

Cite this article: R. Kumar, Forest Governance under British Rule: The Bombay Presidency, 1800 – 1947, *RP World. Hist. Cult. Stud.* **3** (2024) 57–63.

Original Research Article

Forest Governance under British Rule: The Bombay Presidency, 1800 – 1947

Rakesh Kumar*

Department of History, Government College, Matanhail (Jhajjar) – 124106, Haryana, India *Corresponding author, E-mail: <u>rakesh2036.he@hry.gov.in</u>

ARTICLE HISTORY

ABSTRACT

Received: 6 July 2024 Revised: 2 Nov. 2024 Accepted: 7 Nov. 2024 Published online: 10 Nov. 2024

KEYWORDS

Colonial forest policy; Bombay Presidency; Indian Forest Acts; Resource extraction; Indigenous communities; Colonial legislation. This paper examines the evolution and impact of forest policy in the Bombay Presidency from 1800 to 1947, a period marked by increasing colonial intervention and resource extraction under British rule. The study analyzes how forest governance shifted from customary community management to centralized colonial control, reshaping the ecological, economic, and social landscapes of the region. Drawing upon archival records, official reports, and contemporary accounts, the paper traces the formulation of key legislations such as the Indian Forest Acts and their localized implementation in the Presidency. It highlights the role of British scientific forestry in redefining forests as commercial assets, marginalizing indigenous practices, and displacing local communities. The paper also explores patterns of resistance and negotiation by forest dwellers, as well as the emergence of conservation rhetoric in the late colonial period. By focusing on the Bombay Presidency as a case study, the research offers critical insights into the colonial legacy of forest policy in India and its enduring implications for postcolonial environmental governance.

1. Introduction

The issue of deforestation has gained attention from both policymakers and the general public as environmental concerns have grown in importance. To enhance strategies and direct future reform initiatives, it is imperative to conduct a historical analysis of India's forest policy. This essay examines India's forest policies throughout the colonial era, with particular attention to the Bombay Presidency.

The early nineteenth-century colonial policy on woods and forest inhabitants has not been well examined or scrutinized. Anthropological studies make up the majority of the material now available on India's forests. Up until now, research has mostly focused on how the Forests Acts gradually reduced the rights of forest inhabitants. The effects of the laws of 1865 and 1878 on the citizens of the Bombay Presidency are described in detail. It is crucial to determine whether ecological balance and environmental protection were given any weight in the early nineteenth century or if a crude commercial forest policy was the only one adhered to. The goal of this essay is to critically examine the British government's colonial-era forest policy, with a focus on the Bombay Presidency.

2. Colonial forest policy

People's well-being has been greatly influenced by forests. It is also commonly acknowledged that they play a part in ecological balance, environmental stability, biodiversity conservation, food security, and sustainable development. The people of India depended on forest resources as a vital component of their survival prior to the foundation of British rule. When the British arrived in India, the country's woods became an essential part of the state. Due to the massive consumption of this timber in the King's and private yards, the British Isles' timber resources had run out by 1800 [1]. In order to preserve British sovereignty over the oceans, Great Britain was keen to discover new supplies of raw materials for building ships, particularly warships for their Royal Navy.

In order to promote the extraction of teak, a tree known for its exceptional shipbuilding capabilities, in the southern districts of Malabar and Travancore, Captain Joseph Watson was appointed as India's first Conservator of Forests on November 10, 1806 [2]. The British government's monopoly on teak was established in 1807 when it issued a proclamation giving the Conservator control over the woods of Malabar and Travancore. As the other species' commercial worth was realized throughout time, this monopoly extended to them. The colonial administration included blackwood, ebony, anjili, eyne, and sandalwood to the list of species that were set aside for extraction and usage between 1820 and 1865. While Kanara (Karnataka) and the Surat Dangs (Gujarat) provided larger timber for shipbuilding, Thana and Kolaba provided teak spars for the Bombay Presidency [3].

