsa and Sonkos rivers in the Western Duars. In this division an attempt was made to protect the reserves from fire by planting a thick belt of Sal, 100 feet broad, along the boundary. Good progress was made with this, but mean time the injury done by fires was very great. No less than 36,440 acres were burnt in the year out of an area of 103,900 acres sought to be protected. This division also felt the demand for sleepers and timber for the Northern Bengal State Railway, and 2776 green trees and 1,932 dry trees and pieces were cut during the year. The actual receipts were, however, only Rs. 37,153 against charges amounting to Rs. 50,658. This deficit was however owing to the fact that Rs. 12,095 were disbursed during the year on account of former years, and that a large stock of sleepers cut and carted during the year were only made over and paid for in April. The division was really a surplus division.[35]

The financial results of the Forest Department in Bengal from 1871 to 1878 given in the above table showed that the revenue was double during the year under review (1877-78) and the cash surplus had risen from Rs. 10,712 to Rs. 1,71,251. The value of stock on hand had fallen by Rs. 1,56,338, as compared with Rs. 87,468 in 1876–77, so that a great improvement had taken place in every respect. The Conservator felt confident that the surplus in future years would be still greater, and that the Government Forest Estates in Bengal "may now be said to have become a source of permanent and increasing returns to the state." In fact the new Forest Code, which came into force on the 1st April, 1877 was a great help to Divisional Officers in the conduct of their office work. The working of the department was more or less favourably reviewed by the policy makers in the following words: "Although the timber returns may perhaps be somewhat more complicated than necessary, the conservator found that on the whole, the business of the department is conducted in the manner prescribed by the code."[36]

But the financial results of 1877–78 and 1878–79 are apparently perplexing as well as confusing:-

Year	Receipts	Charges	Surplus profit	Area of Reserved Forests
	Rs.	Rs.	Rs.	Square miles
1877 - 78	4,32,363	2,61,112	1,71,251	3,434
1878 – 79	4,16,027	3,38,675	77,353	2,967

The table shows that in 1878–79 charges increased much and the area of Reserved Forests decreased drastically. This was because of heavy charge of Rs. 63,492 which was incurred in 1878–79 for the purchase of land in Kurseong from Mr. W. Lloyd. This purchase, however, was made on very advantageous terms, and ought to result in a considerable increase of revenue hereafter.[37] If this extraordinary disbursement is left out, the comparison stands thus:-

				Surplus profit Rs.
1877 – 78	.....	.....	.....	1,71,251
1878 – 79	.....	.....	.....	1,40,845

Regarding the cause of the drastic decrease in the area of reserved forests in 1878–79 explanation may be given by projecting the following table[38] :-

		Square miles		Square miles
Area on 1st April 1878	.....	.....	.....	3,430
Added in 1878 – 79	.....	41 ½	.....	.....
Excluded	.....	504 ½	.....	.....
Area on 1st April 1879	.....	.....	.....	2,967

To be specific, at the beginning of 1878–79 the area under the Forest Law was 3,430 Square miles. From this were finally excluded the Damin–i–koh in the Santal pargana and two trifling areas in Darjeeling and Jalpaiguri and temporarily in Hazaribagh and Shigbhum forests, — altogether 504½ square miles; while 41½ square miles were added in Darjeeling, Tista and Kurseong Division. Thus, at the end of the year the total was 2,967 square miles.[39]

Be that as it may, the number of trees felled during the year (1878–79) was 6,481 and the quantity of timber, exclusive of fire-wood, brought to depot from the forests was 78,082 cubic feet. Altogether 30,989 sleepers were supplied to the Northern Bengal State Railway, nearly all from the Buxa and Kurseong Divisions. Considerable quantities of timber were also supplied for

the Rungpur-Dhubri road. To quote the resolution, "The attention of the Lieutenant-Governor has just been drawn to the supply of excellent timber in the Nepal forests, of which the Durber are anxious to encourage the export. It may be possible, incase of need, to supplement the out turn of our forests from this source, and it is not unlikely that an extension of the trade might arrest the destruction of fruit trees and other small timber in the plains."[40]

During this year the Darjeeling forests supplied 1,81,727 maunds of fire-wood and charcoal with an average clear profit of Rs. 6–2–3 per 100 maunds. The profit on each cubic foot of timber supplied from Kurseong and Buxa Divisions was 12 annas 3p and 11 annas 4p respectively.[41]

Regarding the mode of delivery, rates etc., the Conservator informs the government that the work of supply of fire-wood and charcoal is carried out by contractors, in all cases Nepalese. Tenders were called for in the usual way, and the local rates for hire of carts, pay of axe-men etc., having been ascertained, a tolerable correct idea was gained as to the amount which should be paid for the contracts. Eventually the following were agreed on:-[42]

(a) For Darjeeling. — whether to the depot in the bazaar or to residents' houses —

Fire-wood — Rs. 17, per 100 maunds.

Charcoal — As. 8½ per maund.

(b) For Jalapahar. —

Fire-wood — Rs. 15 per 100 maunds.

Charcoal — As. 8½ per maund

During the year 1878–79 Rs. 13 – 8 was paid, but in 1879–80 it was raised to Rs. 15 as the former rate was found too low.

(c) For Jore Bungalow. —

Fire-wood — Rs. 7 per 100 maunds.

Charcoal — As. 6 per maund

A proper stamped agreement is entered into with the contractors just before the end of the official year generally, of which agreement the following are some of the conditions (other than the ordinary ones, regulating the supply according to orders, the rates, dates on which payments are to be paid, and the usual penalty of the damages to the extent of Rs. 200 to be

levied for non-fulfilment, besides loss of claim to any wood or charcoal lying on the ground, but not delivered on the day on which the contract may be cancelled) viz.:-

(a) No trees are allowed to be felled unless marked by a Forest Officer. In the event of an unmarked tree being felled, the price is deducted from the contractors' bill.
(b) No branch of wood of a less diameter than 4" is allowed to be brought to depot.
(c) All trees to be cut one foot above ground.
(d) All dry and fallen trees or parts of trees are required to be utilized for fire-wood.
(e) Fire-wood to be cut into billets 18" X 12" X 4"

The Conservator notes that the wood is cut up into these billets in the forest, and carried to the road side by coolies, whence it is carted to its destination. The cutting is done with the axe. Great endeavours have been made to get the men to use saws, but they have hitherto failed, except in one or two small instances, axe-men having apparently insuperable objection to change their own implement for the saw.

(f) No wet or half-burnt charcoal is accepted. Forty two seers are taken as representing one maund.
(g) Within three months of the beginning of the work the contractors are required to deliver over and above the daily requirements a reserve stock of charcoal in a godown belonging to the Department, and this charcoal is held in stock during the pleasure of the Forest Officer. The object of this is to provide a reserve in case of supplies may fail.
(h) No huts or building of any kind are allowed to be erected in the forest with out permission, and no saplings, & c., allowed to be cut to construct them, it being found that the charcoal owners cause great damage among the young growth if not carefully looked after.

Regarding payments the Conservator notes that payments are made once a month to the contractors. No advances or part payments of any kind are made on any account. This was difficult to arrange at first, owing to its having been the custom to give advances to contractors, but with a little trouble the practice was stopped.

The system of accounts is as follows:-

A purchaser requiring a quantity of fuel remits the money in advance (no credit being given) to the Divisional Officer only, who gives a receipt. An order is then issued through the Forest Ranger to the contractors for the delivery of the quantity, which is usually sent in within

two days. A *challan* is sent with the carts, which *challan* is signed by the recipients and is taken back to the Forest Ranger at Jore Bungalow, forms the voucher for contractor's bill and on which he is paid.

The fuel being weighed out into the carts at Jore Bungalow, it follows that the quantity entered in the challan is expected to arrive at Darjeeling. Should, however, there be a discrepancy, the contractor is made to pay for it at Rs. 8 per 100 maunds wood and annas 7½ per maund for charcoal i.e. the difference between the price paid to him for delivery and that received from the public by the Forest Department. Thus, for fire-wood the department receives Rs. 25 per 100 maunds and pays Rs. 17 for delivery, for charcoal Re. 1 and pays annas 8½ for delivery.

"In the case of the depot agent the procedure is somewhat different. He gives an indent one day for the quantity required to be sent in the next day. For this also a *challan* is sent, and this he signs, and it is treated in the same way as those signed by residents.

He dose not pay in advance, but is required to give a daily statement of sales, keeping up a book in English for the purpose, the entries in which must agree with the receipts or *challans* signed by him. The amount received by him is daily paid to the Divisional Officer. His commission is then paid to him and the balance credited in the cash book.

As, however, his sales are always a little below his receipts, it follows that there is a small amount outstanding against him at the end of the month, and he is thus never a debtor to any large extent."[43]

Darjeeling delivery — consists of —

(a) That made to the bazar depot.

(b) That to the residents' houses i.e. as near to the houses as carts may be allowed to go.

As regards the former, a large godown, capable of holding in the lower storey some 1,200 maunds of wood if filled (about eight days' supply), and in the upper 300 maunds of charcoal, was erected in a convenient central position in the bazar. "The object is to supply the bazar and other poorer residents who are not in a position to send for large quantities of fuel at one time."[44]

"The Manager of the Happy Valley tea estate just below Darjeeling also takes his supply of charcoal from the depot, generally 1,000 to 1,200 maunds annually." Primarily, this depot was managed by a departmental munshi; but this was found very unsatisfactory arrangement, "and now it is in the hands of an agent to whom all fuel is sold at rates a little below the usual ones, the difference being his profit. Thus the usual price of firewood being Rs. 25 per 100 maunds, it is sold to him at Rs. 24. Charcoal, usually Re. 1 per maund, is sold to him for 15 annas 6p. per maund."[45]

This was found to work satisfactorily, and there was no loss of wood and charcoal on the depot accounts.

Results (Darjeeling and neighbourhood) – The following were the actual results obtained during the two years 1877–78 and 1878–79 as taken from the annual reports :-

Purchasers	Fire-wood Quantity in 1877–78 Mds.	Quantity in 1878–79 Mds.
To the Public Works Dept.	3,533	12,962
To the Commissariat Dept.	71,381	49,000
To the residents of Darjeeling, Jalapahar, and Jore Bungalow.....	92,259	1,07,124
Total	1,61,173	1,69,086
	Charcoal	
To the Gielle tea estate	500	1,286
To the residents of Darjeeling, Jalapahar, and Jore Bungalow	5,372	11,194
To the Public Works Dept.....	.....	160
Total	5,872	12,640

The financial aspect was as follows for the two years :-

Particulars	1877–78 Rs. A. P.	1878–79 Rs. A. P.
1,73,046 maunds 20 seers of firewood and charcoal sold; realized on an average per 100 maunds	24 2 3[46]	.....
1,81,727 maunds 6 seers of firewood and charcoal sold; realized on an average per 100 maunds.....	.....	27 4 9[47]
Total expenditure on an average per 100 maunds, including share of establishment, & c.	16 2 11	.....
Ditto ditto for 1878–79	.....	21 1 1
Average surplus per 100 maunds	7 15 4	6 3 8

By this time Government had no reliable data regarding the out turn of wood and charcoal per tree. In the record of 1877–78 it was shown that 89 maunds of fire-wood were obtained per tree and 128 in 1878–79; charcoal, 4 maunds in 1877–78 and 16 in 1878–79. But these figures were hardly to be depended on, especially as regards fire-wood, as large portion of the quantity obtained was from fallen trees, & c., which were not shown in the return as trees felled, and the number was not set off against the fire-wood.

On this C. W. Bolton, Under-Secretary to the Government of Bengal wrote, "In my opinion the quantity of firewood per tree on an average will probably be most correctly put at 100 maunds and charcoal 15 maunds; the trees used for charcoal being generally smaller, as charcoal is better and easier made from green stems, which can be at once cut into short round logs and do not require splitting."[48]

One thing should be pointed out here that up to this period with the exception of that for a few minor forest products, the market was a local one, the timber or fuel being consumed at Darjeeling and Jalapahar, or used in the tea industry of the neighbourhood.[49] Export, in the true sense of the term, was far off.

It has already been mentioned that in 1874–75 Jalpaiguri Division (probably in place of the Cooch Behar Division) was formed. In this year Jalpaiguri Division including Buxa (not a separate division then) had 390 square miles as Reserved Forest area. From 1874–75 to 1876–77 before the separation of Buxa from Jalpaiguri Division there was a deficit; the receipts and expenses in 1874-75 being Rs. 19,784 and Rs. 23,513 and in 1876-77 Rs. 15,534 and Rs. 54,726. In 1877-78 Buxa was separated from Jalpaiguri Division and created a new division of the same name. For Jalpaiguri the receipts in 1877–78 were Rs. 12,580 and expenditure Rs. 16,545 and in 1879–80 Rs. 10,417 and Rs. 11, 593. For Buxa Division the figures were Rs. 38,153 and Rs. 50,658 for 1877–78 and Rs. 64,351 and Rs. 56,089 for 1879–80.[50] It was reported that the greater expenditure in Buxa was due to the departmental working.

The financial analysis of the decade (1870–80) shows that at the beginning of the decade there was a meagre profit, but from the middle the financial results were unfavourable and a downhill trend was noticed. At the same, it should be pointed out that the deficit showed a trend at a reduced rate. And if departmental charges could be controlled and forest operations and commercialization could go hand in hand there was a possibility of profit in near future. Timber theft should also be checked to make forest a profitable business.

But unfortunately the forest departments of Jalpaiguri and Buxa Divisions immediately could not rise to the occasion. Faced by various difficulties specially of opening of new markets fed by the ranges of other divisions the Jalpaiguri and Buxa Divisions failed to show steady profit even in the next decade. The following statement shows the result of the working of the reserved forest for the next twelve years since 1882-83.[51]

Jalpaiguri Division				Buxa Division			
Year	Revenue	Expenditure	Net receipts	Year	Revenue	Expenditure	Net receipts
	Rs.	Rs.	Rs.		Rs.	Rs.	Rs.
1882-83	11,805	17,057	.....	1882-83	80,443	68,711	11,732
1883-84	8,077	14,660	.....	1883-84	75,045	64,942	10,103
1884-85	8,993	16,550	.....	1884-85	55,641	65,276	.....
1885-86	7,835	20,589	.....	1885-86	27,740	44,742	.....
1886-87	12,421	20,483	.....	1886-87	53,503	50,487	3,016
1887-88	12,060	14,293	.....	1887-88	30,589	26,101	4,488
1888-89	14,328	12,262	2,066	1888-89	12,920	20,004	.....
1889-90	24,635	15,666	8,969	1889-90	31,296	22,725	8,571
1890-91	31,998	15,967	16,031	1890-91	23,398	23,913	.....
1891-92	23,697	25,656	.....	1891-92	12,465	22,188	.....
1892-93	29,189	29,648	.....	1892-93	12,556	23,296	.....
1893-94	40,185	25,705	14,480	1893-94	10,185	23,165	.....

The above figures speak for themselves. They show that year after year Government was losing money for the upkeep of these forests save and except a few financial years. Obstacles to the commercialization were not one but many and of various nature. (1) Rates for timber and other forest produce were high; (2) practically, no facility was afforded to the public for obtaining timber without trouble and delay; (3) managers of tea gardens (they began to procure fuel from 1884)[52] and others were usually compelled to supply their requirements of wood for tea boxes by procuring it from Japan and Burma; (4) tea gardens did not use the fuel from nearby forests but bring coal from Ranigunge. In order to facilitate commercialization and make forest operations profitable D. Sunder in 1895 suggested, (a) opening of good cart roads leading into every forest; (b) speedy measurement of timber when purchased, instead of present delay and obstruction caused by Forest Rangers; (c) prevention of present unnecessary harassment and intimidation of people who reside in the vicinity of forests by Rangers, Foresters and Forest-guards; and (d) greater supervision by Gazetted Officers in charge of forest divisions, and closer touch with planters and the people generally. All these suggestions were not given proper importance immediately but being wise after event adopted in much later days doing much harm to the forests and commercialization of forests.

In fact, the working of the Jalpaiguri Division did not begin to show a steady profit until 1893–94 and in the Buxa Division the expenditure exceeded the revenue in thirteen out of twenty two years from 1882–83 to 1903–04. Jalpaiguri Division from 1898–99 and Buxa from

1904–05 had been doing well and had made handsome profits. The table below gives the figures from 1898–99 to 1907–08 for ten years.[53]

Year	Jalpaiguri Division			Buxa Division		
	Revenue	Expenditure	Net profit	Revenue	Expenditure	Net Profit
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
1898 – 99	54,568	24,131	30,427	17,452	23,315	.....
1899 – 00	56,780	34,378	22,402	28,826	33,683	.....
1900 - 01	55,345	37,101	18,244	43,228	37,135	6,093
1901 – 02	56,774	44,918	11,856	62,675	40,032	22,643
1902 – 03	68,621	41,089	27,532	57,334	55,917	1,417
1903 – 04	55,199	31,738	23,461	63,255	76,694	.....
1904 – 05	88,521	50,434	38,097	1,20,789	84,783	36,006
1905 – 06	99,403	43,807	55,596	1,32,434	91,671	40,763
1906 – 07	1,33,630	48,740	84,890	2,15,037	97,351	1,17,686
1907 - 08	1,04,730	41,662	63,068	2,20,893	1,21,220	99,673

It is seen that in 1906–07 the two divisions between them made a surplus of over two lakhs of rupees, and in 1907–08 of over one and a half lakhs. The forests had been carefully preserved by the Forest Department and the result of the good work done was becoming apparent; the Buxa Division was capable of still further development but its working was hampered by the difficulty experienced in getting the timber to the markets of Eastern Bengal and Calcutta. There was a demand of timber for houses, railway sleepers, railway carriers, car bodies, ships, boats and country boats, furniture, packing cases, tea chests, and over all fuel – but these demands from larger economy on the forest resources could not be met due to the lack of developed transport system and absence of clear cut government policy. The government did not pay seriously any heed to the suggestions given by Sir Brandis. As a result of these and others noted above the forests of these two divisions suffered for a considerable period in future.

A few words more should be said particularly about the commercialization of Buxa forests. The Conservator's Annual Report for the year 1871–72 gave a picture of the potentiality of Buxa forests. In that report it was stated that there were 12 blocks or patches in Buxa and area 103,690 acres (tallies with the acreage of Hunter). The report gave a description of the forest as follows: "..... it contains sal timber mostly, with a few sissoo, khair (champ), magnolia, also India-rubber trees mixed with many kinds of common jungle trees. There are large patches of heavy grass where there are no sal and sissoo and a few magnolia – the latter near the foot of the Buxa hills on the sloping ground. Area 103,690 acres. The best timber is met with on the northern parts of the tracts. It would be impossible to say what quantity of mature timber these tracts would yield, as I have not been able to go carefully through them tract by tract, but they would yield a large number of logs."[54]

Next important report on Buxa forests was furnished by Dr. W. Schlich. In 1874 he drew up a preliminary Working Plan for the Buxa Reserve which prescribed the fellings of sal trees to be under taken in the different compartments into which the forest had been divided. One of the difficulties in working this Reserve was the absence of water in the dry season in the northern part of the forest. The carting season was short, lasting from December to March, and the sowing season from October to the end of April. Elephants could drag out timber at all seasons except during the hot weather months. The trees were either drawn to the roadside and then sawn up into sleepers or, if the material was of first quality, it was carted to Alipur. Dr. Schlich's Working Plan prescribed that 5,520 trees should be felled per annum. The average number of trees cut annually upto January-February 1879 was only 2800, whilst numerous logs were lying on the roadside and large quantities of timber remained in the forest. E.P. Stebbing in giving an account of the Buxa forests writes that in Compartment VIII, where 1,742 sal trees had been felled, 1200 logs still remained in the forest, and in Compartment X 1400 logs out of 1623 trees felled. These were 1876–77 fellings, and in addition there were the fresh fellings of 1878–79. In 1877–78 Buxa was separated from Jalpaiguri Division and stood as an independent forest division.

Next important event was the visit of Brandis. Brandis visited some of the northern forests of Bengal including Buxa in between January and December, 1879. His report on his inspection of the forest furnishes an instructive picture of the chief lines upon which conservancy was proceeding in the Buxa Division. He submitted his report in 1880. He issued instructions to defer further felling in Buxa until all the timber in the forest should have been removed. Secondly, that in future the fellings should be regulated by the possibility in annual extraction. Another reason for postponing fellings was that the project to construct the Rangpur to Dhubri Railway, for which large indents of sleepers had been made, was deferred. Timber was, however, wanted for the Kawnia-Kurigram tramway.

In addition to the old depot at Alipur, sale depot for Buxa timber had been established at Gachidanga on the Kaljani river and at Kawnia on the Tista river (the sleepers being floated down the Brahmaputra river and then taken 50 miles up the Tista to Kawnia). Another depot had been established at Dacca to facilitate the timber trade of Buxa forests. For the time being this depot could not function. Mr. Gamble subsequently reported that the second class Buxa sal timber sent there could never compete with the magnificent sal from Nepal. Some 1000 sissu trees had been cut, but only 200 logs had been dragged from the forest of Buxa and the demand for that timber was limited.[55] It was thought that efforts were to be made to interest Calcutta merchants and the Ordnance Department in this timber. Its quality was, however, held to be

inferior to that of Oudh also. The whole of this work was departmental. Purchasers were allowed to remove dry timber on payment, a girth limit of 5 feet being fixed, above which no tree could be sold. Brandis pointed out that this restriction was wasteful because, in areas where no departmental operations were being under taken, the larger trees rotted and their value was thus lost. A special rate should be fixed for logs over 5 feet girth and the Divisional Officer be empowered to sell them to purchasers. He also suggested that an attempt should be made to sell some of the other species associated with the sal or sissu in these forests, to be tried as railway sleepers. The financial results of Buxa inspired the Forest Department. For Buxa the receipts in 1877–78 were Rs. 37,153 and expenses, Rs. 50,658 and in 1879–80 Rs. 64,351 and Rs. 56,089.[56] It has already been noted that the great expenditure in Buxa was due to departmental working.

To save the Department from losses the Government thought of changing its policy of departmental operations of forests in Buxa Division by 1882–83. Earlier the policy of working the forests by private enterprise bore fruits which gave satisfaction to the department as well as government. Similar method was taken up in Buxa. The Conservator informed the government in 1883 that "In the Buxa Division a commencement has also been made by merchants from the Goalpara district, Assam, in purchasing standing timber for export, and the result of the speculation will be watched with interest as an opening which may result in the withdrawal of departmental operations in favour of private enterprise in this division also." The notices regarding sales of timber etc. issued during the year were as follows:

"Timber may be obtained on permit in the forests of the Buxa Division situated in the Western Duars, Jalpaiguri District, by application to the officer in charge of the Division at Alipur, Buxa Duars and other forest produce on application to the subordinates in charge of the ranges viz.-

The Forester at Chilapata for the Borojshar Range
Ditto Haldibari „ „ Haldibari „
The Forest Ranger at Rajabatkhawa for the Buxa Range."

The following were the rates in 1882–83 in force for the sale of timber and other forest produce from the depot and forests of the Buxa Division :-

Depot Sales																	
Depot	Group A						Group B						Group C					
	Class – 1			Class – 2			Class – 1			Class – 2			Class – 1			Class – 2		
	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.
Alipur	1	4	0	0	12	0	1	0	0	0	10	0	0	10	0	0	8	0
Kawnia	1	12	0	1	4	0	1	0	0	0	10	0	0	10	0	0	8	0
Dacca	2	0	0	1	4	0	1	4	0	.....			1	0	0	.....		
Rajabatkhawa	1	0	0	.....			.....			.....			.....			.....		
Buxa Roads	0	14	0	.....			0	10	0	.....			.....			.....		
Kurigram	1	12	0	1	4	0	1	0	0	0	10	0	0	10	0	0	8	0
Mogalhat	1	12	0	1	4	0	1	0	0	0	10	0	0	10	0	0	8	0
Mynaguri	1	4	0	0	12	0	1	0	0	0	10	0	0	10	0	0	8	0

Group A – includes Sal.

Group B – includes Saj, Tun, Champ, Chilauni, Sisu, Oak, Chestnut and Pipli.

Croup C – includes all other kinds.

In the eye of the Government and Government Officials Jalpaiguri and Buxa were twin sisters. They were called in the same breath. Both were interdependent in many respects, and in many cases the financial as well as commercial position of both was calculated jointly for a considerable period. When Ribbentrop was requested to furnish a statement of outturn of timber for these two areas he prepared it including both the areas jointly. It is fact that from1865 to 1877 Buxa was within Cooch Behar and later within Jalpaiguri Division. But in preparing the statement from 1875–76 to 1887–88 Ribbentrop considered both jointly. The statement is interesting to have an idea of timber operations in those forest tracts.[57] The Statement is shown in Appendix – H.

The statement speaks for itself. There was some causes for concern on the part of the Government because of the continued decrease in the outturn from the Reserved forests of the Buxa and Jalpaiguri Divisions. E.P. Dansey, Conservator of Forests found out some causes behind it in his Progress Report of 1891–92. First was "the cattle disease of the previous year, which not only killed of a large proportion of the local transport animals but frightened outsiders away." Secondly, "To a certain extent the falling off in Buxa is due to the small rainfall, which rendered it impossible for the timber merchants to make the usual use of the Kaljani and other rivers for floating the produce out of the district." Third cause was attributed "to the low prices which at present prevail in the Dacca and Sirajgunj markets."[58]

Regarding the low outturn in the Jalpaiguri Division he reported that "The extensive Tondu forest in the Jalpaiguri Division was practically closed to purchasers from the moment that Government made a free grant of the available mature sal tree contained in it to the Bengal Duars Railway Company." He further pointed out the major obstacles to the commercialization

of these forests and noted, "The quantity of sound mature timber in those two Divisions is, moreover, relatively very small." In spite of this rooted weakness he informed the Government that "Arrangements have now been made for carrying out a systematic series of improvement fellings in the Buxa forests, and also for treating parts of the Jalpaiguri forests on a somewhat similar method."[59] He expressed hope that by these measures, and by a reduced sale of rates corresponding to the generally inferior quality of timber which these "improvement fellings" might be expected to yield, "induce purchasers to come forward in large numbers." To conclude his report Conservator wrote that the forests of the Jalpaiguri District were overrun by wild elephants which, apart from any damage done by them to the trees, "tend to frighten away the timber contractors."[60]

The expectation held by the Conservator about the improvement of forest operations and commercialization in Buxa belied at least in near future. The timber thieves could make a fortune out of this forest, but the forest department could not. It was alleged that there was a considerable demand of poles amongst the planters,[61] but due to administrative inefficiency that demand was not met. "A reference is necessary to the Veneer Factory of the Buxa Timber and Trading Company which was erected at Rajabhatkhawa in the Buxa Division. One object of the undertaking was to enter the three-ply tea-box market. Owing to the war the supply of Venesta and similar boxes ran short and there appeared to be a great future before such a factory, it being considered that the mixed forests in the neighbourhood contained suitable timbers."[62] The company had, unfortunately, gone into liquidation. E. P. Stebbing writes, "The layout of the factory and quarters for the management appears to have been on rather an ambitious scale – but the trade depression and inexperience may have played a considerable part. The Conservator is still hopeful of success being ultimately achieved."[63] In 1925 E.P. Stebbing saw some beautiful three and five-ply boards in the factory.

We have seen above that the Buxa forest began to profit from 1900–01 and that was due to the change of the system. In 1900 departmental operations were again started after a recess and sleepers sawn for the Eastern Bengal Railway until 1912, upto 1906 under the selection system, and from 1906 onwards under Mr. Hatt's working plan which was in force upto 1919–20. This prescribed selection fellings on a 15 year cycle with a 6 feet 3 inches exploitable girth combined with improvement fellings. The improvement fellings bore on inferior sal and other species interfering with promising sal and also on sal which was so obviously defective that it could not grow into a good tree of the exploitable girth.

At first, trees of other species were felled at considerable cost, often in the interest of a few saplings. As there was then no demand for them they were allowed to lie where they fell. About 1911, as it was found that these fellings tended to increase the already dense evergreen undergrowth, it was decided to deal with only such trees as were actually interfering with established sal and these were girdled instead of being felled.

In 1906 the bad effect on sal regeneration of the evergreen undergrowth induced by fire protection led to clearings being started to free sal seedlings. There was a good deal of discussion as to the efficacy of these clearings which were abandoned in 1910. Results in Jalpaiguri, where they were not abandoned until 1915, showed that they were of little value in comparison with their cost. In 1912 departmental sleeper work was abandoned, and from that time all sal timber was sold by auction.[64]

To maintain the chronological order of the creation of forest division let us now turn to Kalimpong. The forests of the Kalimpong Division came under the jurisdiction of the Forest Department between 1879 and 1881.[65] The First Working Plan for the division was written in 1896 and was in force until 1905 when the Second Working Plan was written. The latter expired in 1921. The detailed prescriptions of the First Working Plan related only to sal–bearing areas, and the large demand for fire-wood for tea-gardens in the Duars led to the writing of the working plan for the Mal forest in 1901. The First and Second Working Plans for Kalimpong Divisions showed that prior to 1880 the sal forests between the Tista and Lethi rivers had been worked and that the full-sized sal trees were left only in accessible places, while the forests on the left bank of the Tista were practically unworked till 1886–87. From the latter forests only a few sal trees were removed until 1891–92 when the system of selling trees by the Cubic foot was introduced. Prior to 1896 the felling of sal was entirely unregulated. The First Working Plan prescribed selection fellings of sal trees over 7 feet in girth in Tista and Chel ranges on a felling cycle of 10 years, and it also prescribed improvement fellings. Such selection fellings were carried out in Tista range north of the Rilli river, where about 90 per cent of the sal trees over 7 feet in girth were removed, but south of the Rilli little progress was made. In the absence of a demand improvement fellings were neglected.

The Second Working Plan prescribed selection and improvement fellings for sal on a 15-year felling cycle in Tista and Chel ranges. Under the selection method of this plan the number of trees, over a prescribed girth limit viz., 6 feet 4 inches, which it was considered advisable to remove, was laid down and annual coupes from which these trees were to be removed were allotted. In addition improvement fellings were prescribed which had been largely neglected. It

was understood later that sal would not establish itself under shade in this area. The result was that, in gaps caused by the fellings of selected trees, either clumps of bamboos or a shrubby undergrowth replaced the original sal tree. J.M. Cowan, the Deputy Conservator of Forests, Bengal wrote in 1924 "The selection system as formerly in force is therefore tending to lead to a crisis, which might culminate in the extinction of *sal.*"

Under the First Working Plan unregulated fellings of species other than sal were permitted. The Second Working Plan prescribed selection fellings of these species in Tista and Chel ranges, passing over the area in 15 years. Elsewhere, except in the fire-wood coupes, unregulated fellings were permitted. Even in the non-sal-bearing areas of the lower hill forests, where miscellaneous species were marked on the selection method, there was little natural regeneration, and that the forests were not becoming more normal. The demand for trees for box-planking and building timber was large, and the supply was insufficient from the accessible areas. Here too a crisis was inevitable.

Regarding fire-wood coupes the Mal Forest Working Plan (1901) prescribed coppice fellings in Mal block. Similar fellings were extended to Mongpong, Lish, Churonthi, Ramthi, Lethi, Fagu, Eastnar and Khumani blocks in the second Working Plan. Fire-wood coupes were clear-felled with the intention of allowing the area to be regenerated by coppice.

However, the Mongpong and Lish forests for commercialization were selected for working during the cold season of 1882–83 to supply the demand at Siliguri, and the Badamtam forest for the Darjeeling supply. From the financial results of the year 1882–83 it is found that timber and other produce were removed from the Tista (Kalimpong) Division by Government agency. In this head receipts were Rs. 2,117 and charges Rs. 10,390. Under the head 'Other Revenue' the receipts were Rs. 8,065 and charges 7,109. For formation, protection and improvement of forests the charges were Rs 10,406. Total receipts were Rs. 10,182 and total charges Rs. 27,905. The results show that in the year 1882–83 the Division was running in deficit; but the statement of 1881–82 shows the Division as surplus. That was because during 1881–82 the Division received Rs. 3,939 in advance for 1,954 sleepers to be supplied, having been credited as revenue in the accounts for that year. Without this item the results of the departmental operations for 1881-82 would have been deficit instead of a surplus and the actuals of the two years would be about equal.[66] The value of stock on hand gave Rs. 3,481 in favour of the year (1882–83) and it was confidently expected by the Conservator that future would show an actual cash surplus with energetic management and good supervision.[67] But this expectation belied in subsequent reports. In the report of 1892-93 Conservator E.P.Dansey wrote about Tista

(Kalimpong) Division, "In the case of the bulk of the forest of this charge, namely the upper hill forests of Oaks, Chestnuts, and other mixed species that are without any present export value." He further reported that there was "no demand whatever exists for major produce as this part of the Darjeeling District is sparsely populated, comprises but few tea corners, and is too remote and difficult of access to be of use to the plains country below."[68] Moreover, the Kalimpong forests were not so well situated for water transport.

The financial results of Kalimpong or Tista Division were not encouraging one. In 1894–95 the receipts were Rs. 22,734 and charges Rs. 22,848. In 1895–96 receipts were Rs. 24,702 and expenditure Rs. 21,148.[69] Here surplus was Rs. 3,554. But this was not steady surplus. In 1897–98 and 1898–99 the deficit was Rs. 3,350 and Rs. 847 respectively.[70] Yet the removals of timber from the forests of Kalimpong Division by purchasers improved to the extent of 48,153 cubic feet which was a record against the exploitation of forests in previous years.[71]

In 1902 the Government of India observed that contracts were enforced into to supply sleepers to the Eastern Bengal State Railway and the Bengal Duars Railway from the Tista, Buxa and Jalpaiguri Divisions. The number of sleepers delivered within the year was not, however, shown in the Progress Report for the year 1900–01, but it was observed that the full indent was not worked upto owing partly to the Tista Valley road being impassable. "The Government of India are glad to observe that His Honour the Lieutenant-Governor is desirous of establishing a regular demand for railway sleepers." It was further noted that every reasonable inducement should be held out to Railway Companies to purchase sleepers from the Department, and efforts should be spread to create or foster a permanent demand whenever timber "has hitherto failed to attract purchasers up to the limit of the possible annual yield." The Government of India gave a friendly caution to the Forest Department by noting that the Department should endeavour to carry out its contracts with punctuality, since failure to meet engagements inevitably "drives purchasers to seek other sources of supply."[72] Although the Government of India gave the Forest Department of Bengal a caution, yet the condition did not improve. A..L. Mclntire, offg. Conservator of Forests, Bengal reported in 1903 that revenue decreased of Rs.10,000 in Tista (Kalimpong) on account of the delay in marketing sleepers.[73]

But the activities of this Division along with Kurseong Division improved by 1908 due to the change of policy of the Railway Board. Conservator McIntire informed the Government about it and wrote, "It may be mentioned that changes effected since the creation of the Railway Board in methods of buying sleepers for the different Railways, tend to accentuate the effects of an indifferent timber market. Before, when other markets were dull, buyers of trees could

usually with safety venture on cutting railway sleepers. But under the present system of tender only powerful companies which are in the habit of cutting and supplying railway sleepers, and can afford delays, can venture into the sleeper trade without running great risks of dropping heavily over the supply. In the case of sal forests of the Kurseong and Tista Divisions the Railway Board has been pleased to approve a special arrangement which should enable buyers from those forests to cut some sleepers when other sources of demand are not exceptionally active. But unfortunately such an arrangement could not be extended to Chota Nagpur and Orissa."[74]

Before drawing curtain on the forests of Kalimpong Division it should be pointed out that Appendix XI of the Third Working Plan for the Kalimpong Forest Division gave a graph showing the past financial results constructed from the average figures of quinquennial periods from 1877-78. It should be noted, in this connection, that during the years 1877 to 1885 the Tista Valley Forest, west of Tista, were included in Kalimpong Division.[75]

The graph shows abrupt rise in expenditure under head 'A' (conservancy and works) during 1902–06. This was due mainly to extensive departmental timber operations and partly to the execution of the forest survey. Seventy per cent of the total cost of the latter amounting to Rs. 19,559 was charged to divisional expenditure. Departmental fellings were undertaken with a view to induce contractors to undertake such work by showing that a profit could be made. The fellings were discontinued during the next period, purchasers for standing trees having been found. A fall in expenditure under 'A' resulted.

The following table shows the past yield of the Kalimpong Division from 1906–07 to 1922–23 — its outturn of sal timber, including yield of dry trees and windfalls, outturn of other species of timber, fire-wood and minor produce.

Past yield

Year	Outturn of sal timber, including yield of dry trees and windfalls.		Outturn of timber (other species).		Firewood.	Minor produce.
	No.	C. ft.	No.	C. ft.	C. ft.	Rs.
1906 – 07	624	55,720	1,583	139,689	943,656	7,288
1907 – 08	800	62,466	1,462	179,402	1,296,052	11,421
1908 – 09	278	15,126	1,402	192,918	915,401	13,274
1909 – 10	288	15,251	1,339	137,732	1,405,091	11,860
1910 – 11	1,121	82,922	1,742	219,704	1,020,452	12,424
1911 – 12	762	51,888	1,708	250,753	1,190,357	15,702
1912 – 13	2,236	207,221	1,655	224,871	998,424	9,236
1913 – 14	477	39,014	1,654	223,051	1,162,566	18,452
1914 – 15	1,441	143,957	1,861	205,642	1,416,190	21,387
1915 – 16	1,210	121,415	1,205	164,752	910,464	29,780
1916 – 17	1,317	102,243	1,597	259,807	1,485,865	17,708
1917 – 18	422	21,403	2,661	290,982	1,202,089	12,837
1918 – 19	1,419	82,742	52,144	381,110	1,045,464	12,287
1919 – 20	971	50,186	2,123	250,641	940,945	12,503
1920 – 21	1,419	79,856	2,863	214,783	860,186	8,712
1921 – 22	706	28,971	2,348	195,605	1,337,643	13,553
1922 – 23	778	26,002	2,602	201,253	1,459,421	14,791
Total	16,269	1,186,383	34,989	3,732,675	19,590,266	2,43,215
Average	957	69,783	2,058	219,569	1,152,369	4,307

The table shows that outturn of sal timber during the seventeen years was not uniform one and production was not steady enough. In 1909–10 in the case of sal timber 15,251 cubic feet only were produced, whereas in 1912–13 207,221 cubic feet were worked out by the same Department. In the cases of other species of timber, fire-wood and minor produce the outturn was more or less uniform except one or two years. This up and down in production was the result of two things – idleness and activity of the Department and rise and fall in demands of forest produce. The rise and fall in production was reflected in financial results of the Kalimpong Division.

The following table shows the revenue and expenditure of the Kalimpong Division from 1912–13 to 1921–22.

Statement of the Financial Results of the 10 – year period 1911– 12 to 1921 – 22.