Large-sized timbers, particularly teak, were in high demand for export, Admiralty use, and shipbuilding and repair in Bombay's dockyards. The first stage of deforestation in western India began with the construction of ships, which began in the middle of the eighteenth century, and the British government's construction of larger ships (war ships, which needed a huge amount of timber) in the early nineteenth century. The amount of lumber used by the frigates and gunships at the Bombay dockyard is based on statistical data on the timber trade between the British East India Company and the timber contractors. Additionally, it shows the size and locations of the deforested lands in western India. View the



Table For example, roughly 646 pieces of Calicut timber and 1,58,560 Guz Calicut boards were needed for a warship with 74 guns. Approximately 161 trees were cut down to produce 646 pieces of lumber, with each tree yielding an average of four candies of timber (the first sort timber produced five candies per tree, and the second sort produced four candies per tree). It took about 825 trees to harvest 1,58,560 Guz planks from Calicut. There were 3,300 sweets in total, with one candy equal to 48 guz. In order to build a warship with 74 cannons, 986 trees were chopped down in Calicut alone [4].

The British government's forest policy, which promoted agriculture at the expense of forests in the first part of the nineteenth century, was another factor that led to deforestation. "In many localities, forests were an obstruction to agriculture and, therefore, a limiting factor to the prosperity of the country," according to early forest historian E.P. Stebbing. The goal of the entire strategy was to expand agriculture, and the prevailing tactic was to clear forests in order to achieve this goal [5]. Prior to British administration, village and local leaders cleared forests from vast swaths of land on the western ghats' hills for farming. All potentially arable ground was encouraged to be cleared when the British took control of these and other more isolated regions. To clear vast areas of good timber and impenetrable bush by fire or axe, the British government brought in and settled laborers [6]. How to clear the vast territory covered by trees and brushwood for agriculture was one of the British government's top priorities in Poona district, the capital of the Peshwa confederacy [7]. This kind of behavior was common throughout India.

The British promoted plantations in the delicate forest area after the lands were cleared and all valuable timber was sold. These plantations initially produced indigo, a dye used in the cotton industry, and later produced coffee, tea, spices, and, of course, timber trees. This caused significant harm to the forest ecosystem. After the American Civil War and the American War of Independence, the country's subsistence crops started to be replaced with commercial crops, particularly cotton [8].

The British government became aware of the pressing need to preserve the woods by the late 1830s due to the declining state of the forests and the challenge of securing quality lumber for their naval. As a result, the Bombay Presidency's Forest Department was founded in 1847, and Dr. Alexander Gibson was appointed Forest Conservator [9]. Additionally, it signaled the start of Bombay's forest conservation movement in the late 1830s.

The department's goal was to supply the British government with the timber it needed for various purposes in order to meet the demands of the populace and to build up a standing timber stock for future use [10]. Gibson created a thorough plan to protect this presidency's woods. Together with Clerghon, a skilled botanist, surgeon, and the first conservator of the Madras Presidency in 1856, he tirelessly opposed shifting agriculture since it upset the natural equilibrium and degraded the rich soil, causing rivers to overflow and hill springs to dry up [11]. Gibson was successful in stopping shifting cultivation in the Bombay Presidency by 1860.

Additionally, Gibson developed silvicultural methods for both natural and artificial teak tree regeneration. To improve the quality of desired trees in forests for timber production, silviculture techniques such as weeding and thinning were used. Gibson's thinning efforts were successful, increasing both the quantity and quality of timber [12]. He imitated the Malabar acting collector Conolly's approach to cultivating young teak plantations in order to increase the amount of green cover [13]. Furthermore, in 1858, Dr. Gibson grew a large number of plants from the seeds sent by Dr. Thompson from the Calcutta Botanical Garden, increasing the variety of forest trees. He was quite hopeful that the Hewra Garden would develop into a hub for botanical gardens, which are significant even to India's indigenous population. Additionally, he made a significant contribution to the growth of *Mahagony* trees in Dapuri and Hewra. Gibson grew the tanning *casalpinia* of South America, *Dovadivd*, into trees after Dr. Wallich, the director of the botanical garden at Calcutta, provided seeds of Sag wood [14]. However, the region's biodiversity was impacted by these monoculture plantings.