Year	RECEIPTS			CHARGES											
	Produce removed by Government Agency.	Produce removed by purchasers.	Other receipts including drift.	Produce removed by Government Agency A I.	Produce removed by purchasers AII.	Roads and Buildings A VII.	Demarcation A VIII (a).	Sowing and planting A Viii (e)	Fire – protection A Viii (f)	Other charges under Organisation and Improvement	Establishment	Miscellaneous and Drift	Total receipts	Total charges	Surplus
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
1912-13	28	93,005	7,067	1	677	11,221	725	1,470	294	926	24,910	899	1,00,100	41,123	58,977
1913-14	588	79,718	3,670	3	539	6,258	860	1,578	303	1,930	22,110	1,609	83,976	35,192	48,784
1914-15	94	90,724	2,465	0	651	4,274	1,045	3,248	316	2,025	21,294	573	23,283	33,426	59,857
1915-16	302	88,956	2,260	0	600	5,421	884	1,667	547	999	21,320	84	91,518	31,522	59,996
1916-17	212	99,072	2,970	0	479	4,368	596	0	421	3,846	21,264	220	1,02,254	31,194	71,060
1917-18	1,162	61.219	3,338	9,098	492	2,726	749	0	438	3,296	22,790	729	65,719	40,318	25,401
1918-19	34,067	1,03,257	2,964	16,119	576	3,927	655	0	439	4,424	25,514	794	1,40,288	52,448	87,840
1919-20	4,484	98,005	2,225	483	899	5,050	552	0	353	6,880	25,706	1,303	1,04,714	41,228	63,486
1920-21	0	90,784	2,455	0	554	7,796	630	30,533	76	1,625	22,076	1,499	93,239	37,309	55,930
1921-22	248	82,871	4,479	1,667	841	22,976	553	4,223	312	5,366	40,653	2,617	87,634	79,218	8,416
Total	**41,221**	**8,87,611**	**33,893**	**27,371**	**6,308**	**74,017**	**7,259**	**15,239**	**3,503**	**31,317**	**2,47,637**	**10,327**	**9,62,725**	**4,22,978**	**5,39,747**
Average	**4,122**	**88,761**	**3,390**	**2,737**	**631**	**7,401**	**726**	**1,524**	**350**	**3,132**	**24,764**	**1,033**	**96,273**	**42,298**	**53,975**

The great increase in the surplus during the 1912–16 period over the previous *quinquennial* period was due to the greater demand for and outturn of sal timber. In the next period, namely, 1916–21, departmental operations had again to be undertaken to supply timber for military purposes, resulting in a rise in expenditure under head 'A' (Conservancy and works). Increased prices were however not maintained. A fall in surplus was the consequence.[76] The total area of reserved forests in Kalimpong Division on 30th June, 1919 was 212 square miles.[77] And from the statement of revenue received and outstandings on account of revenue during 1919–20 shows that in Kalimpong Division value of sales and other revenue during the year was Rs. 1,04,757 annas 14 and paisa 4. Amount realized during the year was Rs, 1,04,713 annas 14 and paisa 4. And the outstanding was Rs. 44 which was the balance due to the Department at the end of the year.[78]

In 1890 Kurseong Forest Division was formed.[79] Between the years 1881 and 1891 the Sivoke hill forest formed part of the then Tista Division (Kalimpong Division), but they were restored to the Kurseong Division in the later year. Mahaldaram block was transferred to the Kurseong Division from Darjeeling Division in 1910 and Chattakpur in 1919.[80] The distribution of the forests of the Kurseong Division into ranges underwent shuffling and reshuffling several times. Beginning with three ranges the number of ranges gradually increased to six, was then reduced to two, but eventually again increased by gradual steps to the number of five by 1960–61.

Most of the old documents of this Division are not available since a fire in the office of the Conservator of Forests in the year 1897 had destroyed many important papers, including several working schemes prepared for these forests. It is possible, yet to depict the past systems of management and their results connected with the gradual growth of this Division with the help of available documents kept elsewhere. Before reservation the whole tract of the plains forest was much jhoomed by the Meches, and there was tea cultivation in the north of the Panchenai block. After reservation in 1865 the forest between the rivers Mechi and Tista constituted the Sikkim Division. Before 1877 the Kurseong, Tista and Darjeeling formed one Division, (this was done in 1870) called Cooch Behar Division. This Division was far too large to control efficiently. In view of the difficulty to manage this large division the Kurseong Division was formed by separating from the Darjeeling Division. It included "most of the forests below, roughly, the 4000-foot contour in the Himalaya and including the forests out in the plains at the foot of the hills."[81]

About the time of reservation (1865), Government granted a monopoly to one Mr. Dear to work the forests for railway sleepers. He removed all big trees except hollow and unsound

ones from the plains tract. After an examination of the forests in the year 1867, it was reported that sal trees over 5 feet in girth could only be found in the lower hills, but stumps up to 15 feet in circumference indicated that there had once been big trees in Terai. Although depleted of the big trees, the Terai was rich in smaller trees that would become valuable in 30 to 40 years — the Conservator of Forests, Bengal, reported in his Annual Report for 1867–68. He also pointed out that the regeneration of sal was so abundant as to "require check". That being the condition of the Terai and the local demand being small, it was not likely that purchasers would undergo the expense of working the hills for bigger trees. The Government of Bengal at this time laid down, "no tree should be felled except by the direct agency of the Forest Department."[82] This was perhaps the genesis of departmental operations. The Conservator of Forests opposed the decision on several grounds but in vain. Later on sale of trees over a certain girth on permits at a fixed price per tree was allowed, provided that trees were selected by responsible forest officers. On account of paucity of staff this condition could not be fulfilled; the result was that all good stems were removed from easily accessible areas. The contractors employed by the department in timber operations for the supply of sleepers to the railway and of building and bridge materials to the Communications and Works Department made further serious inroads into the forests inasmuch as they felled smaller trees in disregard of the girth limit rule. The Conservator of Forests, who inspected the outer hills between the Darjeeling hill cart road and the Mahanadi (Mahananda) river in 1870 wrote in his inspection report that the tract had been stripped of nearly every sal tree "sufficiently large and sound to yield one sleeper". Sale by measurement of volume was introduced as an alternative but was not favoured by the local people as the rate per tree remained cheaper. Some dry timber was disposed of at the cubic foot rate but only when that rate was reduced by half.

After the preliminary examination in 1867 a rough estimate was made as to the number of mature sal trees that could be felled annually. *Kukat* (inferior species of timber tree) trees were allowed to be cut as wanted. This scheme was revised from time to time as further data became available. Thus, every year a plan of operations was prepared in advance, but such plans do not appear to have been strictly adhered to, the outturn fluctuating with the demand. Mature sal trees were felled departmentally for the supply of railway sleepers; other fellings were done by purchasers and localized near centres of consumption.

In 1877 the forests of Kurseong with the exception of Mahaldaram and Chattakpur blocks were made into a forest sub-division of the Darjeeling Division under the general control of the Divisional Forest officer, Darjeeling. The chief revenue in the Kurseong sub-division at this time was obtained from sal timber in the lower forests. "The number of trees cut

departmentally between 1877–78 and 1879–80 amounted to 2236, whilst for the same period 339 were cut by purchasers on permit, or 858 trees average per annum."[83] As regards finance, it was not possible to separate the accounts of the three Divisions (Darjeeling, Tista or Kalimpong and Kurseong) before their formation. However, from the statement of timber brought to Depots from the different Forest Division during 1867–68 Sukna forest produced timber as follow:-[84]

Description of Timber	Pieces	Cubic feet	Total Pieces	Total cubic feet
Sal	1,268	29,005		
Sleepers	18,853	64,152		
Planks	303	763	20,424	93,920

In 1868–69 Sukna forest produced 31,172 pieces (1,06,071 cubic feet) sleepers; scantlings 1,066 pieces (2,264 cubic feet); and logs 338 pieces (6,525 cubic feet). Total pieces were 32,576which amounted to 1,14,860 cubic feet.[85] In 1869–70 Sukna produced 1,763 (5,999 cubic feet).[86] It is to be noted that Sukna was small part of Kurseong forest sub-division and in the Progress Report for 1882–83 Kurseong was separately referred to in connection with indicating area of reserve forests in the several divisions. It is known from that report that on 31st March, 1883, Kurseong Reserve Forest was comprised of 89½ square miles. The same report noted that progress had been made gradually during the last three years in the introduction of a regular system of working, and the sale of forest produce by tender had been simultaneously commenced. The actual results of the year's (1882-83) working were a profit of Rs. 12,209 or 22 per cent on the total revenue.

But over all, the condition of Kurseong forests was not encouraging one. After the formation of the Kurseong Division in 1890 the Conservator of Forests reported in 1893 that the Kurseong Division had been for the past few years in rather a bad plight. He pointed out several causes behind it, namely, low prices of tea, the increasingly bad climate of the Terai, growing scarcity of labour. All this reacted on the forests which were there to a great extent dependent on the requirements of the tea concerns. The Forests of Kurseong did not contain – in the hills at least – timber sufficiently valuable to be exported to a distance. In the lower hills and of the Tista Valley mature Sal timber was found in limited quantity, and from this source a small annual income was expected.[87] From the Progress Report for the year 1895–96 it is known that Kurseong forests supplied small quantities of sleepers to the Darjeeling Himalayan Railways. The financial results of 1897–98 and 1898–99 showed surplus in the Division. In 1898–99 the receipts were Rs. 39,021 and charges Rs. 33,796 and surplus Rs. 5225. In 1897–98 the receipts were Rs. 40,610, charges Rs. 33,864 and surplus Rs. 6,746.[88]

During 1899–1900 in the Kurseong Division all the *sal* trees of over 5 feet in girth were counted and recorded, while a detailed description of the forests, block by block, was prepared. Pending the undertaking of reular operations these records were being utilized for the framing of the annual plan of operations.[89] Perhaps this counting of *sal* trees in the Division was partially done, because in 1903 the system of counting as well as working plan for the Division was criticized by the Officiating Conservator. He wrote, "A Working Plan for the Kurseong forests was prepared by Mr. Hatt. But as it appeared from this plan that the yield could not be determined without enumerating sal trees, over a certain size, in the whole sal producing area, and as before preparing the plan, Mr. Hatt had been able to count such trees on only 30 per cent of that area, the completion and submission of the plan has, with the approval of the Inspector-General of Forests, been determined pending an enumeration of trees on the remainder of that area. It is expected that this enumeration will be finished in the course of next cold weather."[90] He, however, noted that natural reproduction in Kurseong forests, especially that of *sal* continued satisfactory. During 1902–03 in this division 49,136 cubic feet of green *sal* timber, 18,086 cubic feet of dry sal timber with 27,360 cubic feet of green timber of other kinds were cut. As a result of this revenue increased of about Rs. 10,000 in Kureong.[91] Full countings of sal trees in Kurseong forests were completed in 1904. This showed that the yield of *sal* actually obtainable from selection fellings was nearly double the yield which was proposed on the strength of the partial countings and former estimates. The cost of this Working Plan upto 1904 had been Rs. 93 per square mile. It is also found that in the Kurseong Division the *sal* selection coupes of the year 1918–1919 were not sold by auction but were worked departmentally. The first 800 trees worked out showed a clear profit of Rs. 83 per tree in spite of high extraction rates. Considering the high prices that could be obtained for *sal* timber, the prices realized by auction sale of *sal* coupes in the Jalpaiguri Division were low. This goes to show that departmental work was more profitable than outright sales. It is interesting to note that by 1919 the revenue increased in all Divisions except the Kurseong, where a decrease of Rs. 2,137 as compared with the previous year was due to less sales to purchasers. Even by 1920 the Kurseong Division showed a considerable decrease in receipts and the main cause behind this was the shortage of rolling-stock on the Darjeeling Himalayan Railway and consequent delay in the supply of trucks. This accumulation of stocks led to shortage of revenue. Thus the deficit was more apparent than real as stocks in hand represented revenue.

To observe and assess the over all commercialization of forests in Bengal upto 1919-20, it should be pointed out that, Government could not decide for a long time whether the forest operations would be made by the Forest Department or by private enterprise. Secondly, the Government were at a loss to perfect the transport system to carry the timber out of the forests

and reach the depots smoothly. Thirdly, for a considerable period the Government could not decide the method between improvement fellings, regeneration fellings and selection fellings, and prior to 1896 the felling of sal was entirely unregulated. The selection system in some areas failed since it could not establish regeneration to the normal extent. Thus the selection system as in force tended to lead to a crisis which in certain areas culminated in the extinction of sal. Fourthly, the Government failed to open new markets for the sale of wide variety of timbers and even Calcutta market could not be exploited by the Bengal Government. Fifthly, they even failed to create new demands for timber and other forest produce. And last but not least, the Government did not try sincerely to encourage the private traders of timber, let alone indigenous private traders to purchase forest produce including timber. Hundreds of rules and regulations hampered the process of smooth forest operations and commercialization of forests. In every step there were troubles, obstacles and interruptions. Lack of experience and dearth of efficient foresters made the things worse. Training centre for foresters and rangers was opened in 1906-07 in Kurseong but it could not function properly for a long time. Indiscriminate fellings in approachable area and lack of roads to the deep forest disturbed the balance of forest operations. And as a result of latter the Forest Department failed to bring good timber from deep forests to the market for a considerable period. Even in 1908 McIntire, Conservator of Forests, Bengal wrote that the obstacle to the rapid development of exports from most of the forests was the transport difficulty.[92]

Despite all these hurdles the Government along with the Forest Department got their teeth into the forests to over-come all difficulties. As a result of tireless efforts the receipts had risen steadily from Rs. 87,260 in 1871-72 to Rs. 5,61,340 in 1880-81. But the Government sounded a note of warning against the Forest Department that the expenditure must be proportionately reduced.[93]

For the improvement of timber business the Government of India were glad to observe in 1902 that His Honour "the Lieutenant-Governor is desirous of establishing a regular demand for railway sleepers. Every reasonable inducement should be held out to Railway Companies to purchase sleepers from the Department, and no effort should be spared to create or foster a permanent demand whenever timber has hitherto failed to attract purchasers upto the limit of the possible annual yield." The Government advised the Department and noted, "It is important, moreover, that the Department should endeavour to carry out its contracts with punctuality, since failure to meet engagements inevitably drives purchasers to seek other sources of supply."[94] The Government of India further observed that the financial results of the year 1900-1901 showed a surplus of nearly six and-a-half lakhs of rupees as against a little more than six

lakhs in the previous year. Apart from the Direction Division, all the 13 Divisions of the province, with two exceptions yielded surplus. The exploitation of minor produce continued to receive considerable attention from the Conservator with the result that there was an increasing revenue under this head; a satisfactory result, "which points to further expansion of this source of income being possible." Mr. Hardy concluded his report with the note, "That the Forest Department has its commercial side is a point that should not be lost sight of, and the Government of India have noted with pleasure the attention that this aspect of forest management is receiving from the Government of Bengal."[95]

The analysis of the financial results of the year 1903-04 made by A.L. McIntire is interesting one. He wrote that the decrease in removals by purchasers resulted in a serious fall in the income, which did not lead to any savings in expenditure. On the contrary, necessary improvements in administration, and works undertaken with a view to opening out unworked or little worked forests had led to increased outlay under several heads, and "expenditure would have been higher but for the fact that charges of an unusual nature were below the average." The actual increase in expenditure was largely due to departmental timber and fuel works.

Statistics of the Forest Department in 1903-04 suggested that the percentage of income of the province was 65.78, against 51.32 in the previous year, and an average of 49.72 in the five years. Of the income of the year 69 per cent was from sales of major produce, Rs. 2,79,698 or 27 per cent being from sales of bamboos and minor produce, whilst the remaining 4 per cent was from miscellaneous sources. Of the expenditure, 51 per cent was due to charges for the extension, constitution, improvement and exploitation of the forest property, 49 per cent having been spent on administration, protective and executive charges. The net income was 34.22 per cent of the gross revenue.

From the available data the following average amount of forest operations for five years in Bengal is known:-[96]

Period	Timber and fuel in thousand of C. ft	Bamboos Nos.	Minor produce value Rs.
1909- 10 to 1913-14	24,486	17,805,013	2,42,157
1914- 15 to 1918-19	20,577,	25,532,019	2,94,233

Owing to the First World War some timber sales had to be cancelled; for the same reason negotiations in some cases fell through. On 25th September, 1919 H.A. Farrington, Conservator of Forests, Bengal wrote from Darjeeling, "Recently prospects have improved considerably with general revival of trade and there is no doubt that the outturn will be increased in the next quinquennium."[97]

The average annual financial results for the quinquennium in question in Bengal compared as follows with those of the preceding one:-

Period	Revenue Rs.	Expenditure Rs.	Surplus Rs.
1909- 10 to 1913-14	14,63,702	6,46,543	8,17,159
1914- 15 to 1918-19	14,53,023	6,99,352	7,53,671

Here also the war appreciably affected the revenue and the resulting surplus; but there had been a recovery since, as the revenue in 1918-19 was over 4½ lakhs more than in 1917-18. In 1917-18 the total revenue collected was Rs. 15,01,670 and in 1918-19 Rs. 19,55,394. This was due mainly to departmental working in connection with the production of munitions. At the same time the expenditure increased only a little over half a lakh from Rs. 7,71,124 to Rs. 8,33,634. The surplus amounted, therefore, to Rs. 11,21,760 against Rs, 7,30,546 in the previous year. To make forests a more profitable one the Government took the policy of control and management of money. The average annual amount spent on roads, bridges, buildings and other works decreased from Rs. 87,853 during the previous quinquennium (1909-1914) to Rs. 70,408 (1914-1919) owing to enforced economies. And to increase revenue the disposal of coupes by auction or tender at outright prices continued in Darjeeling, Kalimpong, Jalpaiguri, Buxa and Sundarbans. Fuel continued to be sold on royalty everywhere but in the departmental coupe in Kurseong. In Kurseong Division, owing to departmental work, no *sal* coupes were sold to purchasers during 1919-20.

The total value of the year's sale (1919-20) as compared with those of the previous year (1918-19) was as follows:-[98]

	1919-20 Rs.	1918-19 Rs.
Timber	10,83,982	9,02,964
Fuel	2,00,611	2,18,651
Bamboo	74,092	85,328
Grazing	23,176	23,006
Minor Produce	2,21,023	2,30,923
Commutation fees	8,760	8,354
Total :	16,11,664	14,69,226

Outturn and Sources of forest produce

The total amount of forest produce removed during the year, 1919-20, was as follows:-[99]

Class of Forests	Timber in thousands of C. ft.	Fuel in thousands of C. ft.	Bamboos Nos.	Minor produce value Rs.
Reserved	7,037	12,746	27,049,853	3,60,275
Protected	1,419	127	.....	16,730
Unclassed	788	360	3,180,786	11,217
Total	9,244	13,223	30,230,639	3,88,222

Timber - The main increase, which was in the Sundarbans Division, was due to the free grants made for cyclone relief. Increased demand in Darjeeling and Jalpaiguri also accounted for the increase in part.

Fuel - The decrease, which occurred chiefly in the Sundarbans Division was due to lack of demand, partly attributed to the cyclone and partly to the continued prevalence of high prices.

Bamboos - Stoppage of sale to purchasers of bamboos other than Dolu (*Teinostachyum Dullooa*) from the Kassalong Range in terms of Messrs. Andrew Yule & Co.'s lease and an outbreak of cholera in the Ringkheong Reserve were primarily responsible for the poor result in the Chittagong Hill Tracts Division.

Minor produce - The increased revenue was derived from the 64 elephants caught in the *khedda* operations which alone accounted for Rs. 84,700, the larger sale of Golpatta (*Nipa fructicans*) in the, Sundarbans Division, and free grants of the same in the cyclone-affected areas.

By 1919-20, in all Divisions except Kurseong there was a decrease in the extraction of box -planking trees and this was due to bad markets. The increase in miscellaneous trees showed that local demands were now greater. The decrease in sal was due to the discontinuance of the supply of timber to the Munitions Board.

A comparison of income and expenditure with those of previous year and with the average of the five preceding years is given in the following statement:- [100]

	1919 – 20	1918 – 19	Average 1913 – 14 to 1917 – 18
	Rs.	Rs.	Rs.
Revenue	20,02,819	19,55,394	13,89,438
Expenditure { A.	5,80,487	4,49,881	3,01,863
{ B.	4,74,737	3,83,753	3,59,768
Total Expenditure	10,55,224	8,33,634	6,61,631
Surplus	9,47,595	11,21,760	7,27,807

Head "A" means conservancy and works.
Head "B" means establishment.

In spite of a considerable decrease in receipts in the Kalimpong, Kurseong, and Buxa Divisions (second named Division showing a considerable deficit over income) higher receipts obtained in other Divisions raised the revenue above the previous years. In the Kalimpong and Buxa Divisions the decrease was due to cessation of supply of timber to the Munitions Board. The major cause of the decrease in the Kurseong Division, as mentioned above, was the storage of rolling-stock on the Darjeeling-Himalayan Railway and consequent delay in the supply of trucks. This led to accumulation of stocks and shortage of revenue. Moreover, there were large

outstanding amount of revenue at the end of the year. If the outstanding amount and stocks are taken together both of which represented revenue, the deficit of Kurseong Division was more apparent than real.

The analysis of revenue and expenditure of the year 1919-20 shows 76 per cent from major produce, 21 per cent from minor produce and 3 per cent from miscellaneous sources, while on the expenditure side 55 per cent was spent on extension, constitution, improvement and exploitation of the forest property, and 45 per cent on administrative, executive and protective charges. The percentage of net income fell to 47 from 57 owing to increased expenditure.