Therefore, by using such experimental methods, the forest department attempted to optimize the revenue potential of the forest resources. However, the Railways, which started in Bombay in the middle of the nineteenth century, eventually employed same conserving tactics to cut down forest trees. Although it aided in the better regeneration of a few specific timbers, like teak, forests became more of a commercial commodity than a matter of rich biodiversity to be conserved from different undesirable influences. The Court of Directors dispatched a dispatch to India in July 1847 to gather data on climate change and deforestation [15]. Since the late 1830s, there has been a severe timber crisis, which has led to significant worry about the depletion, degradation, and threatened natural regeneration of the forests. The government was forced to act quickly in order to save the forests. On his own initiative, Gibson attempted to convince the authorities of the importance of forest protection by promoting concepts concerning deforestation and engaging in significant lobbying. As famines grew in India in the late 1830s, he started to link deforestation to climate change. India's environment was commonly regarded as incompatible with European constitutions because of the simultaneous famines in the nineteenth century. It should come as no surprise that the European medical establishment in India was somewhat alarmed by the increase in the prevalence of severe illnesses in the cities by the middle of the 1830s. As a result of the growing concern about this environment's degradation, the Bengal presidency implemented sanitary changes. The growing famines in India, which were attributed to deforestation, heightened British interest in health and climate [16]. "The rule (not the law) is that although Europeans may conquer the tropics, they do not Europeanize the tropics, not even countryside with European temperatures," Alfred Crosby said in his engrossing book "Ecological Imperialism: The biological expansion of Europe 1400-1900, 1986" [17]. Acclimatization consequently became a significant problem for British citizens living in India.

In 1838, Gibson made the following observation about Ahmedabad: "it were greatly to be wished, that the leveling, and removal of ruins in this, and other great towns: the planting belts of trees, in eligible situations on the leveled and vacant spots, formed a principal part in the medical police of these towns" [17] in his paper "A General sketch of the Province of Guzarat from Dessa to Damaun," which was published in the *Transactions of the Medical and Physical Society*, a reputable journal that medical service officials read frequently. According to Gibson, this kind of afforestation would protect the populace from harsh seasons and improve the environment for living in [18]. Gibson thus attempted to establish connections between deforestation and climate change as early as 1838.

Other British officials have made the connection between climate change and deforestation. It is widely believed in the Konkan that the removal of wood has caused the small streams to more or less dry up. This is also true at the Nilgherries, where I spent 18 months, where a significant change in climate has occurred due to the same reason, according to Alexander Elphinstone, the late Collector of Poona and the Collector of Ratnagiri in the Southern Konkan. Due to increased farming, the number of jungles had decreased to the point that the Ryot's labor was greatly increased in order to acquire the jungle produce, such as leaves and branches, that had been burned on the fields. The locals in Ratnagiri claim that the land is less productive than it once was, that the rainy season is much more unpredictable, and that there is less rainfall than there used to be. According to Elphinstone, the only way to stop this kind of depredation under these conditions is to plant trees on all the bare area that cannot be farmed more than once every eight years. Additionally, he recommended that the Khots who broke teak agreements face harsh punishment. In addition, he recommended the appointment and authority of a Conservator of Forests to address the devastation of forests [19]. Thus, the ability of woods to store water was believed by botanists, foresters, physicians, and government officials. It was now widely acknowledged that the amount of forest cover had a significant impact on the climate. This forced Alexander Gibson, the proponent of the desiccation theory, to support strict forest preservation.

Additionally, Gibson encountered the Konkan people, who felt that the seasons had grown more unpredictable, the climate had gotten drier, and the land had lost its fertility. The growing population and the resulting demand for land for food production were the main causes of the land removal. For this reason, he vigorously advocated for the appointment of a Conservator and the establishment of his office [20].