Outstanding amount at the end of the year (1920) amounted to Rs. 1,50,834 or Rs. 75,055 more than at the commencement, due, in the Sundarbans and Buxa Divisions, to delayed payment of instalments on sales of timber and, in the Kurseong Division, to outstanding amount against the Eastern Bengal and East Indian Railways and the Munitions Board. Added to this, the value of stock of timber at forest and sale depot, and other forest produce showed a difference in favour of the year 1919-20 of Rs. 59,049. In connection with this, the Conservator in his annual report for the year 1919-20 noted that "Outstanding due by contractors and disbursers, representing advances for work not finally accounted for, amounted to Rs. 26,592 at commencement and Rs. 21,718 at the close of the year." In spite of all this weakness of the Forest Department the financial results of the year 1919-20 satisfied the Governor-in-Council, Bengal.[101] The Forest Department at last began to show signs of profit in Bengal after spending considerable period in financial wilderness in the region.

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CHAPTER – VI

RISE OF THE INDIGENOUS TIMBER TRADERS

Timber trade is an age-old business of the Indians. From ancient period through medieval period to modern period the Indians were involved in the timber trade. But unfortunately, about the indigenous timber traders operating in North Bengal forests upto 1920 practically no information is available. Stray references are yet available that timber merchants from eastern Bengal, particularly from Dacca used to come over here to purchase timber. But, who were these merchants, what was their class character, how far they approached to collect timber, where from they usually collected timber, who were the people at the other end, how was the contract signed, what were the conditions, whether there were middlemen between the sellers and the purchasers, what was the rate of the deal, whether there was re-sale system in Dacca and Sirajgunj, if so, who were the purchasers thence, from which time did the trade begin in colonial period, what was the nature of demand in eastern Bengal and another places, which timber had a demand most, purpose behind the demand, how were these heavy timbers transported in private capacity – all these and allied questions cannot be answered to with the materials at our disposal. It is an interesting field of study, but at this stage of our knowledge we are handicapped.

Most interesting feature of this timber trade was this that before the involvement of the Europeans no indigenous people of higher social hierarchy used to come to this business. When the higher caste Hindus and upper class Muslims came closer to the European business circle they showed interests in such business to which they had previously sneers at adopting. Indigenous people regarded the Europeans as Gods, and when the indigenous people of higher social hierarchy found the Europeans in timber business which earned much profit, the Indians of higher class began to deal in timber trade.

In our period of study the Europeans showed the path for timber business in large scale. However, we find the origin of this business in colonial period by going back in time. It is known from modern research that the British officials in their private capacity were involved in timber trade in the middle of the 18th century. George Gray, the chief of the Malda Factory (1761-63), Richard Barwell who replaced the former in 1765, Sykes, the Resident at the Durbar

of Murshidabad – all were involved in timber trade. They operated mainly in Morung country (Nepal) and in Purnea forests.[1] The Murshidabad city in the 1770s and 1780s imported timber from Purnea forests.[2] Terai forests were also rich in timber trade. Sir Joseph Dalton Hooker in 1848 wrote in his famous "Himalayan Journals": "In the latter country it is called the morung and supplies Sal and Sissoo timber for Calcutta market, the logs being floated down the Konki and Cosi rivers to the Ganges."[3] And from the history of Raikut dynasty it is known that the Zamindar of Baikunthapur (Raikut) had established in their forest tracts "Kachhari" (offices) to facilitate forest operations and timber trade. They established forest offices at Salugara, Bodagunj, Shikarpur, Lantong and Farabari.[4] Many timber merchants from different parts of the country used to go there for business transactions in timber. Dr. Barun De and Pranab ranjan Roy in their "Notes For The History Of The Darjeeling District" have given a well-documented description of timber trade at Baikunthapur Centre. They wrote, "The Baikunthapur Estate was an important centre of the timber-logging and trade. Many merchants from Bihar as well as Giri Gosains of the Dasnami Naga sect of Beneras invested in this."[5] If the timber traders could come all the way to Baikunthapur, adjacent to Western Duars, certainly the indigenous timber traders including the timber traders of East and South Bengal were attracted to the timber trade of Western and Eastern Duars. The British sources mentioned that there was a timber market at Jalpaiguri before their arrival in this place.[6] It was also reported in 1865 that in Rajshahye Division there were special hauts in which timbers were sold, but timbers were, however, procurable in almost all large bazars in every district under the division. They were "Singrah in Rajshahye, Nemansurai in Maldah, Chapgatee, Bhugwangolah, Jellingee, Devipore, Azimgunge, Jeagunge, Ellahegunge and Berhampore in Moorshedabad."[7] Besides the above there were several places on the banks of large rivers in which timbers were sold, though no haut or fair was held there. From these information it may be assumed that these timber markets were operated by the indigenous people; but unfortunately particulars about them are not available. There are other indications of local people's involvement in this trade because there were great demands of timber in East Bengal. Besides country-boats and pleasure-boats, 'Sal' and other hard-wood had a great demand for plough, yoke, bullock-carts, carts drawn by horses and palanquin. Demand for 'Sissu' was for furniture. Timber was also used for house-building purposes and poles, and bamboo were in need to construct mud-built house. Even in the construction of brick-building, for supporting roof, the beam of 'Sal' wood was essential in those days. It seems that to meet these many and various demands in East Bengal the Dacca merchants used to come at Buxa, Jalpaiguri, Baikunthapur and Eastern Duars to collect timber and poles, and usually they contacted with the timber-thieves to avoid governmental restrictions, and ensure attractive margin in their deal. To facilitate legal timber trade government, on the

other hand, established timber depots at Alipurduar, Buxa, Kawnia, Rangpur, Sirajgunj, Dhubri and Dacca.

The Europeans also continued private trade in timber along with the indigenous traders in the second half of the 19th century. For part of the Sal forests on the bank of the Ranjeet (Rangit) Major Wardroper[8] held a lease rent free for fifteen years. The lease was dated from 8th November, 1854. The area of this lease-hold was around the junction of the Little and Great Rangit. Reference to native contractors has been given by Dr. Anderson. These native contractors contracted to deliver large number of railway sleepers before the expiry of working season in 1865-66. They were asked to work in Tista valley. In giving information about the working of the Forests Dr. Anderson wrote, "The Assistant Conservator has received the greatest annoyance from these native contractors; none of them would commence work without an advance, and one or two have absconded without fulfilling their contract."[9] Again, about the year 1865 one Mr. Dear secured monopoly for working the whole of plains forest in the Darjeeling district for supply of railway sleepers.[10] He removed all the big trees, except hollow and unsound ones from the plains tract. After an examination of the forests in 1867, it was reported that practically all the 'Sal' trees over 5 feet in girth were removed from the plains forest and such trees could only be found in the lower hills. Later on removal of 'Sal' trees on the basis of exploitable girth limit on permits at a fixed price per tree under the supervision of a responsible Forest Officer was introduced. But for shortage of staff the condition could not be rigidly followed and the result was that all good trees were removed from easily accessible areas. The contractors employed by the department in timber operations for supply to the Railway and of building and bridge materials to the Communications and Works Department made further inroads into the forests and felled smaller trees in accessible areas in disregard of the girth limit rule. The Conservator of Forests who inspected the outer hills between the Darjeeling Hill Cart Road and the Mahanadi (Mahananda) river in 1870, wrote in his inspection report that the tract had been stripped of nearly every Sal tree "sufficiently large and sound to yield one sleeper." Sale of Sal trees on volume measurement was introduced as a remedy but the local people favoured the rate per tree system. This showed that the local people entered into the timber business in the late 19th century along with the Europeans.

In the Progress Report of 1868-69 the Conservator informed the Government, "It is still found necessary to work the forests by the agency of petty contractors. Large timber contractors, men of sufficient influence and means to undertake as in Burma the whole work of felling, converting and transporting to depots, have not yet been found."[11] However, an offer was received from Messrs. K.C. Roy and Co., Calcutta, of Rupees 9 per log for all Sal logs lying in the forest near Buxa not under 6 feet in girth and 25 feet in length on the following conditions :-

1st. – The timber to be made over to them or their agents, by the Forest Officer, in the forest.

2nd. – The privilege of sawing the timber in the forest to be allowed to them.

3rd. – Payments to be made prior to the removal of the timber from the district in cash.

4th. – All timber removed by them within 12 months from the date of contract to form the subject of the contract, and at the expiry of the term should any timber be left it will remain optional with them to take it on the same terms on a renewed contract.

In dealing with Messrs. K.C. Roy and Company the conservator's observation is interesting one. He wrote, "I do not think it would be advisable to accede to these terms, but if Messrs. K.C. Roy and Company or any others are willing to pay a fair amount of royalty and to subscribe to conditions of sale sufficiently stringent to secure, with certainty, the conservancy of the forests they propose to work under the permit system, it might be desirable to enter into an agreement with them, and thus test the operation and effects of that system as applied to the forests of Bengal."[12] He further noted that to ascertain if the offer of Rupees 9 per log was reasonable one, it would be necessary to deduct the cost of converting the timber and transporting it to Calcutta from the value at that market, and allow a fair margin of profit to the permit holder. He calculated that a log, 25 feet long 6 feet in girth, would give two scantlings 16 inches broad by 8 inches thick, which at Calcutta would, according to Messrs. Mackenzie, Lyall and Company's timber market quotations, realize about Rupees 50 each, or Rupees 100 for the two.

	Rs.	**As.**	**P.**	**Rs.**	**As.**	**P.**
Market value of one log at Calcutta				100	0	0
Deduct						
Profit to permit holder, at Rs. 20 per cent ...	20	0	0			
Cost of Sawing per log	5	0	0			
Transport to Revenue Station	15	0	0			
Transport to Calcutta	30	0	0	70	0	0
	Balance			30	0	0

This calculation gave a balance of Rupees 30, which if the items were correct and none omitted would represent the real value of the timber to Government as it lay in the forest. Probably, however, the timber when sold at Calcutta would not realize quite so much, and the expense to be incurred by the permit holder might be insufficiently estimated. The Conservator finally observed, "A royalty of Rupees 15 per ton for logs and one rupee a piece for sleepers might be a fair rate to charge for the first year, or until further experience indicates whether this is too high or too low. The rate might then be revised."[13]

Among the European private companies, besides Messrs. Mackenzie, Lyall Company, Messrs. Queiros and Company had a timber business with the Forest Department in Bengal. W. Stenhouse, Offg. Conservator noted, "In the forest near Buxa a portion of the timber felled by Messrs. Queiros and Company, under contract with the Forest Department, has been removed to the bank of the Deema River, whence it will be floated to the Alipore Depot."[14] To exploit the Calcutta market he suggested that Goalanda, which was situated at the junction of the Ganges (Padma) and Brahmhaputra rivers, and was the proposed terminus of the Eastern Bengal Railway, would probably be the best place for the establishment of a main depot for government timber from the Assam and Bhutan Forests. From this main depot, it seems, that the petty indigenous timber merchants of Bengal collected timber and used to do timber business in Eastern and Western Bengal. Indigenous timber merchants of Dacca, however, preferred to collect timber from Assam and Chittagong.[15] Dacca based timber merchants were not interested about the timber of Buxa apparently due to its inferior quality and high prices. That was the opinion of an Officer in the Forest Department. It seems that it was a tactics of the Dacca merchants. They spread this view only to keep the price of Buxa timber low, otherwise the Railway Department would not collect Buxa timber for railway sleepers.

However, it is evident from facts that the timber merchants from Dacca and other places were active in illegal timber trade. It is found in stray references of the English officials that timber theft became a profitable business of the local people adjacent to forest tracts. What did the timber-thieves do with this timber cannot be assessed properly. It seems from the report of the Forest Officials that there was a collusion between the timber-thieves and the timber merchants. The Government Officials described these merchants as 'unscrupulous' and these merchants used to come from Dacca and other places. They preferred illegal trade to legal one. Profit-margin in their favour was the only objective, and they did it without scruple. The Dacca merchants offered high prices of timber in comparison to the rate in local sale. This has been reflected in the report of W. Stenhouse. It runs : "The high prices offered for Sal timber by traders from Dacca and other places on the Brahmapootra river present very great temptations in the way of the inhabitants of the Eastern Dooars to assist and participate with these unscrupulous

people in the plunder of the Govt. forests. It will therefore require the constant presence of an active and vigilant forest establishment to counteract these powerful influences."[16]

Incidentally, mention may be made about the timber trade in Baikunthapur forest as revealed in the Statistical Account of Jalpaiguri. Although Baikunthapur or *Battris-hazari* was a private forest of Baikunthapur Raj Estate but it was almost surrounded by government forests. Hunter noted that in this forest tract the purchases were mostly made by native merchants from Devigunj in Jalpaiguri district, and from Kangtapukhuri in Natore in Rajshahi district; the timber was intended chiefly for building boats. The advances were made to men called, *dafadars,* who employed workmen at monthly wages; and each of them contracted to deliver what was called a *dhura* of timber at a specified place on a river bank, from which it could be floated down stream.[17] Hunter further informed us that from twenty-five to thirty *dafadars* were usually employed every year. In order to superintend the *dafadars* to settle with the owners of the forest, and bring the timber home, the merchant employed a man called a *Charandar,* who was allowed Rs. 3 a month for nine months in the year. On the Tista, the usual expense of bringing out a *dhura* of Sal timber was as follows :- For the *Charandar* or agent, Rs. 27; rent, say Rs. 50; for floating the timber to Fakirganj, two logs being tied to a canoe, one on each side, a rupee for each log, Rs. 126; for the wood-cutters, Rs. 150; total Rs. 353.[18] This was the rate and usual expense in and around 1876. On an average, about two *dhuras* or 252 logs might be cut out yearly on account of Europeans.

Following the foot steps of the European timber traders indigenous people of higher social hierarchy or *Bhadroloks* entered into this business. They comprised both Hindus and Muslims. First of them was Beharilal Ganguly who hailed all the way from Jessore. He, somehow, got the news that by clearing the forests the entrepreneurs were establishing Tea Estates in Duars. He came to purchase these timbers for business.[19] It is also known that main business centre of Beharilal Ganguly was at Boyra river port in Rangpur. From thence big canoes reached Jalpaiguri to carry timbers, and navigable Tista river helped to transport timber to Rangpur.[20]

Ananda Gopal Ghose's article referred to was based on the claims of the oral tradition of Jalpaiguri. This tradition may help us with materials in writing this history of timber trade. But we cannot clutter up our pages with dates and supporting written documents. However, this does not mean that we are going to spice up facts with fiction, and let no one rush to the conclusion that all this is speculation. It is based on facts, professionally verified and logical analysis.

According to this tradition major centres of timber trade in Western Duars were Lataguri, Odlabari, Chalsa, Damanpur, Gayerkata etc. All these localities were under the Bhutan Government before 1865. From the late seventies of the 19th century Bengalis of prosperous families invested capital in timber trade. One of such families was the Lahiri family of Sukhani, once a prosperous port adjacent to Rajgunj in Jalpaiguri district. Rameswar Lahiri, contemporary with Beharilal Ganguly was a big timber merchant. Even today this family lives at Sukhani in 'Lahiri Para' (Locality of the Lahiris) named after this family. In early decades of the 20th century notable indigenous timber merchant of this district was Durgamohan Basu who had many business centres in Duars. His son Prafulla Kumar Basu was also a reputed timber trader. His main centre of operations was Meteli, a northern most locality of this district.

Siliguri, a sub-division of the district of Darjeeling had a flourishing timber trade business of the indigenous people. Among them Abdul Gaffar Khan, Ganesh Roy, Suresh Joardar, Rajendra Datta Majumdar, Madhusudan Chottopadhyaya, Atul Chandra Datta, Nibaran Chandra Ghatak, Tinkari Kundu and Dr. Satya Kumar Roy are some of the names to be mentioned.[21] This has been corroborated by another writer named Pradyut Kumar Basu, a pleader who noted that from the late 19th century to early decades of the 20th century timber trade was a flourishing business of the locality and timber trade was almost a Bengali monopoly.[22] He further noted that an advocate named Kalikinkar Singha had an old store-house of timber (kathgola) and such a store-house of timber was also possessed by Dr. Rashiklal Ghosh. In his memoir he has further noted that in 1925 he saw in Siliguri a good number of established Bengali timber traders of whom Manmathanath Sarkar, Bireshwar Chottopadhyaya, Promoderanjan Bhowmick and Narendranath Roy were renowned timber traders.[23]

Recently I went to Lataguri along with my friend to meet a senior citizen named Mr. Niranjan Mukherjee, an old-timer, who has a first hand knowledge about the timber trade of the Bengalis in Duars since nineteen forties. His family came at Lataguri from Jessore and intimated us that timber business was also run in this area by the people from Khulna and Barisal – all the three are South Bengal districts. His father, Durgapada Mukherjee was the first generation to enter into timber business, but he recollected information handing down from earlier generations. He told us that in this business there were some Hindi-speaking people of Western India and one of them was Dilip Singh, but most of the timber traders of this area were the Bengalis. He called back to mind some of them who were older than him by fifty to sixty years. He remembered one Satish Chandra Roy who came from Barisal and established himself as timber magnet in Gayerkata. Other two timber businessmen at Gayerkata were Hiralal Ghosh and Binode Sarkar. Durgadas Mitra and Santi Biswas's timber business centre was at Binnaguri. Chhakmal Agarwala, Gopal Mukherjee and Monotosh Majumdar worked at Odlabari, Chalsa

and Lataguri respectively. Satish Chandra Kundu began his timber business at Banarhat and Panchanon Nag at Birpara. Incidentally he informed us that the Rajbansis of North Bengal who were the early settlers in this area were not interested in timber trade and worked as labourers. Be that as it may, according to the claims of the local traditions the Western Duars was dotted with various timber trade centres run mainly by the Bengalis of higher strata of the society, and none of them was of local origin. The relocation or immigration of the South Bengal people to North Bengal to earn livelihood is a peculiar feature of this period. Before the arrival of the higher castes the labourers as immigrants from South Bengal, particularly the Muslims populated this area effecting a demographic change. This has been corroborated by Binoy Choudhury. He writes, "In Rangpur, however, particularly in the northern parganas, the immigrant labour was mostly Muslim and the first initiative in this was taken by the Raja of Baikanthapur. The immigration, beginning soon after the Permanent Settlement considerably increased during the next two decades. While by 1793 the Muslim population in Baikanthapur was 'numerically of no account', in 1809 Buchanon found nearly half of the population to be Muslims, and, indeed, in some pohce stations they actually outnumbered the Hindus."[24]

Last but not least, Buddhadev Guha, a Chartered Accountant turned forest based novelist in Bengali wrote in one of his novels that his father, who was also a Chartered Accountant, had many clients who used to do big timber business, namely, S.N. Ghosh and Company, Standard Timber Company, B.N. Guha and Company etc. Standard Timber Company mainly operated in Burma for *Segun* (teak) timber. B.N. Guha and Company's major areas of operations were Russel kunda, Buxa, Nepal and Bhutan borders. One of the business-partners of B.N. Guha and Company was Buddhadev Guha whose centre of business was Dacca. And all the way from Dacca this Company used to come to purchase timber from Buxa, Bhutan and Nepal borders.[25]

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CHAPTER – VII

REACTION OF THE INHABITANTS OF FOREST IN DARJEELING AND JALPAIGURI

The Policy of Forest Reservation of the British in India disturbed the age-old system of the village communities either in hills or in plains. Before that, they had control over the means of production over the resources needed to reproduce itself. But the forest reservation and management struck at the very root of traditional social and economic organizations of the forest-dwellers. The forest management operated on radically different principles from the customary use of forests by surrounding villages.[1] This underlying conflict manifested itself in a variety of forms in Darjeeling and Jalpaiguri, except forest movements and open revolt as are found in other parts of India. The root cause of this was 'the struggle for existence between the villagers and the Forest Department; the former to live, the latter to show a surplus and what the department looks on as efficient forest managemant.'[2]

The major aim of apparently unlawful activities of the forest-inhabitants was to undo the restrictions on customary model of the use imposed by so-called scientific forestry. Initially, they could not accept that their ancient rights in relation to the forest were to be set aside with one scratch of the pen. The takeover of the Darjeeling hill forests and Terai from the Raja of Sikkim, and Kalimpong, Western and Eastern Duars from the Government of Bhutan and their subsequent management on purely commercial lines were at once a denial of the earlier traditional obligations met by the Sikkim and Bhutan Governments, and a threat to the subsistence dilemma of the forest-peasantry. Since the Lepchas, Meches and Garos of Darjeeling and Jalpaiguri were illiterate and were not united and as there was no leadership grew among them and no outsider came to help them, they could not put any resistance to British move. Even they could not draw the attention of the higher authorities to their pitiful condition, leave the name of 'deputation'. But that was not the case in western part of the Lower Provinces of Bengal.