One of Dr. Gibson's responsibilities following the establishment of the forest department in 1847 was to conduct a methodical investigation into the biological alterations brought about by deforestation. His visits throughout the Presidency verified that the summer drying of the springs was caused by forest removal, particularly in the districts of Thana and Ratnagiri. Likewise, Khandesh's Baglan *taluka's* barren hills had reduced the amount of water available to the several streams that ran through this area. He persuaded a forester to be assigned to this area, which resulted in a healthy cover of *sisoo* and young teak timber [21].

He remarked that the Singhur forest in the Poona district was unusual since it shared a climate with both the Deccan and the Ghat. He said, "There is no doubt but that the effect of such a clothing is diminishing the dryness of the Poona climate considerably so that... and the hills have by continued cultivation been made quite bare" [22] if the hills to the east in the same range that are now bare were, as seems to have once been the case, clothed with wood.

River silting was another environmental consequence of deforestation that Gibson seemed to be concerned about. Gibson enumerated the rivers and creeks around the Malabar coast that had silted up in one of his forest reports after being named Conservator, according to E.P. Stebbing. Given that silting was having an impact on shipping and harbors, this illustrates Gibson's primary economic concern. Gibson also discussed the use of plants to stop roads on steep slopes from eroding [23]. The East India Company, which grew more frantic over time to discover new revenue streams, benefited greatly from his understanding of plants and the geography of western India.

The Conservator, Dr. Gibson, worked tirelessly and devotedly, but the forest conservation in the Bombay Presidency was only partially effective. Gibson's duty was questionable since he had to protect the forests while also making sure the government had a steady supply of timber and maximizing state revenue. It was necessary to preserve the delicate balance between these two goals. This does not negate the fact that the forest department made an attempt to limit the removal of young teak trees and sent foresters wherever feasible to prevent deforestation. Gibson firmly believed that Bombay's forests had been severely destroyed as a result of the government's inability to control rather than manage the forests. He advocated for reforms and saw the necessity of a suitable department to ensure its efficient operation. Dietrich Brandis, the first Inspector General of the Imperial Forest Department in 1865, was a precursor to him and made a significant contribution to the development of scientific forestry in India in 1878 [24].

However, the only outcome of these conservation measures was to violate the indigenous people's traditional rights. They were not allowed to cut down the trees that the Ryots had long cherished. Furthermore, in order to guarantee easy access to timber, it was forbidden to cut down trees, particularly teak, and to preserve the jungles along the seashore in areas close to rivers.

Therefore, British administrators and policymakers realized the consequences of their land use plans by the mid-1800s. The growing threat to vital raw materials required for the achievement of state objectives, such the construction of the railway network, sparked this worry rather than the environmental or social repercussions of deforestation. Keeping supply of teak, blackwood, Khair, Ain, Sal, and Deodhar for use as railway sleepers was the main preoccupation of the British [25]. The devastation of the forests was mostly the result of private contractors, both Indian and European. The lush forests of Thana, Bassein, Konkan, Calicut, and other places, as well as the deodar forests of the Kumaun and Garhwal Himalayas, were especially damaged by the vast railroad network that ran across the subcontinent [26]. The western Indian woods were impacted by the railways in two ways. It accelerated deforestation and encouraged conservation efforts to restore the Bombay Presidency's woods. However, commercially valuable plants like eucalyptus and teak were given preference [27].

These worries led to the initial attempts to develop a logical policy for the use and management of Indian forest resources. A note on forest protection, circulated by the Governor-General, Lord Dalhousie, in 1855, recommended that teak be designated as state property and that its commerce be tightly controlled [28]. The Governor General, Lord Canning, deemed colonial forest administration ineffective in 1862 and demanded the creation of an organization to oversee Indian woods in order to guarantee the continuous supply of raw materials for sleepers [29].

The Imperial Forest Department was created by the Indian government in response to these worries. The first Inspector General of woods was Dr. Dietrich Brandis, a German forester who had worked in Burma's teak woods for over ten years. Up until now, revenue officials held sole authority over forest lands; they had no qualified foresters on staff and were mainly concerned with expanding farming. Brandis underlined the significance of logging control right away. He justified permanent management as part of a new National Forest Department structure by citing the high demand for forest resources.