Singbhum was in Chhotanagpur Division under Lower Provinces, Bengal. The forest operations of the Government generated quite an amount of unrest and discontent in Sarendapir and Porahat Parganas of Singbhum. The people who had always enjoyed absolute liberty resented much the curtailment of what they considered their ancestral rights, and the restraints imposed by the rules of the Forest Department were extremely distasteful to them. The

government gave Porahat forest the status of Government Forest and planned to demarcate its area. The Porahat people refused to allow the demarcation of their forest to be proceeded with.[3] In Saranda demarcation was completed and matters cooled down for the time being, but in Porahat irritation continued and Major Garbett of Singbhum had to arrive in order to overcome opposition.[4] "During 1893–94 the ownership of all the village wastelands which was vested in the Government were constituted into 'protected forest' under the Indian Forest Act of 1878, subject to ryots' existing rights. Forest Settlement operations were also started in Porahat which lay in Singbhum as well as in Palamow and Manbhum and measures were adopted to prepare a record of forest rights."[5] The background revealed the general causes of the discontent. "With their gradual socialisation, the Mundas began to clear the forest and reclaim what lands they pleased for their homestead and their farmstead. After mastering the art of cultivation the Mundas collected liberal supply of wood for construction of ploughs, carts and other articles of husbandry. They depended on the forests also for fodder. No wonder therefore that popular imagination should draw these people as forest-dwellers. Forests in short formed the home and provided the livelihood of the Mundas and their very existence was dependent on it."[6] In this perspective Jeta Manki of Gudri, Rasha Manki and Moni Manki of Durkapir submitted petitions to the authorities claiming resumption of what they called were their old rights meaning free fuel, grazing etc. They claimed this since formerly they were the proprietors of the soil. Also Birsa took part in such a forest movement under Gidiun of piring in Porahat and led a number of ryots of Singrida village to Chaibasa to present a petition for remission of forest dues.[7]

Similar resentment was expressed by the ryots of Chandwa and Manka villages which lay on the route to Daltongunj. They sent a deputation to the Commissioner which objected to the demarcation line drawn for the protected forest areas and resented the posting of forest guards who would deprive them of their means of subsistence. When the Daltongunj ryots made similar complaints the Deputy Commissioner of Hazaribagh punished Mr. Sunder, the Settlement Officer and said that the Officer had exceeded his limits when he drew belts. The Deputy Commissioner on the eve of declaring protected forests in this area pointed out to the Government that in the Government estates of the region mild discontent was to grow when the village forests were declared protected. As he now received the deputation and found that the Mundas were full of complaints about their means of existing he felt that some of the rules would hard hit the ryots and so the Government could think in terms of some modification and relaxation.

When the British made the forest-inhabitants of Darjeeling and Jalpaiguri to leave the reserved forests such type of resentment was not shown by them. In some cases they had a fit of

pique, others made arrangements with the British to live outside the government forest and some others left these forests for Garo hills in Assam or Bhutan. The major causes of the 'peaceful' arrangement, inter alia, were two. First, population of forest-dwellers in this region was insignificant in comparison to other areas of government forests. Second, there was abundance of uncultivated land outside the reserves for their rehabilitation. If there would have been leadership from among the Lepchas, Garos and Meches they could show resentment against the British since they were not accustomed to live in such an environment, and, at least, they could profitably bargain with the British authorities. I wonder, why did not the enlightened outsiders come to their help? The period of forest reservation coincided with the period of Bengal Renaissance. The Renaissance-men fought for social justices and uplift of the downtrodden. They were not unaware of the unenviable condition of the coolies of tea gardens. About 1880 Indian Association of Calcutta deputed Mr. Dwarakanath Ganguly, Assistant Secretary of the Association for investigation into the condition of the coolies. After an on-the-spot investigation in Assam, Mr. Ganguly contributed a series of articles in *The Bengalee* vividly exposing the wretched condition of the tea garden labourers.[8] But such attempt was not taken by any Calcutta-based association or individual to take stock of the situation connected with the forest-dwellers of this region. Even they did not care to understand the impact of the proclamation of Dalhousie in 1849, Charter of Indian Forestry in 1855, Indian Forest Act of 1865, Forest Act of 1878 and Forest Policy of 1894 on the forest villagers and peasants. They did not play any role in any form to mould public opinion against these oppressive Acts executed all over the sub continent. And to be frank, the Calcutta-based intelligentsia like 'Young Bengal' and their sympathizers only had a swaggering walk in college street.

If we take it for granted that they were far away from this zone, the silence of the enlightened men of Cooch Behar, Rangpur and Rajshahi about these forest-inhabitants cannot be excused on any pretext. It is written in so many words that the Brahmos established Brahma Sabha and Samaj in Cooch Behar, Rangpur and Rajshahi and they were highly enlightened and they were patronized by the enlightened Maharaja of Cooch Behar and zamindars of Rangpur and Rajshahi. If they were really enlightened they should have been aware of the British injustice against the Meches and Garos who lived adjacent to their places of activities in this area. If they failed to do anything directly for these unlucky masses against the British imperialist policy of forest reservation, at least, they could write articles like Dwarakanath Ganguly who did something for the cause of the tea labourers by focusing on the pathetic condition of the coolies. But it is beyond rational explanation why the intelligentsia of Cooch Behar, Rangpur and Rajshahi did not know the existence of the forest-dwellers, let alone, the plight of these people who were deprived of their traditional rights on the forest produce which

was their means of existence. The intelligentsia of Calcutta, Cooch Behar, Rangpur and Rajshahi during the era of the Renaissance were quite unaware about what was going on in the forests of Bengal. If we are allowed to go back, we find that Krishnakanta Basu and famous Rammohan Roy went to Bhutan in 1815 as *Vakils* of the Magistrate of Rangpur through the forest area of Bijnee and Sidlee (Eastern Duars)[9], but they did not gather any information of the major inhabitants of this region. This shows their lack of curiosity of the people of this zone which is unusual in the case of the Europeans. Thus we have missed a possibility of collecting a lot of valuable information of this people between the First and Second Anglo-Bhutan Wars.

The forest-inhabitants of this region, however, never thought of any God-sent man to come over here to save them from the British imperialists. They in their own pragmatic ways began to express their resentment against the British Forest Policy. The Zaminders of Bijni and Sidli took a way, and the Lepchas, Garos and Meches took other ways to ventilate their discontent.

The problems of Forest Reservation became acute in Eastern Duars and the British could not move in full sail. The wealthy Kings or Jotedars of this area claimed the ownership of certain forest tracts. W. Stenhouse in his Progress Report of 1868–69 reported, "In the Eastern Dooars there are several claimants to large areas of country. Of these the principal are the Rajas of Sidlee and Bijnee. The claims made by the former, if recognized, will curtail the limits of the large forest tract proposed for reservation in the Sidlee Dooar, and demarcated for that purpose by the Revenue Survey Department." No source materials are available about the course of settlement with the Rajas of Bijni and Sidli. But it is evident that the Raja of Bijni preferred to rule independent of the Bhutan and British Governments. The earliest to any portion of British territory raised by the Bhutan Government was to a portion of the Zamindari of Baikunthapur, including the mahals of Ain Falakata and Jalpesh. In 1787 claims were also raised to the mahal of Holaghat on behalf of the Bijni Raja, and to the mahal of Goomah on behalf of the Zamindar of Beddragong; but the respective owners of these mahals repudiated the claims, and they were dropped.[10] It appears that in relation to the British the Rajas of Bijni and Sidli also wanted to remain independent, and they were not even ready to cede their forest tracts to the British Government. Ultimately what actually happened is not clear since relevant documents are wanting. It seems that following negotiations the British entered into an agreement with the Rajas of Bijni and Sidli under which the British Government obtained a perpetual lease of the forest tracts they desired to bring under reserves. A specimen of such type of document is, however, available when the British came to an understanding with the Zamindar of Jeerung in Khasi hills. The translation of the document runs as follows:-

"I, Chootoo Sadoo Sing, Rajah, Zeminder of Jeerung ilaqua, execute this agreement, that at the wish of the Government I willingly lease all the forest and waste lands pertaining to the Jeerung ilaqua (by the clearing of which no damage will arise to the ryots of the ilaqua), and also all minerals that may be discovered hereafter, to the British Government in perpetuity. I agree that from henceforth, the said Government may, at their pleasure, receive revenue from those lands, causing them to be brought under cultivation, or settling them under ryots, and that neither I nor any of my heirs or representatives will have power to raise any objection to the present agreement. All disputes about such lands will henceforth be adjudicated by the Government without my interference. This is on understanding that my heirs shall receive from Government half the rents derived from such lands; and that should no rent accrue, no claims on my part for rent shall be accepted.

"Without the permission of the British Government, neither I nor my heirs will have the power of transferring any lands in the said ilaqua either to Englishmen or Bengalees.

"In case of my doing so, the lands will be liable to seizure by the Government.

"*Dated 15th September 1859.*

"P.S. — The agreement and the timber forest for that ilaqua, which was given by me, will also remain in force. CHOOTOO SING *Rajah.*"[11]

In this way the Jeerung forests were acquired by the British. But there is no record of anything having been done with the forest until 1863, when it was leased to a Mr. Bainbridge for five years at a yearly rent of Rs. 100.

Be that as it may, this was a thrust of *Pax Britannica.* The colonial rulers and their collaborators sought to build up a new sensibility as to the justness of their claim over the forests in various parts of India. The ruling classes had to be demonstrated not only as legitimate but almighty as well.[12] Similarly the Colonial Government's claim over the forest had to be displayed as just and legitimate. It was imperative to project the ruling class as well as the government as powerful, invincible and paramount. At this backdrop it may be assumed that Chootoo Sing Rajah's document was prepared under duress. It seems that such compulsion made the Rajas of Bijni and Sidli to cede the forest tracts to the British as was also done in the case of the Raja of Sikkim in granting Darjeeling or British Sikkim in the name of 'gift' to the British. In fact, these episodes were a form of resentment. Initially the owners of the forest tracts

refuse to comply with the British wishes to occupy certain forest tracts for their policy of commercialization of forests, but ultimately the owners give in and are pressured to come to an agreement of perpetual lease with the British who move with the ulterior motive of annexing the area permanently to the British empire on any pretext. The cases of Bijni and Sidli, it seems, were no exception to this policy of the British. The independence of Bijni and Sidli was sacrificed at the altar of British Paramountcy whose glaring examples were treatments with Chootoo Sing Raja of Jeerung and Raja of Sikkim.

Forest-inhabitants were affected in another way. Framing of a set of British laws connected with forest reservation caused inconvenience to the forest-dwellers. They were accustomed to forest life but were brought out of forests. The theme of British Paramountcy brought to the fore the fundamental conflict between the traditional perceptions and socio-cultural patterns and the new or comparatively strange codes of social, moral, economic and legal values. The forest was one of the venues where the two divergent systems clashed. In the latter part of the 19th century the vast forests of India turned into a business centre of the British and to have that as a monopoly, they gave demonstration of colonial power. While asserting formal rights of ownership over forest resources, the colonial government brought to bear on its management a highly developed legal and administrative infrastructure. In course of the 19th century the British Government restricted access to the forests. This new legal and administrative framework thrust upon the forest-dwellers was geared to generate a new sensibility as to what would be crime, what would be property, what would be justice, what would be injustice, what would be legitimate and what would be illegitimate, what would be order and what would be disorder.[13] The whole conception of this law was alien to the forest-people of India. But, for the sake of truth it should be said that these laws were not so cruel like *'The Waltham Black Act'* or simply *The Black Act* of 1723 introduced in Windsor Forest in England which possessed a criminal code with so many capital provisions for minor offences.[14] In a single stroke in India, still the Government's claim over the forest became legitimate, and forest-dwellers' traditional rights of hunting, food gathering, jhuming, grazing and cutting of woods from any Government Reserved Forest for domestic purposes became illegitimate. The British laws and Acts created a whole new legal category of forest crimes. The new way of managing the Indian forests appeared to be strange, alien and unintelligible in the eyes of those who had been using the forest from time immemorial.[15] The forest-people wholly depended on forest for their livelihood. State reservation of forests sharply affected the subsistence activities of this community. Some of the groups of this community remained unreconciled to the colonial forest policy, and refused to recognize the validity of the government's claim. They found contradictions in British laws. The forest hunters who went out hunting wild animals for food

were treated by alien law as 'poachers' or criminals, whereas the Europeans, native Maharajas and local Rajas's hunting *(Shikar)* for sport was a show of strength and was highly appreciated. One small-scale slaughter of animals was a crime and illegal, another large-scale slaughter of animals was a demonstration of might and legal. The forest-inhabitants looked at the British in silent wonder and took their way of life by violating British laws — they became criminals in the eye of new laws. Some of the groups of this community, however, over looked this inherent contradictions of British laws and made adjustment with the British, and went out of the reserved forests and rehabilitated themselves in some patches of land allotted to them. Others left the forests for a place of shelter not known to them. It was a journey from known to unknown.

First reaction against the British forest policy, in our area of study, was shown by the Lepchas of Darjeeling (British Sikkim). To trace their origin Suniti Kumar Chatterjee told us that they were a mixture of Tibeto-Chinese and Tibeto-Burman people.[16] Charu Chandra Sanyal in his compilation of table from S. K. Chatterjee's book 'Kirata Jana Kriti' agreed that the Lepchas were of Tibeto-Chinese and Tibeto-Burman origin.[17] They were the aboriginal inhabitants of Sikkim. They did not enter Sikkim from across the Himalayas or from Tibet, but are supposed to have come from the East along the foothills from the direction of Assam and Upper Burma.[18]

When they settled themselves in Sikkim (*'Dejong'* in Lepcha term means the 'land of rice') they began to call themselves Rongpa or 'dwellers in the valley'. I cannot help quoting a passage from Claude White's book 'Sikkim and Bhutan' in respect of the character, mood, usage, religious belief and habitat of the Lepchas. "They are people of a mild, quiet and indolent disposition, loving solitude, and their homes are found in the inaccessible places, in the midst of forests if possible, and seldom above an elevation of 4000 feet. They are also very improvident, living from hand to mouth; with abundance when the crops are good, but once the supply is eaten up going often in the direst straits, picking up what they in the jungle till the next crops ripens. They are great nature lovers and good entomologists and botanists, and have their own names for every animal, insect and plant and are, I should think, unequalled anywhere as collectors." Claude White further tells us: "They now profess Buddhism and are generally very devotional, although they originally worshipped the spirits of the mountains, rivers, forests, a natural outcome of their surroundings. Leading solitary, isolated lives, everything would tend to foster such beliefs in a country where the mighty snows appear immortal, the raging torrents irresistible, as though impelled by some unseen avenging spirit, combined with the curious shapes taken by everything when veiled in gray mist and the ghostlike and awesome forms to be

met in the shadows of the damp dripping forests full of phosphorescent stumps old trees scattered round in strange contortions, with the accompaniment of the weird sound of the wind, as it moans round some projecting crag or through some giant tree, where even the melancholy cry of the birds is pitched in a minor key, all must encourage such beliefs and leave a deep impression on the character of the people who live amidst it."[19]

In such a sylvan environment with such beliefs the Lepchas lived in Darjeeling. After Darjeeling forest being declared as reserved forest, according to British forest laws they had to leave that forest where they lived from time immemorial. What was their reaction, whether they refused to leave the forest, could not be known from British sources. When O'Malley prepared Darjeeling District Gazetteer in 1907 he had to suppress many facts, but he could not avoid contradictions in his presentation. He knew that the Lepchas were disappearing with the forests they loved, but to shirk responsibility for this he took imperialist stance which was as usual contradictory. Firstly, by census statistics of 1872 and 1901 he tried to prove that the number of the Lepchas increased. Secondly, he said that by intermarriage with the Limbus and Sikkim Bhotias the Lepchas were contributing to their self-effacement. Thirdly, he remarked on the basis of a contemporary unknown writer that when they first acquired the hill territory of Darjeeling, there were practically no Lepchas in the land because the Raja of Sikkim had forced 1,200 able-bodied Lepchas to fly from Darjeeling and its neighbourhood. Lastly, he concluded, "the Lepchas have at any rate not decreased under British rule, largely no doubt as a result of the establishment of a reserve for them in Kalimpong."

If the number of the Lepchas increased under British rule why the question of self-effacement arose? Did this process of self-effacement mean that the Lepchas only gave birth to female children and they married their daughters to the boys of the Limbus and Sikkim Bhotias? Was it one-way move and no marriage matured in opposite direction? Moreover, he reported on the basis of an unknown writer that the Raja of Sikkim forced the Lepchas to leave Darjeeling but no cause was shown behind this oppressive attitude of the Raja. The fact seems to be that the British Government ordered the Lepchas to go away from the reserved forest of Darjeeling and an alternative arrangement was made for them in Kalimpong. After spending so many words O'Malley let the cat out of the bag. He wrote, "The tendency is for them to leave the unsuitable environment of Darjeeling and other parts of the district, and to settle in Kalimpong, where they can get land on low rents and where is still much forest left." He did not yet tell us the whole truth. The responsibility for leaving Darjeeling should not be placed on the Lepchas because the 'unsuitable environment' in Darjeeling was the creation of the British who deforested the area for their own cause. The fact was that the British compelled them to leave Darjeeling for

Kalimpong and when Kalimpong was annexed to British empire from Bhutan the Lepchas under compulsion had to leave even that place and entered Bhutan[20] proper, and western Bhutan became their habitat where they found forests and suitable environment. They were driven from Darjeeling, and that was the whole truth, and they reacted by abandoning the area of the British.

How the Lepchas were treated by the British is known from D.F. Rennie's note referred to by Arabinda Deb in his book, 'India and Bhutan'. Mr. Rennie wrote in 1866 that the Lepchas in Darjeeling Terai fell victims to 'tea culture speculation'. "Their lands were bought up from their headmen and they were suddenly turned adrift to find new homes and distasteful employments where they could. Tea Plantations revolutionized their primitive state of society."[21] This was a peculiar way of thinking which goes round profiteering. That was certainly not the way of thinking of the Lepchas. The long and short of it was that the British treatment towards the Lepchas made them discontent, but their nature prevented them from expressing it. They silently left the place with a disgruntled mind.

The Garos were not treated better. The Garos call themselves *achi mande* (achik=hill; mande=man) just as the Lushais (a hill tribe of Assam) call themselves Mizos (Mi=man; zo=hill).[22] The original home of the Garos is not known. They themselves believe that their original homeland was in Tibet. A legend to this effect has persisted among the Garos, for generations. In his monograph on the Garos, Major Playfair points out certain linguistic resemblance between the Tibetan and the Garo tongues and also refers to the reverence which the Garos like the Tibetans have for gongs and the value they attach to the Yak's tail though the animal never inhabited these hills.[23] These features are not only applicable to the Garos of Assam Hills but also applicable to the Garos of the Western and Eastern Duars accepting a few local variations. But such scrappy pieces of evidence are not sufficient for establishing a historical connection of the Garos with Tibet. Suniti Kumar Chatterjee held that the Garos were of Tibeto-Chinese and Tibeto-Burman origin like the Lepchas and Meches, and the Garos had direct Bodo-Naga origin.[24] Mr. Pugh holds that certain features common to the Nagas and Garos in the performance of the funeral ceremonies (the practice of tethering a bull to a Y-shaped post before it is sacrificed) and other customs, especially the practice of head-hunting, point towards a link between Nagas and the Garos. Major Playfair surmises from these facts that the Garos probably inhabited originally some area near Dimapur and there, because of proximity, picked up some of the Naga customs and habits. All this leads to the supposition that the Garos moved into Assam, Mymensingh and Duars through the north-eastern route from China and Upper Burma. "This movement was part of a great Mongolian influx into this part of India in prehistoric times. It is not merely possible, but very probable, that the movement started

originally from Tibet and other parts of western China."[25] However, with the march of time the Garos were greatly influenced in their religious beliefs and social custom by the neighbouring Hinduised tribes of the plains. As in the Hindu pantheon the Garos have numerous deities such as protector of crops, the God of fertility, the God of strength, the Goddess of riches. Natural forces are also deified in the Hindu fashion. The sun, moon and stars are believed to be spirits placed in the heavens for ruling the seasons. Thunder, lightning, rain, wind, earthquakes have corresponding spirits controlling them, and they have to be propitiated with sacrifices of birds, animals etc. When there is a drought, the Rain-God is worshipped. On the other hand when there is too much rain the Sun-God is worshipped. In both the ceremonies a goat or a fowl is offered in sacrifice. Like the Hindus, the Garos also show great reverence for their ancestors, as is indicated by funeral observances such as offering of food to the departed souls. The Hindus did it without any overt effort at conversion, the characteristic feature of Hinduism having been throughout the ages assimilation rather than conversion. But after 1865 when the Duars region was brought under British control the Christian missionaries began to convert them to Christianity, and they were asked to give up their age-old jhumming method of cultivation.