3. Forest legislations: Act of 1865 and 1878

In light of this, the Government Forests Act of 1865 was passed by the Indian government, establishing the first national regulation of Indian forests. Nonetheless, the primary purpose of this Act was to make it easier to acquire these forest tracts in order to provide the railroads with timber [30]. The Act gave local governments the authority to create provincial-specific regulations for improved forest management and preservation, as well as to specify penalties for breaking the regulations. The Act's regulations also addressed the specifics of forest conservation, including the personnel to be hired for forest administration, the process to be followed when establishing "Reserved Forests" and "Unreserved Forests," their demarcation, etc. For the first time, national legislation governed popular access to and use of forest resources, which had hitherto been primarily governed by custom and tradition [31].

In official circles, the official Forests Act of 1865 quickly gained controversy. The main shortcoming, according to those who opposed the Act, was the degree of governmental authority over forests that the Act gave. Only until they were chosen and designated as government forests did it offer protection for forest regions. According to this viewpoint, the state could only be guaranteed effective control if it were granted the authority to safeguard forests before they were designated as government forests. Administrators believed that the 1865 Act was flawed and lacked strong principles. Real forest conservancy became nearly difficult for the administrators due to the huge volume of claims for forest rights. There was also a lot of conflict between the Forest and civil officers as a result of these assertions [32]. Consequently, the 1878 Act, which was intended to address these issues, ultimately superseded this Act. A system for categorizing forest access and use was established by this Act. The law made it possible for the government to fully entrust the Forest Department with the administration and control of potentially valuable woods. Three categories of forests were identified under the classification system. In lands that the Indian government already held, reserved forests were created. They were designed to sustain commercial timber supply and offer ecological stability, both of which were necessary for British strategic and developmental objectives. Large, compact stands of commercially valuable species that could withstand longterm exploitation were designated as reserved forests. Furthermore, the main goal of these forests was to eliminate all rights that had previously existed and shield them from any violations by the local population [33].

The second category, known as protected forests, included forests that, after being delineated and covered by working plans, would eventually be designated as reserved forests. Provisions that permitted limitations on activities like grazing and reserved access to commercially valuable tree species were used to establish control in these regions. Lastly, village woods were designated forest areas where the state government had given local officials complete governance authority. The complex Forests Settlement process was used to establish forest reservations. Proclamations identifying the areas to be reserved and inviting villages to come forward to assert whatever rights they believed they were entitled to were published by state-appointed Forest Settlement Officers. Such claims may be fully or partially granted by the Settlement Officer, or they may be terminated with compensation. To "secure the best possible legal title" over forest regions the government wished to manage was the Settlement Officers' main goal [34].

However, each family of "rightholders" was only permitted a certain amount of fuel and timber under the terms of the 1878 Act, and it was strictly forbidden to sell or trade forest products. Therefore, this exclusion from forest management was both social—it gave "rightholders" a limited and rigid claim on the forest's produce—and physical—it prevented or restricted access to pastures and woods. The foundation of the significant forest policy statement of 1894 was also the state monopoly idea [35].

After the Forest Act of 1878 was passed, there was a great deal of controversy in Bombay around the issue of grass and grazing. The Forest Department began the task of chopping and bailing grass to be used as livestock feed under the strain of famine. Because the cattle wouldn't eat the chopped and stacked hay, the folks refused to purchase it. Consequently, a significant amount of grass was left to rot in the forests and cutting and baling was discontinued [36].

At the request of the Government of Bombay Presidency, Brandis traveled to Bombay in 1882. Making a judgment regarding the classification of the forest areas was one of the goals of his visit. He proposed dividing hill reserves into two classes: one that would be completely protected against unapproved grazing, fires, and felling, and the other where grazing would be allowed in exchange for payment but forest burning would not be allowed. Brandis made an attempt to curb the unsatisfactory situation in the Presidency. Nonetheless, this did assist in reducing public discontent with forest management. Things became so bad that the Thana Forest Association was established as a public organization to voice the complaints of the people. Another public organization that was heavily influenced by the Poona group and actively represented the complaints of the people in Western Maharashtra was the Poona People's Association [37]. In its 1881 memorial to the government, the Poona organization acknowledged that the strictest regulations were appropriate and necessary in reserved forests, but that they only applied there and to the commercial timber cutting system, not to the system of permits and fees on other land, or to any other forest produce or grazing rights [38].

The Forest Department nevertheless implemented the majority of the rules and licensing requirements for forest products in spite of these public requests. The new reservation was expanded by the Forest Department in 1882 to include the uncultivated village wastelands. The district's unhappiness grew as a result. In order to investigate the dispute in the Thana and Kolaba areas, the Calcutta administration finally announced the creation of a special panel called the Bombay Forest Enquiry panel. Three Indians and four British representatives from the Revenue and Forest Department made up its membership. G.V. Vidal, the Thana Collector, served as the Commission's chairman. Other members included Lieutenant Colonel W. Peyton, the Forest Conservator; Triambak Acharya; Rao Bahadur Krishnaji Laxman Nulkar; E.C. Ozanne; C.S.; Rao Bahadur Yeshwant Moreshwar Kelkar; Deputy Conservator R.C. Wroughton; and Rao Sahib Ramachandra. In 1887, the Commission finished its thorough examination of official and non-official opinions [39].

After two years of effort, the Commission produced comprehensive and methodical strategies. The Commission made an effort to reconcile the two very different and diametrically opposed goals of long-term forest preservation and the people' immediate sustenance needs. They demanded that government properties be quickly turned into conserved forests. The panel suggested that, to the greatest degree feasible, the empty village lands be used to meet people's subsistence needs. Rather, the subsistence requirement was to be satisfied as much as possible from private lands [40]. In 1887, the government received the commission's report. It did not, however, do anything for two years. After that, a resolution was passed that kept the report in mind. People's dissatisfaction and the number of forest offenses continued to rise as the government mainly disregarded the Commission's recommendations [41].

Following the 1878 Act, land use regulations also negatively affected agricultural output. The British hired an expert, J.A. Voelcker, to assess Indian agricultural policies and methods, and he turned in his report in 1893. According to this assessment, Indian forest policy needs to be changed to promote agricultural production because it is negatively affecting the rural social structure [42].

These factors led to a change in forest policy, which was published in 1894 as the Forest Policy Resolution. More focus on local demands on forest areas, such as clearing land for agricultural extension, was the most notable development. The previous forest classification system was somewhat altered to achieve these goals. Four types of forests were managed by the government: (a) Protective Forests, which were set aside to preserve the environment; (b) National Forests, which were set aside as areas that consistently produced commercial timber; (c) Minor Forests, which included village forests and areas that produced only subpar timber, fuel wood, and fodder; and (d) Pasture lands [43]. Indian forestry policy continued to be mostly a means of limiting public access to forest resources in spite of these changes and the seeming accommodation given to local requests.

The Indian Forest Act, 1927, which specified the rights and responsibilities of forestry officers and detailed situations in which officials were able to arrest suspected criminals without a warrant, marked another revision to Indian forestry policy in the 20th century. The new law, however, was an effort to increase government authority over Indian forests [44].

With the passage of the Government of India Act, 1935, the management of Indian forests underwent a significant shift in 1935. The Act created a dual system of governance that eventually led to Indian federalism and allowed for regional legislatures. It started the forest administration pattern. This Act placed forestry administration within the jurisdiction and control of provincial legislatures and included forests to the provincial list (item 22). The Indian government's responsibilities were limited to overseeing general forestry activities including teaching and research [45]. Even if the colonial state's position was officially diminished, in reality it still had a significant impact.