The British had to deal with the Meches along with the Garos. They treated the Meches in the same vein as was done with the Garos but the result or the reaction of these two tribes were not the same. The Meches were also a Tibeto-Burman speaking Indo-Mongoloid tribe whom Grierson in his *Linguistic Survey of India* along with the Kacharis, Koch, Rabha and Garo brought under a single group called the Bodo. The Bodos like the other tribes migrated into India through Patkoi Hills between India and Burma and gradually spread themselves into the whole of undivided Assam, North Bengal and parts of East Bengal (Bangladesh). It is probable that they marched towards three directions. One part went south upto Kachar and were called Kacharis. The second part went along the river Brahmaputra and established themselves in the whole of undivided Assam upto Goalpara and parts of Jalpaiguri and Cooch Behar under the name Bodo or Bara. They were further subdivided into four classes, namely, Mech, Koch, Rabha and Garo.[26] The Meches went towards the west along the foot of the Himalayas upto the river Mechi between India and Nepal and settled on the north bank of the said river as Mech or Mechia. They crossed the river and established themselves in the deep forests of Darjeeling Terai and Baikunthapur of Jalpaiguri. Again they marched eastwards, crossed the Tista and spread themselves in Duars, Jalpaiguri. They gradually moved further east crossed Sankosh and went towards Goalpara in Assam. All over these areas there were dots of Mech villages when the British occupied Terai and Duars from the Raja of Sikkim and the Deb Raja of Bhutan respectively. In addition to their traditional beliefs, religion and custom they were also influenced by Hinduism and worshipped many Hindu Gods and Goddesses like Mahakal (Siva),

Parvati, the consort of Siva, Kali, rivers like Tista, Torsha, Kaljani and Sankosh. Formerly there was no image worship; a lump of earth represented the deity. In course of time they began to worship clay images of Gods and Goddesses like the Hindus. The European missionaries began to convert them to Christianity after the annexation of Assam and North Bengal by the British. The Meches were accustomed to shifting cultivation which was distasteful to the British for bright outlook for trade in forest produce.

It has already been discussed in details in chapter III (Implementation of the Forest Acts and Policy in the area of study: Darjeeling and Jalpaiguri Districts) that the Government of Bengal on the basis of the Forest Laws and Policy of the Government of India formulated local laws prohibiting local people like the Garos and the Meches from indiscriminate felling of trees. At the same time some privileges were given to them to use specific trees and timber from the forests for their house-hold purposes. In fact, the Forest Department took three fold measures to save forests in Terai, Western and Eastern Duars. First, the Forest Department categorically named some species of trees which should not be cut down. Secondly, to fulfil the necessity of the local people some facilities of cutting down specific timber were allowed. The purpose of this was to keep the Garos and Meches in good humour whose habitat and movement in the region extended from Terai to Eastern Duars.[27] When the Government prohibited shifting cultivation in virgin sal forests[28] in and around Duars, as a reaction, a group of the Garos in a fit of pique left for dense forests towards the east and found their new habitat in Garo-hills in Assam.

But the Garos and Meches who remained in Terai and Duars entered into negotiations with the Government[29] and came out of the reserves to live in outside of the Reserved Forests but adjacent to the forests. They were allowed shifting cultivation in jungles consisted only of bushes, shrubs and stunted trees.[30] The Garos even left the reserves[31] and settled outside the virgin sal forests and continued shifting cultivation in marked areas. But the Meches came out of the Reserved Forests on condition that they would be given adequate compensation.[32]

The third policy of the Forest Department was to involve local people in protecting forests. They were given responsibility to protect forests from timber-thieves[33] and even some Meches were appointed as Forest Watchers to secure good will of the local inhabitants. In fact, the policy of the Forest Department was to get rid of the forest-enemies by setting one against another. But the forest officials did not know what else was to come next. The Forest Policy of the Government along with its method of implementation by the Forest Department of Bengal was gall and wormwood to the local people who reacted against this in crooked way. They

pretended to protect the forest property of the Government but secretly helped the timber-thieves to illegal timber-business by destroying the rich forests[34] for their personal profit at the cost of the public forests, and it is assumed that the Forest Watchers even got a share of the money thus collected. So, as a reaction against Government Forest Policy they allowed the destruction of forests, and thus the local people in uniform, due to forest rules, were made collaborators of the timber-thieves. In general, the forest-dwellers turned criminals as a result of the Government Policy, and mischief, deceit and depredations of forest-property against the forest rules were the peculiar way of reaction of the deprived forest-inhabitants.

This crooked way of reaction of the deprived local people took a new form which caused breaches of laws framed for the forest management. This began in 1865–66 and is still continuing. Gustav Mann, Asst. Conservator of Forests, Sikkim reported in 1865–66 : "No better proof of the wanton destruction of timber, trees can be given than by the fact that within five to six miles of Darjeeling there is hardly any tree left fit to be cut up for timber....."[35] He further informed the Government, "Another great evil was the indiscriminate cutting of valuable timber trees and worthless kinds of wood for firewood." Before the reservation of forests the local inhabitants used to cut timber in a limited way only for the domestic purposes, but now it has become a dogged determination to undo the forest rules. The Asst. Conservator proposed for stricter rules to protect the forest from indiscriminate felling. The cases of breaches of law competed with the progress of forest administration.

Breach of Forest Rules has been recorded by the Conservator of Forests in 1873–74. The Conservator wrote that five prosecutions had been instituted during the year in Cooch Behar Division, and four convictions obtained. Four were cases of petty theft; the fifth was, however, an important case, namely the cutting and partly removing of 100 sal trees from the Sukna forest. But it was not the case of reaction of the local people — it was a case of robbery with an aim of profit committed by one timber contractor-cum-robber, Nakul Sing, a native of Nepal.[36]

The Forest Department was elated at finding decrease in the number of offences in Buxa during the year 1882–83 compared with the former year; and the proportion of convictions to cases instituted, omitting cases withdrawn and pending was 86.3% against 86.8% for 1881-82. The Conservator wrote, "The system of compounding offences has been found to work well, and is preferred by the people, who generally apply to be allowed to pay money compensation when discovered in the act of breaking the rules, instead of being made to stand a trial before the Magistrate."[37] The Conservator further added that in Buxa reserves the number of prosecutions under the head 'Injury to forest by fire' was three only, compared with nine in the previous year;

it was further reported that although forest fires had done more damage during the year under report than in 1881–82, there were fewer cases of willful damage from this cause.

Another form of reaction or protest, in addition to illegal felling, was the illegal grazing by ignoring the forest rules. In Darjeeling Division such cases had been found during the year 1882-83. The Conservator reported that 19 cases were instituted during the year, involving 27 persons in all of which convictions were obtained, with the exception of one case, which was withdrawn, as it entailed a question of boundary. Thirteen cases were for unauthorized felling and the remaining five for grazing without permission.

In the same year in Tista Division six cases were sent up for trial involving six persons in all of which convictions were obtained. Great difficulty was experienced by the Forest Department in cases of illicit grazing in bringing the offenders to justice. The Conservator reported, "Large parties come across the border from Sikkim with flocks and herds, and resist the guards who attempt to arrest them"; before assistance could be obtained they used to enter into Sikkim territory and the civil authorities did not have any power to cause their arrest when they left British territory.

In Kurseong Division there were ten cases of breach of Forest Law during the year, involving ten persons, of which two were for injury to the forest by fire, five for unauthorized felling, one for grazing in closed forests and two for breaking up land for cultivation. In Jalpaiguri Division three cases involving nine persons were pending from the previous year and five cases involving nine persons were instituted under the Forest Act during the year. In Buxa Division there was only one case instituted for injury to forest by fire which remained pending at the close of the year.

In 1895–96 the breaches of the forest law increased in number, those taken into count being more than doubled. This was to some extent explained by the creation of a new division; and as nearly 90 per cent of convictions were obtained. However, unnecessary prosecutions were not encouraged by the Government. The Government of India fully agreed with the Lieutenant-Governor as regards the importance of a correct and uniform classification of forest offences, and were pleased to see that this would "insisted upon in future."[38]

In 1899–1900 nature of offences was shown compared with previous year as follows: This was the picture of peculiar form of reaction of the local people at the end of the century.[39]

Nature of offence	Nature of offence			
	Number		Increase	Decrease
	1898 – 99	1899- 1900		In 1899 – 1900
1	2	3	4	5
Injury to forests by fire	19	50	31	—
Unauthorized felling etc.	204	200	—	4
Grazing without permission	18	21	3	—
Other offences	66	84	18	—
Total	307	355	52	4

But it should be kept in mind that all the cases of injury to forests by fire were not intentional — some were intentional no doubt, others natural. The following was the usual divisional details of offences during the years 1898–99 and 1899– 1900.[40]

Division	1898-99	1899 – 1900			For each case			For each person		
	Number of offences	Number of offences	Number of persons	Total compensation received						
1	2	3	4	5	6			7		
				Rs.	Rs.	A.	P.	Rs.	A.	P.
Darjeeling	587	441	623	1,256	2	13	7	2	0	3
Tista	389	341	433	924	2	11	4	2	2	2
Kurseong	54	57	88	411	7	3	4	4	10	9
Jalpaiguri	50	110	252	1,598	14	8	5	6	5	6
Buxa	55	25	56	405	16	3	2	7	3	9
Total	1,135	974	1,452	4,594	43	11	2	22	11	1

Intentional firing cases had been particularly recorded during the year 1900–1901. Under this head there were three categories. First, intentional firing in order to obtain new grass; second, intentional firing in order to turn out game or to reduce cover; and third, maliciously fired. In this year Buxa Reserve recorded six cases of first category by which 9,794 acres were burnt; ten fires were recorded to turn out game or to reduce cover, and for this 2,020 acres were burnt; two cases were recorded under the category 'maliciously fired' by which 81 acres were burnt. In Jalpaiguri Division three cases were recorded in second category by which 1,200 acres were burnt, one case in third category by which 3,099 acres were burnt. In Kurseong Division one case was recorded in second category and three acres were burnt, one was recorded in third category but burnt area was not mentioned. No cases were recorded under 'intentional firing' in Darjeeling and Tista Divisions during the year.[41] But general nature of forest offences like unauthorized felling or grazing without permission increased during the year 1902–1903. The principal increases were 265 in the Tista and 172 in Darjeeling Divisions.[42] In the next year the total number of forest offences reported was 2,923 against 3,556 in the previous year.

In 1904–1905 the number of forest offences reported was 3104 or 181 more than in the previous year and 94 more than the average of the three previous years. More than half the cases of the year occurred in the Darjeeling and Tista Divisions which show increases of 240 and 143 cases respectively. But in these Divisions cases were as usual, of a trivial nature, such as stealing head loads of wood or fodder without permission.[43] The Conservator knew that such type of offences were unavoidable since the labourers lived in close proximity to the forests. The Government also found that most of the forest offences were done in collusion with the forest staff, and the Government made the punishment fit the crime. In 1907–8 punishments included the dismissal of 12 Forest Guards, and the services of 3 Foresters, 1 Tashil Muharin, 1 Checking Muharrir and 14 Forest Guards were dispensed with; 4 Forest Guards were fined; 2 Forest Guards were reduced, whilst 2 Forest Guards were suspended at the end of the year.[44]

In spite of this strong disciplinary punishment inflicted on the staff the forest offences were not checked, let alone stopped. The following statement compares the average annual number of forest offences during the five year period from 1914–15 to 1918–19 and that in the preceding five year[45] —

	1909 - 10 to 1913 - 14	1914 - 15 to 1918 - 19
Injury to forest by fire	24	51
Unauthorized felling	838	1,206
Unauthorized grazing	637	1,009
Other offences	119	394
Total	1,618	2,660

However, the Government felt satisfaction at the insignificant decrease of the forest offences during the year 1919-20. The number of forest offences reported during the year was 3,269 as against 3,694 in the preceding year. W.S. Hopkyns wrote, "The decrease is satisfactory, and is ascribed not only to more frequent resort to courts in 1918–19 but also to keener vigilance on the part of the subordinate staff and to the infliction of adequate punishment by courts in proved cases. The fact that the percentage of convictions was 94 shows that unnecessary prosecution were not undertaken."[46]

Forest offences yet kept the Government under pressure. Clandestinely breaking the forest rules was a form of protest in this region against the British Policy of Reservation of Forests. They began the act of sabotage against the Government Policy. This is accepted even today as a form of protest or movement. The sabotage included intentional forest firing, unauthorized grazing and unauthorized felling or timber theft. It is found in stray references of the English officials that timber theft, as the years rolled along, became a profitable business of

the local people lived in adjacent to forest tracts. What did the timber-thieves do with the timber cannot be assessed properly. From the report of the forest officials, it seems, that there was a collusion between timber-thieves and the timber-merchants. The Government Officials described the merchants as 'unscrupulous' and they used to come from Dacca and other places. They preferred illegal trade to legal one. This money-making tendency of the locals marred everything. The failing morale of the local people destroyed the possibility of granulation of the movement. The area became a den of pilferers. This vile tradition is still continuing.

Notes and References

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CONCLUSION

Generally speaking even before the advent of the British, forests were respected by the people in India. Not only the Indians, the Lepchas, Sikkimese and the Bhutias did not unnecessarily destroy forests. To do any harm to trees was considered as a sin in Bhutan. The superstition that forest is the habitat of the demons also helped to preserve forests. The Jamatia tribes of Tripura traditionally conserved the forests as defence measure. Similar idea prevailed in modern Arunachal Pradesh. The sacred groves of Meghalaya and Manipur represented a long tradition of forest conservation in their own way. In Mizoram there existed a long tradition of managing village forests by classifying them under two different functional classes. Such classification by the village council concerned was based on the functions that the particular forest performed. A forest patch situated on the crest hill slope was kept for particular purpose. Generally no extraction of products was made from this area, which was managed mainly for protecting water resources and maintaining the quality of water. These forests were usually home to a number of native plant species. The remainders of the village forests were the supply reserves, and provided the villagers with day-to-day fire-wood, fodder and small timber needs. Management of both the forest types was regulated by the village council. In Nagaland also forest was respected and forests were never destroyed indiscriminately. A forest patch was cleared for *jhum* cultivation and fire-wood was collected from the forests for bare necessity. Ancient Indian ruler like Asoka had full respect for flora and fauna.

The Sultans and the Mughals were not aware of the importance of forests. But the Amirs of Sind were perhaps exceptional in the extent to which they took up afforestation along the banks of the Indus.

The British entered the Indian forests with commercial as well as ecological outlook. But the pragmatic sense of making money prevailed over ecology or environment. However, due to their ignorance they for a considerable period could not do well in realizing their aims. The forest administration was in a fog, and the wind of experiments, for a long time, could not dispel the fog – the fog of loss, despite continued efforts. Trafford's plan of natural regeneration was replaced by Shebbeare's method of artificial plantation. In the matter of new plantations not very satisfactory work was done upto the beginning of the 20th century. Extraction was poor and although the forests were some of the richest that one could wish for

India, there was lack of supervision and much theft. As a result forest revenues dropped steadily upto about 1910. The alarming way in which revenues fell upto this period has been described by both D.H.E. Sunder and J.A. Milligan in their settlement reports of 1895 and 1919 respectively. However, after 1911 a succession of a very energetic Divisional Forest Officers, commencing with E.O. Shebbeare from November 1913, made a great effort to put matters right. Since 1913 there was a series of very well thought out Working Plans, the fifth for the Jalpaiguri Forest Division being planned for 1942–56 and for the Buxa Forest Division for 1945–1964. These Working Plans took account of every detail of the preservation, growth, increase of the forest, and evolved skilful plans designed to improve the forest revenue. Clear-felling was followed by new plantations, preceded by careful selection of the species to be planted. Only as much area was clear-felled as it was possible to plant them anew in the next year or years. Otherwise mature timber was extracted individually and sold. In fact, by 1920 the scene was one of hope, with the initial despair gradually fading.

As a policy the British did not stop forest fire. To protect the larger trees from harmful insects and to remove the dense undergrowth tended to interfere with the growth of young plants, the work of fire-protection was carried out carefully. It meant controlled burning; and to contain fire-hazards forest-fire-fighting management system was improved. There were regular programmes for climber-cutting and thinning. There were separate rules for the supply of fire-wood to tea estates, and others for permission to graze cattle in the Reserved Forests. All these things were going to be done for making profits out of forests and to keep the people dependant on forests in good humour.

But the realm of environment was not properly addressed. No planning was taken to make the work toward it. The machinery was still ill-equipped to stop illegal felling. The government could not provide the forest-dwellers with the means of subsistence. The forest-dwellers often said that the forest department made thieves out of them in their own backyard. It is now often said that the appointment of the local people can provide invaluable service in keeping the poachers and smugglers off. But this experiment with the local people failed as early as 1871 since the local employees as forest guards had a collusion with the smugglers and as a result the forest revenue fell. If this problem at all to be solved, should be tackled at the root by considering immense pressure of human population and connected unemployment of the young people, and not by trying to prune the branches at the top. However, the British did not address the problem on this line. Moreover, the forced

relocation of the Lepchas, Meches and Garos drove them in difficulty of making a new life in new place. And the encouragement of the Nepalese in place of the forest-dwellers and local people to work as labourers in forest and tea gardens would create complicated problems in future. The forest inhabitants of Darjeeling and Jalpaiguri accepted the forest rights-restriction without any vigorous protest but that was not the picture all over India. The agony of this people found a vent through the 'Forest Satyagraha' which coincided with the Non-Cooperation and Civil Disobedience movements. The 'Forest Satyagraha' was often termed as 'primitive nationalism'.

Taking a stock of the whole process of the forest settlement and management it seems that the British were lacking in imagination. The alarm bells sending warning against the depletion of forests fell on deaf ears and commercialization of forests continued causing landslide and floods. The Himalayas and the Mechi, Balason, Mahananda, Tista, Torsha, Raidak, Diana, Jayanti, Kaljani, Jaldhaka, Murti, Dimai, Nona and Sankosh rivers witnessed so many topsy-turvy in natural forests. The scientific forestry of Germany was introduced in Darjeeling and Duars on the method devised by Brandis and Schlich. They trained the British for scientific forestry. The kingdoms of Sikkim, Cooch Behar and Bhutan shrank; the territory of the East India Company and later British empire expanded. Economically the forest divisions failed to earn a regular profit even in the first two decades of the twentieth century, but they made a sign of profit in future. Forests and wild-life were provided with a rest assured environment and ecology. Shifting cultivation was stopped; protection was taken against large-scale forest-fire. Timber-price hiked; some local people got employment as forest chowkidar; plantation of valuable trees and mixed cultivation in selected tracts were given importance; creepers were cut from valuable trees to keep them green till their maturity.(Jalpaiguri Division was the major supplier of sleepers for Bengal Duars Railway. By supplying timber for tea-boxes, house-building, fuel, furniture, bridges and country-boats the forest department hoped to make forests a regular source of revenue. Rattan, reed and fodder were considered new avenues of income. Bamboo trade was also commercialized. Timber traders of East and South Bengal were attracted to the timber-trade of Eastern and Western Duars as well as Baikunthapur. A demographic change was visible since the immigration of the muslim labourers in this area, specially at Baikunthapur, from South Bengal. Area of cultivation was extended in Western Duars. The bulk of the Garos went away in a fit of pique. The Meches and Lepchas were driven out of the Reserves. Timber thieves were born. 'Shahibs' wearing coat pantaloon and hat infested the area. New roads

were constructed to facilitate forest management. To make the trade of timber, tea and sleeper easy new Rail Stations were erected between Siliguri and Darjeeling and also at Lataguri Ramshai, Chalsa, Banarhat, Binnaguri and Odlabari on the Bengal Duars Railway. All this change was observed by the old trees and mute animals with their eyes down cast.

GLOSSARY

A list of major Timber Trees found in Jalpaiguri, Eastern Terai, Darjeeling, Bhutan and Sikkim with their Local and Scientific names in addition to their uses:

Jalpaiguri and Eastern Terai

Local	Scientific names
1. Am (Mango)	*1. Magnifera Indica*

Use : Often 5 feet in girth, not durable; fruit-tree; used as fire-wood and planks.

2. Amloki	*2. Emblica Officinalis*

Use : A small tree; wood dark red; the fruit is eaten by the local people; fruit is full of vitamin – C.

3. Arjun (Urjoon)	*3. Terminalia Arjuna*

Use : Often 6 to 8 feet in girth; white colour; straight and strong wood; its bark is used as medicine.

4. Gamaree	*4. Garelina Arborea*

Use : Often 5 feet in girth. A light durable wood, well adapted for turnery used by the local people for doors, windows, furniture, drums and other musical instruments; not attacked by insects or white ants.

5. Hartaki (Hur)	*5. Terminalia Chebula*

Use : Useful compact wood; fruits used as medicine and also religious purpose.

6. Jam (Jamun)	*6. Syzygium or Syrygium Jombolanum*

Use : Grows to a good size; the wood is strong and hard, not attacked by insets; used in building and coarse furniture.

7. Joree Pakree	*7. Ficus Camosa*

Use : The lac insect is reared on this.

8. Kadam	*8. Nauclea Cadamba*

Use : Very light, softwood, much used for tea-boxes and safety matches, for which it is well suited, the timber being easily worked and perfectly scentless.

9. Kanthal (Jack-fruit tree) *9. Artocarpus Indica*

Use : Hard wood; often 5 feet in girth; used for doors, windows; wood is tough and heavy; used for other domestic purposes.

10. Khair *10. Acacia Catechu*

Use : A large tree; wood tough and strong but not useful for furniture, extract is used by the Indians with betel, a leaf which is wrapped round bits of areca-nut for chewing; also used in India in a kind of preparation of tobacco (Zarda).

11. Koroi *11. Acacia Odoratissima*

Use : A very large tree, wood tough and strong, but light ; used mainly for canoes.

12. Kul (Bair or Barai) *12. Zizyphus Jujuba*

Use : Small timber tree used only for fire-wood; fruits eaten by local people, sour but tasty.

13. Lali *13. Phoebe Species*

Use : This timber tree is available in northern area of Jalpaiguri and Darjeeling; strong wood used for body of Rickshaw and other similar purposes, the colour of the plank is red.

14. Neem (Nim) *14. Ajadirachta Indica*

Use : Hard wood; used for coarse furniture; not attacked by white ants or insects; leaves and bark are used for medicine.

15. *Pakur (Pakkar)* *15. Ficus Venosa*

Use : Very large tree; often 10 feet in girth; soft wood, used only for fire-wood; worshipped in India as Divine tree.

16. *Pepul (Bat)* *16. Ficus Religiosa*

Use : Very large tree, often 10 feet in girth; soft wood; used only for fire-wood; worshipped in India as Divine tree.

17. *Sal* *17. Shorea Robusta*

Use : Often 6' to 8' in girth; straight, strong, heavy and durable wood; used as railway sleepers, bridges, house post, country boat, door and window frames, cart-wheel; serves almost all purposes except good furniture.

18. Shegun (Teak) *18. Tectona Grandis*

Use : Often 6 feet in girth; straight, strong, compact and very durable, not attacked by insects; used for ship building and esteemed for furniture; it is a first rate wood for doors, windows and planking; it is easy to work and does not warp.

19. Simul *19. Bombax Malabaricum*

Use : Very big tree, often 10 feet in girth, very light and soft wood, generally used for safety matches and tea boxes; also used for supporting roof-casting of buildings; its fruits produce silk-cotton which is used for various purposes.

20. Siris *20. Acacia Speciosa Sirissa (Albizzia Lebbek)*

Use : A very large tree; often 10 feet in girth; wood tough and strong; used in furniture, doors and windows.

21. Sissoo/ Sissu *21. Dalbergia Sissoo (Scandens)*

Use : A very hard, strong wood of great repute for furniture; almost free from insects.

22. *Toon* *22. Cedrela Toona*

Use : Often 6 feet in girth; a close hard but rather brittle wood of dull red colour used by the local people for canoes and esteemed for furniture; it is a first rate wood for doors and planking and does not warp.

Darjeeling, Bhutan and Sikkim

1. Akhrote (Walnut) *1. Juglans Regia*

Use : A strong, heavy, straight and durable wood; fruits are tasty; used for good furniture and for handles and scabbards of swords and daggers.

2. Chalaunee *2. Gardonia Species*

Use : Good timber; used as planks in various domestic purposes including coarse furniture.

3. Champ (Red Magnolia) *3. Magnolia Campellii*

Use : The wood is soft but tough; much esteemed for various purposes including furniture.

4. Champ (White Magnolia) *4. Michelia excelsa*

Use : The wood is light and soft, but tough; used for furniture and other domestic purposes.

5. Cherry (Puddum) *5. Cerasus Puddum*

Use: Useful timber; used as planks and house posts and coarse furniture.

6. Katoos (Chestnut) *6. Castanea Species*

Use : Hard wood, heavy; much esteemed for various purposes; used in building and coarse furniture; fruits are tasty.

7. Oak (Booke) *7. Quercus Lamellosa*

Use: A strong, heavy, straight grained serviceable timber.

8. Pine (Cheer) *8. Pinus Longifolia*

Use : Grows on hills; the wood is straight, light and strong; it was used in floating out the heavier sleepers of Sal; its resin is known in market as calophony and turpentine; it was recommended for railway sleepers; planks are used in building and furniture.

9. Not known *9. Cornus Sanguinea Linn*

Use : It affords the best charcoal for manufacture of powder for Enfield Rifles and it was supposed that it might be a good substitute for the Dogwood of Europe. There are various species of it known as cornus species.

Other than timber (Explanation of technical words in the text.)

1. Charandar - Agent
2. Chowkidar - Watchman
3. Dafadar - An officer placed over common watchmen for supervision.
4. Dhura - It means two logs being tied to a canoe, one on each side.
5. Ghout (Ghat) - A landing place in a river.
6. Hauth - A village market held in specific days in a week.
7. Ilaqua - Area
8. Jhar - Shrub/ Bush
9. Jhora - Small water-course.
10. Jotedar - Owner of a considerable area of land for growing crops.
11. Jotes - Big area of land under one management for growing crops.

12. Khal - Creek.

13. Khasmahal - Commonly used of estates under public management.

14. Khedda. - An enclosure for catching wild elephants.

15. Mahal - An administrative unit for the purpose of assessing land revenue of any part of royal territory. It is smaller than district.

16. Pargana (Pergunnah) - A pargana is comprised of a good number of villages. Civil division of a district.

17. Purwanna - Order / Warrant.

18. Taluk - A kind of dependency, the term came into vogue at the end of the 17^{th} century to denote possession of land, irrespective of title. Revenue sub-division of a district.

19. Tongya (Taungya) - Shifting cultivation / Regeneration by raising tree crops in conjunction with field crops.

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APPENDIX — A

Names	No. of houses	Rate of each house			Total Amount			Area of lands in acres cultivated for paddy			Rate of compensation per acre			Net amount payable			Area of land in acres cultivated for oil seeds			Rate per acre			Net amount payable			Total amount of compensation payable		
		Rs.	A.	P.	Rs.	A.	P.	B	C	C	Rs.	A.	P.	Rs.	A.	P.	B	C	C	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.
Kartica Mech	1	2	0	0	2	0	0	5	0	0	3	0	0	15	0	0	0	8	0	5	0	0	2	8	0	19	8	0
Deeparam Mech	6	2	0	0	12	0	0	5	0	0	3	0	0	15	0	0	1	0	0	5	0	0	5	0	0	32	0	0
Ganggope Mech	3	2	0	0	6	0	0	5	0	0	3	0	0	15	0	0	0	14	0	5	0	0	4	0	0	25	0	0
Bordhona Mondal	5	2	0	0	10	0	0	7	0	0	3	0	0	21	0	0	0	8	0	5	0	0	2	8	0	33	8	0
Kantiram Mech	4	2	0	0	8	0	0	6	0	0	3	0	0	18	0	0	.	.	.	.	.	.	.	.	.	26	0	0
Sarjonee Mech	4	2	0	0	8	0	0	5	0	0	3	0	0	15	0	0	0	8	0	5	0	0	2	8	0	25	8	0
Godoom Mech	1	2	0	0	2	0	0	5	0	0	3	0	0	15	0	0	1	8	0	5	0	0	7	8	0	24	8	0
Silla Mech	4	2	0	0	8	0	0	4	0	0	3	0	0	12	0	0	.	.	.	.	.	.	.	.	.	20	0	0
Ankholu Mech And Santo Mech	6	2	0	0	12	0	0	4	0	0	3	0	0	12	0	0	.	.	.	.	.	.	.	.	.	24	0	0
Bakhur Mech	4	2	0	0	8	0	0	4	0	0	3	0	0	12	0	0	.	.	.	.	.	.	.	.	.	20	0	0

Source : Letter from W.O. Reilly, Esq. Sub-divisional Officer, Buxa to The Deputy Commissioner, Julpigoree. Collection No. 2, Head-R.R., File N11-12. February, 1877. (West Bengal State Archives, Calcutta).

		Upper and Lower (including north of Pangjhora)		Forest Act on 23rd July 1880; north of Pangjhora transferred from Darjeeling Division under orders of the 19th January 1882; renotified under notification No. 147-For., dated 2nd July 1895 again notified under Eastern Bengal and Assam Government notification No. 150-F.S., dated 12th April 1910 excluding 595.20 acres under notification No. 4906-F., dated 2nd May 1907 (vide 4″=1 mile reserved forest map revised and published in 1919 under the direction of the Surveyor General of India).
6th March 1880	19	Rehti	3,263	.....
29th April 1882	4	Salbari	16	Renotified under section 19 of the Indian Forest Act on the 6th December 1884. Renotified under No. 7315-For., dated 23rd May 1927.
9th December 1884	19	Khairanti	64	Renotified under No. 7310-For., dated 23rd May 1927.
3147-For., dated 2nd July 1895.	.....	Gasaihat	1,876	Renotified under No. 7312-For., dated 23rd May 1927 (including Moraghat Reserve).
4369-For., dated 1st June 1908.	19	Khairarbandar	575	Renotified under No. 7311-For., dated 23rd May, 1927.
1232 T.R., dated 12th October 1914.	19	Additions to Rehti forest.	220	Renotified under No. 7313-For., dated 23rd May 1927 (including the Rehti Reserve).
2812-For., dated 9th April 1921.	19	South Khariarbandar	246	Excluding 0.36 acre under notification No. 3964-For., dated 11th March 1927.
7810-For., dated 2nd September 1921.	.....	Murti Extension to Tondu Reserve.	453	.....
1165-For., dated 5th February 1923.	19	Ramshai Extension to Lower Tondu and Daina forest.	3,800	This also refers to the exclusion of 561.97 acres under notification No. 11720-For., dated 19th November, 1925, renotified under No. 11721-For., dated 19th November 1925.
1431 T.R., dated 2nd November 1923.	19	Extension to Lower Tondu forest.	19.46	.....
Total area			**89,584.93 or 89,584.00 (36,253.35 Hec.)**	

Notification Nos. 7308 to 7318 For., dated 23rd May 1927, give amended and more accurate descriptions of the boundaries of all blocks and their areas, except Tondu, Daina, South Khariarbandar, Murti Extension and Extension to Lower Tondu Reserves. The areas given in the above notifications have been used in compiling the statements given in paragraph 17. Where amended notifications have not yet been published the areas given in the 4″=1 mile Reserved Forest maps of 1918-19 have been used.

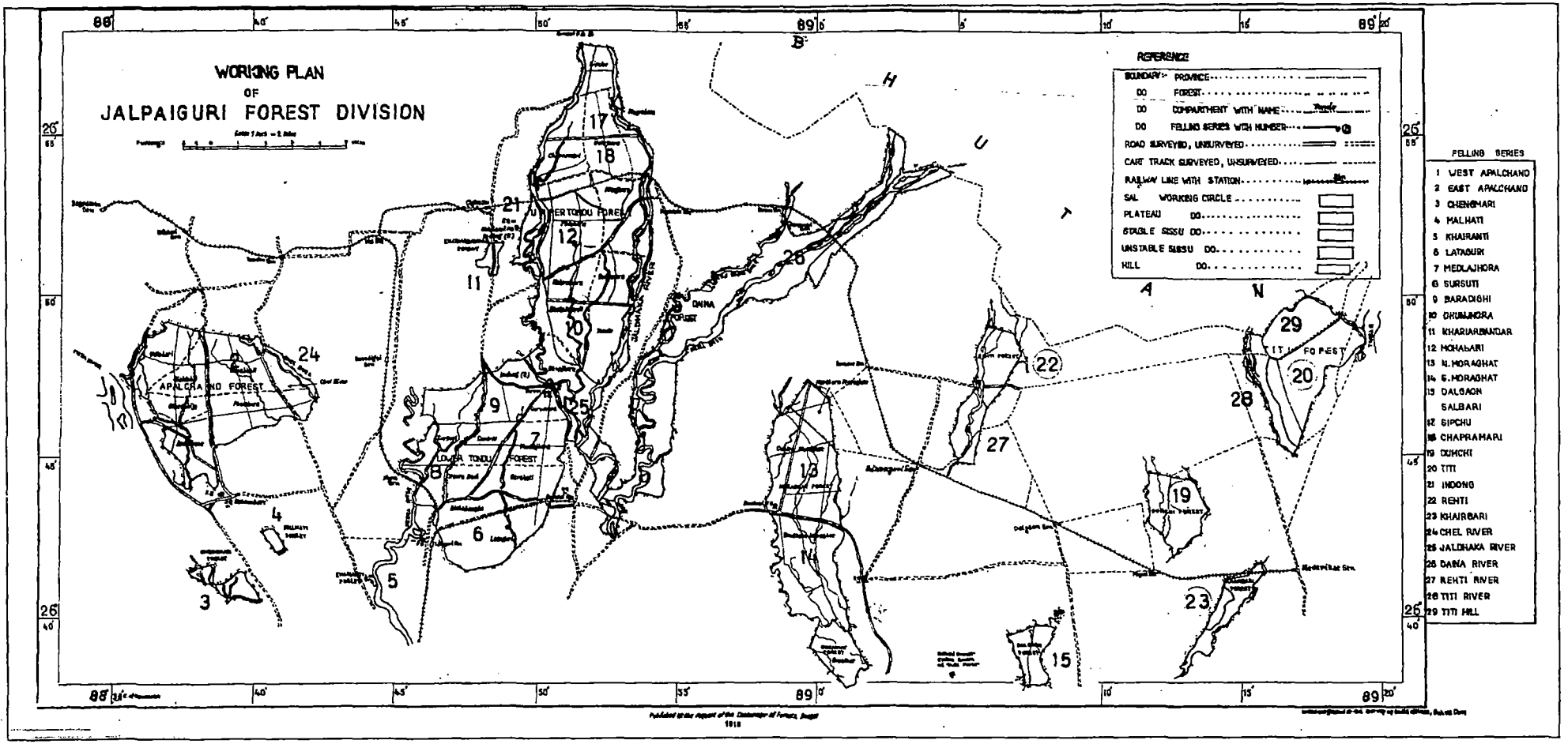
Source : Seventh Working Plan, Jalpaiguri Forest Division, PP 18-19. (Divisional Forest Office, Jalpaiguri).

Ditto ..	..	34	Dalgaon ..	1,471	Ditto. Renotified under No. 7314For., dated 23rd May, 1927.
Ditto ..	..	..	Tondu, Upper and Lower (including north of Pangjhora).	49,986	Renotified under section 19 of the Indian Forest Act on 23rd July, 1880; north of Pangjhora transferred from Darjeeling Division under orders of the 19th January, 1882; renotified under Notification No. 3147For., dated 2nd July, 1895, again notified under Eastern Bengal and Assam Government Notification No. 150F. S., dated 12th April, 1910, excluding 595·20 acres under Notification No. 4906F., dated 2nd May, 1907 (*vide* 4 inches to 1 mile Reserved Forest map revised and published in 1919 under the direction of the Surveyor-General of India).
6th March, 1880 ..	..	19	Rehti ..	3,263	....
20th April, 1882 ..	..	4	Malhati ..	320	Renotified under section 19 of the Indian Forest Act on the 6th December, 1884. Renotified under No. 7309For., dated 23rd May, 1927.
Ditto ..	..	4	Salbari ..	16	Renotified under section 19 of the Indian Forest Act on the 6th December, 1884. Renotified under No. 7315For., dated 23rd May, 1927.
6th December, 1884	..	19	Khairanti ..	64	Renotified under No. 7310For., dated 23rd May, 1927.
3147 For., dated 2nd July, 1895.	..	..	Damchi ..	3,018	Renotified under No. 7316 For., dated 23rd May, 1927.
Ditto ..	..	..	Gossaihat ..	1,876	Renotified under No. 7312 For., dated 23rd May, 1927 (including Moraghat Reserve).
4360F., dated 1st June 1908.	..	19	Khariarbandar ..	575	Renotified under No. 7311 For., dated 23rd May, 1927.
1232T.R., dated 12th October, 1914.	..	19	Additions to Rehti Forest.	2·70	Renotified under No. 7313 For., dated 23rd May, 1927 (including the Rehti Reserve).
147T.R., dated 13th May, 1918.	..	19	Hollapara Extension to Titi Forest.	1,265	....
2567 For., dated 8th April, 1921.	..	19	North Chengmari	66·69	....
2812 For., dated 9th April, 1921.	..	19	South Khariarbandar	246	Excluding 0·36 acre under Notification No. 3964For., dated 11th March, 1927.
3757 For., dated 5th May, 1921.	..	19	Ghish River ..	650	Transferred to Kalimpong Division, Notification No. 3555For., dated 9th April, 1923.
7810 For., dated 2nd September, 1921.	..	..	Murti Extension to Tondu Reserve.	453·39	....
7004 For., dated 5th September, 1921.	..	19	Hollapara Extension to Titi Reserve—"Khairbari jote."	392·80	Renotified under No. 7318 For., dated 23rd May, 1927 (including Titi Reserve and Hollapara Extension to that).
3740 For., dated 1st April, 1922.	..	19	Additions to Khairbari Forest.	3,000	Renotified under No. 7317 For., dated 23rd May, 1927 (including Khairbari Reserve).
3920 For., dated 5th April, 1922.	..	19	Extension to the Apalchand Forest Reserve.	28·16	....
1165 For., dated 5th February, 1923.	..	19	Ramshai Extension to Lower Tondu and Daina Forests.	3,800	This also refers to the exclusion of 561·07 acres under Notification No. 11720 For., dated 19th November, 1925, renotified under No. 11721For., dated 19th November, 1925.
1431T.R., dated 2nd November, 1923.	..	19	Extension to Lower Tondu Forest.	19·46	....
11048 For., dated 3rd December, 1923.	..	19	Rajadanga Extension to Apalchand Forest.	19·10	Renotified under No. 7308 For., dated 23rd March, 1927 (including Apalchand Reserve, extension to that and Chengmari Reserve).
17280 For., dated 5th December, 1927.	..	19	Torsa Reserve. North Borojhar.	1,363 2,752	Transferred from the Buxa Division to the Jalpaiguri Division.
			Grand Total ..	**127,712·199·8 square miles.**	

Notifications Nos. 7308 to 7318 For., dated 23rd May 1927, give amended and more accurate descriptions of the boundaries of all blocks and their areas, except Tondu, Daina, North Chengmari, South Khariarbandar, Murti Extension, Ramshai Extension, Extension to Lower Tondu, Torsa and North Borojhar Reserves. The areas given in the above notifications have been used in compiling the statements given in paragraph 8 and Appendix VI. Where amended notifications have not yet been published, the areas given in the 4-inches-to-1-mile Reserved Forest maps of 1918-19 have been used.