But World War II, when forests were exploited on a neverbefore-seen scale, is one of the significant turning points in British India's forestry history. Nearly every department of the Forest Research Institute was devoted exclusively to the demands of war during this time. The enormous demand for railway sleepers and other timber from the west coast tracts of Bombay, Madras, Coorg, and Cochin was satisfied by using wood that had never been used previously, primarily from evergreen rain forests as well as deciduous woods. In 1940–41, 2,42,000 tonnes of timber were produced [46]. Throughout the conflict, sawing and felling were done in the deep jungles of the Western Ghats and the furthest Himalayan woods. The yield prescriptions in Bombay deviated from the margin by 400 percent [47]. India's woods suffered greatly during the conflict.

In the years following World War II, Indian forest policy changed. The Inspector General of Indian Forests, Sir Herbert Howard, released the policy statement in 1944. During the early decades of the twentieth century, anti-colonial movement in India grew more intense. In this context, forest restrictions that restricted people's access to forests became a symbol of Indian nationalists' resistance movements. For instance, Mahatma Gandhi chose to attack forest laws in the Central Provinces with his campaign of civil disobedience in the 1930s. Nationalists called for a comprehensive land use policy that would take into account the requirements of the rural populace and denounced colonial forest policy for ignoring village and minor forests. Imperial forestry policy, on the other hand, persisted in prioritizing the management of reserved and protected forests that provide timber as well as the limitation of user rights [48].

When developing the post-war forest policy, Inspector General Howard made an effort to take these conflicting concerns into account. He underlined that maintaining the nation's physical and climatic conditions was of utmost importance and that maintaining a minimum number of woods was necessary to ensure its prosperity. When it comes to land use decisions, if these conditions are met, agriculture should be prioritized above forestry, and rural needs should be given more weight than financial considerations. Once these conditions are met, forests should be exploited to generate as much revenue as feasible. Howard emphasized that these rules should result in "sustained yield" and the "greatest good to the greatest number" of people [49].

4. Conclusions

The British government's significant building initiatives in Bombay, particularly the war ships that started in the early nineteenth century and used massive amounts of lumber, had a negative effect on western India's forest resources. It signaled the start of the initial stage of western India's deforestation. Deforestation and a serious timber crisis in the 1830s were caused by the British government's land use policy, which prioritized agricultural expansion in the first part of the nineteenth century. The establishment of conservation policies, which led to the policy of natural resource management, benefited from the pressure of the timber needs. This was the beginning of the Bombay Presidency's forest conservation effort in the late 1830s. When the Railways were established and expanded in Bombay in the middle of the nineteenth century, the second phase of deforestation began. The consumption of firewood for fuel and timber for millions of sleepers, which came from the forests of western India, had an immediate effect on the forests in the decades that followed. By the late 1850s, it led to a timber famine. The western Indian forests were impacted in two ways by the construction of railways during the Bombay Presidency. It accelerated deforestation and encouraged conservation efforts to restore the Bombay Presidency's woods. However, commercially valuable species like eucalyptus and teak were given preference. Additionally, it resulted in the creation of the Acts of 1865 and 1878, which gave the government more authority over the forests and denied the Indians their means of subsistence.

The establishment of teak plantations and the British focus on a few number of species undoubtedly altered the floristic composition of the forests and endangered biodiversity. Environmental degradation was made possible by the British government's policies, which failed to safeguard the environment. As a result, the Bombay Presidency's colonial forestry legacy was deforestation during the nineteenth century as a result of the colonial state's massive timber extraction from both government and private forests in western India.