Source : Fourth Working Plan, Jalpaiguri Forest Division, PP. 14-15 (Office of the Conservator of Forests, Northern Circle, Jalpaiguri, West Bengal.)

APPENDIX - D



Source : Fourth Working Plan, Jalpaiguri Forest Division. (Office of the Conservator of Forests, Northern Circle, Jalpaiguri, West Bengal.)

		Gaburbasra .. .. Mahakalguri .. .. Salkumar ..	10,801 100 1,243 15,894		194,764	
8th August 1885	26	Buxa Hill Forest	.....	1600	193,164	Exclusion.
21st September 1885	19	Addition to Mahakalguri ...	115	.....	193,279	
6th June 1888	26	Mahakalguri Reserve ...	.....	215	193,064	Exclusion
No. 2661 For., dated 14th May 1894	6	Addition to Panbari Block of Buxa	4,595	.....	197,659	
No. 2657 For., dated 18th July 1902	26	Gaburbasra Reserve	.....	886	196,773	Exclusion. (Notification No. 8313 F., dated 27th September 1907, amended the area of Gaburbasra Reserve to 9,915 acres after this exclusion.)
No. 4164 For., dated 29th December 1903.	19	Addition to Buxa Reserve	887	.....	197,660	
No. 1279 For., dated 6th March 1905	19	Sachaphu Forest	11,520	.....	209,180	
No. 8066 For., dated 17th October 1908	19	Addition to Sachaphu	820	.....	210,000	
No. 942 T.R., dated 23rd June 1915	19	Chiko Extension to Buxa	216	.....	210,216	
No. 971, T.R., dated 26th June 1915	19	Poro Extension to Buxa	132	.....	210,348	
No. 1431 T.R., dated 19th August 1916	19	Buxa Hill	10,876	.....	221,224	
No. 1296 T.R., dated 21st September 1917	19	Mendabari Extension to South Borojhar	63	.....	221,287	
No. 8205 For., dated 4th December 1917.	19	Sanjai	38	.....	221,325	
No. 997, For., dated 28th January 1918.	19	Nunai Extension to Buxa	60	.....	221,385	
No. 1182 For., dated 4th February 1918.	19	Jainti Extension to Sachaphu	334	.....	221,719	
No. 9488 For., dated 14th December 1918.	19	Nilpara	360	.....	222,079	
No. 367 T.R., dated 10th May 1919.	19	Buri Basra Extension to South Borojhar	371	.....	222,450	
No. 3924 For., dated 12th May 1921.	19	Hatipotha Extension to Sachaphu	181	.....	222,631	
No. 2420 For., dated 3rd March 1922.	26	Buxa Reserve	.....	99	222,532	Exclusion

Source : Fourth Working Plan, Buxa Forest Division. (Office of the Conservator of Forests, Northern Circle, Jalpaiguri, West Bengal.)

APPENDIX - F

Statement showing the value of timber and planks imported into Calcutta during the last ten years from 1861-62 to 1870-71.

		1870-71.	1869-70.	1868-69.	1867-68.	1866-67.	1865-66.	1864-65.	1863-64.	1862-63.	1861-62.
		Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Boards and planks.	United Kingdom	.....	.....	7,607	21,224	62,715	22,000	22,103	4,377	10,525	7,782
	Suez	.....	.....	.....	.....	.....	.....	.....	251	.....	.....
	France	.....	.....	.....	.....	.....	.....	.....	.....	600	580
	Germany ...	.....	.....	.....	.....	.....	.....	.....	8,660	31,665	.....
	Hamburg ...	.....	.....	.....	.....	.....	.....	32	.....	1,815	2,816
	Bremen	.....	.....	.....	.....	.....	.....	.....	830	.....	.....
	North America	.....	.....	.....	.....	71,304	70,600	62,030	44,370	60,057	70,208
	Ceylon	.....	.....	.....	158	100	.....	.....	.....	10	51
	Mauritius ...	.....	.....	.....	.....	.....	.....	25	.....	173	.....
	Penang	.....	.....	7,007	3,408	30,073	38,081	32,428	2,033	1,471	.....
	Maldives ...	.....	.....	.....	.....	.....	58	.....	.....	.....	.....
	Persian Gulf ...	.....	.....	.....	45	.....	.....	.....	.....	.....	.....
	China	.....	.....	.....	.....	.....	27,150	.....	120	.....	.....
	Cape	.....	.....	.....	.....	.....	.....	.....	.....	17,440	.....
	New South Wales.	.....	.....	.....	205	.....	18,058	185	67	15,102	30,071
	Other foreign countries.	.....	.....	.....	.....	.....	.....	.....	.....	.....	240
	Bombay... ...	872	804	1,042	.....	.....	.....	.....	.....	.....	427
	Madras	1,475	1,725	.....	.....	.....	.....	366	.....	.....	2,100
	Moulmein ...	76	2,316	.....	.....	4,300	3,357	50,225	.....	120	.....
	Rangoon ...	.....	.....	.....	.....	.....	.....	.....	.....	25	.....
	Akyab	.....	.....	.....	.....	.....	.....	1,00,383	.....	.....	.....
	Chittagong ...	.....	.....	.....	.....	395	7,305	.....	.....	43	.....
	Balasore... ...	.....	.....	.....	.....	24	.....	.....	.....	.....	.....
	Cuttack... ...	.....	.....	.....	.....	6,600	18,507	10,210	13,805	.....	.....
	Port Blair ...	.....	.....	.....	.....	7,871	.....	1,800	.....	.....	.....
		.....	.....	.....	.....	261	.....	.....	.....	.....	.....
Mahogany.	United Kingdom	.....	.....	.....	.....	950	1,031	3,702	4,700	8,500	1,890
	France	.....	.....	.....	.....	.....	500	.....	.....	00,451	.....
	North America	12,208	.....	.....	28,230	3,476	.....	10,005	.....	.....	1,263
	Cape	.....	.....	.....	.....	.....	.....	.....	.....	5,157	.....
Masts and Spars.	United Kingdom	.....	.....	.....	5,485	11,308	3,518	12,994	9,480	3,240	3,132
	France	.....	.....	.....	.....	.....	.....	.....	.....	.....	120
	Germany ...	.....	.....	.....	.....	.....	.....	.....	.....	661	.....
	Hamburg ...	.....	.....	.....	.....	.....	1,300	4,321	1,500	.....	600
	Bremen	.....	.....	.....	.....	.....	.....	.....	2,101	.....	.....
	North America	.....	.....	.....	8,878	15,199	18,703	10,583	20,750	35,120	53,309
	Mauritius ...	.....	.....	.....	.....	.....	.....	750	.....	661	.....
	Bourbon ...	.....	.....	.....	.....	.....	.....	510	61	.....	.....
	Cape	.....	.....	.....	.....	.....	.....	.....	.....	470	.....
	Ceylon	.....	.....	.....	100	.....	.....	130	.....	.....	.....
	Penang	.....	.....	.....	1,160	.....	.....	9,177	900	.....	.....
	China	.....	.....	.....	.....	.....	.....	105	.....	350	.....
	New South Wales.	.....	.....	.....	.....	.....	.....	47,964	529	250	.....
	Other foreign countries.	4,217	7,590	10,325	.....	.....	.....	.....	.....	.....	.....
	Bombay... ...	.....	.....	.....	.....	.....	800	250	32	.....	.....
	Madras	.....	.....	.....	.....	.....	.....	650	68	31	.....
	Akyab	.....	.....	.....	.....	123	.....	.....	.....	.....	.....
	Cuttack	.....	.....	.....	200	.....	.....	.....	.....	.....	.....
Sál ...	Balasore... ...	.....	.....	.....	4,748	.....	.....	.....	.....	.....	.....
	Cuttack	.....	.....	.....	8,841	.....	.....	.....	.....	.....	.....
Sleepers, &c.	United Kingdom	.....	.....	.....	25,391	3,04,632	90,144	2,005	58,600	250	9,727
	France	.....	.....	.....	10	.....	.....	.....	.....	.....	.....
	Bourbon... ...	.....	.....	.....	30	.....	.....	.....	.....	.....	.....
	Penang	.....	.....	7,962	1,20,513	.....	2,070	.....	4,505	.....	.....
	New South Wales.	.....	.....	.....	.....	26,711	9,055	.....	.....	.....	.....
	Other foreign countries.	1,260	1,084	7,729	.....	.....	.....	.....	.....	.....	.....
	Rangoon	.....	.....	.....	45,878	2,135	16,247	.....	10,595	.....	.....
	Akyab	.....	.....	.....	37,707	73,604	53,818	61,422	11,315	.....	.....
	Moulmein ...	.....	.....	.....	1,560	.....	.....	.....	9,200	.....	.....
	Madras	.....	.....	.....	10	1,000	.....	.....	130	.....	.....
	Chittagong ...	.....	.....	.....	.....	.....	700	.....	.....	.....	.....
	Balasore... ...	.....	.....	.....	.....	3,850	5,824	.....	.....	.....	.....
	Cuttack	.....	.....	.....	.....	10,296	.....	.....	.....	.....	.....
Teak ...	Penang	.....	.....	.....	.....	1,005	.....	.....	.....	.....	.....
	Bombay... ...	.....	.....	810	.....	100	.....	50	32	.....	.....
	Moulmein ...	12,63,910	13,55,890	.....	11,78,204	9,65,757	21,51,181	7,92,671	9,23,569	22,97,511	14,48,382
	Akyab	.....	.....	.....	.....	.....	.....	.....	4,312	.....	72,806
	Rangoon	2,07,977	3,96,024	12,56,490	3,47,791	7,80,703	3,16,064	53,234	3,10,017	6,02,064	70,085
	Madras	.....	.....	7,052	.....	.....	.....	.....	.....	.....	400
	Chittagong ...	.....	.....	.....	.....	.....	.....	.....	1,370	.....	.....
	Cuttack	.....	.....	.....	.....	.....	.....	.....	1,000	.....	.....
	Total ...	14,92,034	17,65,901	13,07,551	18,34,854	20,15,898	29,04,180	12,98,269	14,74,100	32,20,175	17,80,370

CALCUTTA CUSTOM HOUSE,
29th February 1872.

J. D. MACLEOD,
Collector of Customs.

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Source : Appendix G of the Progress Report of Forest Administration in the Lower Provinces of Bengal for the year ending 1st April, 1872 by H. Leeds. (O.C.F.N.C., Jal., W.B.)

APPENDIX - G

Year of plantation.	Species.	Forest in which planted.	Degree of success.
1866 and 1886	Mahogony (*Swietenia mahogoni*).	Sukna ..	Wholly unsuccessful.
1872 and 1873	Ditto ..	Bamanpokri ..	One tree left in compartment E.V.
1866 ..	Teak (*Tectona grandis*).	Sukna ..	Wholly unsuccessful.
1867-1888 ..	Teak, *tun*, *sal*, *sissu*, *saj*, *lampate* and *silical*, India-rubber and bamboos.	Bamanpokri ..	Teak is successful, but slow growing. The average height of the dominant trees is now (1902) 60 feet, and the girth 2½—3 feet. The other species are also well reported on. Neglect to carry out thinning operations has doubtless retarded the growth of the teak.
1868 to 1888 ..	Teak (*Tectona grandis*).	Ditto ..	Shows fair height and diameter growth but thinned. It is growing on old alluvium.
1873 ..	Baobab (*Adansonia digitata*).	Ditto ..	Wholly unsuccessful.
1874 ..	India-rubber ..	Bamanpokri and Bamonjhora.	Not very successful, the plants having been put down much too close together. The biggest trees are now up to 5 feet girth, and 60 feet high.
1873, 1884 and 1899.	Moreton Bay chestnut (*Castanospermum australe*).	Bamanpokri ..	Wholly unsuccessful.
1873 and 1887	*Divi divi* (*Caesalpinia coriaria*).	Ditto ..	One tree left.
1882-1888 ..	India-rubber ..	Bamonpokri ..	Not successful, chiefly owing to neglect in not cutting away the surrounding jungle, which has overgrown the rubber trees.
1899 ..	*Divi divi* (*Caesalpinia coriaria*).	Sukna ..	Two trees left.
1880 and 1882	Rain tree (*Enterolobium saman, syn. Pithecolobium saman*).	Bamonpokri and Siliguri.	A few fine trees are left near Siliguri railway station and near Garidhura Bazar.
1886-1893 ..	Ditto ..	Siliguri, Sukna, Chamta south boundary and Rakti.	Unsuccessful on the whole, chiefly owing apparently to unsuitable localities having been chosen. Deer and pig are reported to have done considerable damage to the young plants in most of these operations.
1881 ..	Ditto ..	Sukna ..	Unsuccessful.
1880 and 1882	*Jarul* (*Lagerstroemia flos reginae*).	Bamanpokri ..	None left.
1880 ..	Paper mulberry (*Broussonetia papyrifera*).	Ditto ..	Regenerating itself in sandy soil on the banks of the Rakti and of the Rungsong near Garidhura.
1882 ..	Ditto ..	Sukna and Chamta	Regenerating itself in sandy soil on the banks of the Panchonai and Rungdong *kholas*.
1880-1888 ..	Bamboos ..	Chamta, Adalpur and Bamanpokri.	Generally successful, but growth much impeded in places owing to neglect in not cutting away surrounding and dominating jungle. Seven acres put out in the Sukna Block in 1880-1881, and 23 acres put out with sown *sal* seed in the Kynanuka Block in 1887-1888 failed completely. In 1881 an old bamboo plantation is referred to as having suffered much from a species of *Cudandra*. In 1888 the operations in the Kynanuka Block suffered much damage from wild animals.
1881 and 1882	Pyinkado or iron-wood (*Xylia dolabriformis*).	Bamanpokri ..	Unsuccessful.
1881 and 1882	*Bija sal* (*Pterocarpus marsupium*).	Bamanpokri ..	Unsuccessful.
1882-1883 ..	*Sal* ..	Bamanpokri and Hurlia.	Results reported to have been good in 1883. The place where this work was done is not known. In March 1883, 83 per cent. were reported to be alive.
1881 and 1882	*Kusum* (*Schleichera trijuga*).	Bamanpokri ..	Unsuccessful.
1881 ..	*Muli* bamboo (*Melocanna bambusoides*).	Ditto ..	Poor specimen.
1881 ..	*Chir* (*Pinus longifolia*).	Ditto ..	Two trees left.
1926 ..	Ditto ..	Kundong ..	Some died; good many thrived.
1881 ..	*Gab* (*Diospyros embryopteris*).	Bamanpokri ..	None left.
1881, 1882 and 1884.	Ebony (*Diospyros melanoxylon*).	Ditto ..	Unsuccessful.
1881 ..	*Dhupi* (*Cryptomeria japonica*).	Ditto ..	Ditto.
1901 to 1903 ..	Ditto ..	Paglajhora ..	Growing well.
1882 ..	*Wabo* bamboo (*Dendrocalamus giganteus*).	Bamanpokri and Sukna.	Ditto.
1895 ..	Ditto ..	Bengdubi ..	Ditto.
1896 ..	Ditto ..	Panighata ..	Ditto.
1882 ..	Coara rubber (*Manihot glaziovii*).	Bamanpokri ..	None left in the forest, one tree on Panighata tea estate.
1882-1884 ..	*Pithecolobium* ..	Siliguri ..	Successful, but practically abandoned on the score of inutility.
1882-1884 ..	*Acacia pycnantha* ..	Bamanpokri ..	Unsuccessful.
1882-1884 ..	*Acacia melanoxylon*	Ditto ..	Ditto.
1882-1884 ..	*Acacia decurrens* ..	Ditto ..	Ditto.
1885 ..	*Casuarina equisetifolia*	Rakti ..	Ditto.
1885 ..	*Pinus palustris* ..	Ditto ..	Did not germinate.
1866 ..	*Cupressus funebris*, *Thuja orientalis* and *Cryptomeria*.	Dhobijhora ..	Successful. Size of dominant trees is now (1902) 2½—3 feet girth and 60 feet high.
1888 ..	*Podocarpus elongatus*.	Bamanpokri ..	Died in the nursery.
1888 ..	*Peterozylon utile* ..	Ditto ..	Ditto.
1890 ..	Ditto ..	Sukna ..	Ditto.
1882-1891	*Champ*, *katus*, oak, and chestnut.	Dhobijhora ..	Results on the whole not satisfactory. Total failure in blank areas, excepting a few maling bamboos put down in 1890-91, which still survive, though the growth has been very slow, and partial success elsewhere. *Champ* does by far the best.
1902-1903 ..	*Champ*, *Kauta*, *tun*, *amboki*. and *cryptomeria*.	Paglajhora ..	Successful. The cost of upkeep now averages about Rs.325 per annum.
1883-1887 ..	Mango and Jack fruit.	Chamta south boundary.	Total failure.
1890-1892 ..	*Saj*, *tun*, *lampate* and *kalasiris*.	Kynanuka ..	Total failure, due to suppression by inferior species consequent upon neglect.
1899 ..	Sabai grass (*Ischoemum angustifolium*).	Sukna ..	Unsuccessful.
1911 ..	Ditto ..	Sivoke Hill ..	Ditto.
1899 ..	Para rubber (*Hevea brasiliensis*), Nicaragua rubber (*Castilloa elastica*) and Lagos rubber (*Kickxia africana*).	Sukna ..	A big plantation was formed but only two trees left, rest out out.
1901-1903 ..	Para rubber (*Hevea brasiliensis*).	....	Very unpromising at present.
1916 ..	Eucalyptus spp. ..	Pundig ..	One tree is noticed at Sukna, probably planted in the same year; growth poor.

Source : Second Working Plan, Darjeeling Forest Division. (Divisional Forest Office, Darjeeling)

APPENDIX - H

Statement of outturn of Timber from the Forests of the Jalpaiguri Division

Year	Jalpaiguri								Buxa						
	Sal		Others		Sal		Others		Sal		Others		Sal		
	Green trees				Dry trees (Kalakhambas)				Green trees				Dry trees (Kalakham		
	No.	Cft.	No.	Cft.	No.	Cft.	No.	Cft.	No.	Cft.	No.	Cft.	No.	Cft.	No.
1875-76	.....	.....	.....	.....	.....	.....	.....	.....	2,710	84,120	179	1,740	1,879	18,790	
1875-76	405	8164	.....	.....	.....	.....	.....	.....	2,545	76,655	764	3,562	3,064	45,960	17
1877-78	426	18,140	24	2,420	1,788	17,880	78	296	2,326	66,970	450	3,084	1,839	18,390	6
1878-79	416	15,360	1	120	2,212	10,535	42	110	2,604	51,723	7	164	1,945	19,450	...
1879-80	388	6,788	193	17,400	1,527	8,085	.....	.....	40	920	263	5,260	3,038	30,380	8
1880-81	262	8,928	22	2,640	996	9,880	12	84	684	26,442	273	5,421	2,073	20,730	
1881-82	119	14,280	84	9,960	1,926	9,630	.....	.....	1,520	34,071	53	1,630	2,602	26,020	4
1882-83	26	800	73	7,120	1,629	16,589	.....	.....	2,528	67,122	70	1,234	2,205	22,290	7
1883-84	128	4,996	18	1,800	2,928	22,309	76	731	3,060	108,996	32	3,050	2,454	15,777	1
1884-85	145	3,857	49	1,845	3,136	21,828	79	4,740	891	27,860	20	1,538	1,614	10,852	
1885-86	15	1,800	3	33	3,899	19,495	134	264	548	37,265	3	450	2,148	16,680	26
1886-87	148	5,904	13	720	3,291	16,605	84	168	1,825	86,812	13	1,950	1,247	12,470	22
1887-88	118	14,160	20	434	3,124	31,240	97	970	701	29,948	35	5,176	1,245	83,259	29
Total	**2,596**	**103,177**	**500**	**44,492**	**26,517**	**184,176**	**602**	**7,363**	**21,982**	**638,924**	**2,162**	**34,259**	**27,355**	**341,048**	**1,26**

Averag

Source : File 10/3, N.B. 25-38, October, 1892. West Bengal State Archives, Calcutta.