References

- R. Mookerjee, Indian Shipping, A History of the sea-borne trade and Maritime activity of the Indians from Earliest Times, Longman, Green and Company, Bombay (1912) p. 246.
- [2] J. Watson was best suited for this post because he lived in the Malabar and was acquainted with the Malabar language and the inhabitants. Besides, he could make use of their local knowledge to acquire information of the forests and prevent persons from cutting small timber. Maharashtra State Archives (hereafter MSA) Warden, Secretary to Government to the Governor-in Council, St. George, 10 November, 1806, Public Department Diary (hereafter PDD), Vol. 222 of 1806, p. 6557.
- [3] W.E. Copplestone, *Bombay Forests*, The Government Central Press, Bombay (1954) p. 4.
- [4] L. Rodrigues, 'Forest Conservancy of Western India in the Nineteenth Century', Unpublished thesis submitted to the Mumbai University, October 2010, p. 82.
- [5] E.P. Stebbing, *The Forests of India*, Vol. I, New Delhi (1982) pp. 61-62.
- [6] Imperial Gazetteer of India, Bombay Presidency, Ratnagiri and Satara Districts, Government Press, Bombay, 1887, p. 32.
- [7] Imperial Gazetteer of India, Poona District, Vol. 15, Part II, Government Press, Bombay (1885) p. 31.
- [8] M. Savur, The bamboo flowers in the Indian forests, What did the pulp and the paper industry do? Vol. I Manohar, Delhi (2003) pp. 7-8.
- [9] Alexander Gibson was appointed the Superintendent of the ten year old botanical garden of Dapuri near Poona in 1838, due to his interest in natural and agriculture (economic botany), rather than any specific expertise in forestry. He later also managed the Hewra botanical garden in Poona. Richard Grove, Ecology, Climate and Empire, The Indian Legacy in Global Environmental History 1500 – 1940, Oxford University Press, Delhi (1998) pp. 27-29.
- [10] H. Noltie, *The Dapuri Drawings and Alexander Gibson*, Mapin, Ahmedabad (2002) p. 32.
- [11] M.P. Clerghon, Forests and Gardens of South India, W.H. Allen (Ed.), London (1860) p. 132.
- [12] MSA/ Forest Reports of the Bombay Presidency for the years, 1849 -1850, (hereafter Bombay Forest Reports) Bombay Education Society Press, Bombay, p. 8.
- [13] MSA/Bombay Forest Reports 1858-1859, Bombay Education Society Press, Bombay (1861) p. 110.
- [14] MSA/Bombay Forest Reports 1858-1859, Bombay Education Society Press, Bombay (1861) p. 127.

- [15] E.P. Stebbing, Vol. I, op.cit., p. 67, See also Richard Grove, op.cit., p. 437.
- [16] M. Harrison, Climate and Constitutions: Health, Race, Environment and British Imperialism in India (1600-1850), Oxford University Press, New Delhi (1999) pp. 154-203.
- [17] A. Crosby, Ecological Imperialism: The Biological Expansion of Europe 900-1900, Cambridge University Press, Cambridge (1986) p. 134.
- [18] A. Gibson, 'A General sketch of the Province of Gujarat from Dessa to Damaun', *Transactions of Medical and Physical Society* of Bombay (1838) p. 49.
- [19] Extract of Letter from Alexander Elphinstone, Collector of Poona and late Collector of Ratnagiri in Southern Konkan, MSA/ Revenue Department, (hereafter RD) Vol. 93 of 1847, pp.51-53.
 [20] *Ibid. p.* 28
- [20] *Ibid.*, p. 28.
- [21] Bombay Forest Reports, 1857-1858, pp. 51-52.
- [22] Ibid., 1855-1856, p. 70.
- [23] Henry Noltie, op.cit., p. 35.
- [24] L. Rodrigues, 'Dr. Alexander Gibson and the Emergence of Conservationism' and 'Desiccationism in Bombay: 1838 to 1860', Indian History Congress: Proceedings, 67th Session (2007) p. 664.
- [25] R. Guha, Forestry in British and Post-British India. A Historical Analysis Part II, Economic and Political Weekly 18, No. 44, October 29 (1983) p. 1941.
- [26] R. Guha, Forestry in British and Post-British India. A Historical Analysis Part I, Economic and Political Weekly 18, No. 44, October 29 (1983) pp. 1883-1884.
- [27] L. Rodrigues, 'Forest Conservancy in Western India in the Nineteenth Century', Unpublished Ph.D thesis, Mumbai University, (2010) p. 299.
- [28] S. Kulkarni, Forest Legislation and Tribals: Comments on Forest Policy Resolution, Economic and Political Weekly 18, Nos. 45-46, November 5-12 (1983) p. 1940.
- [29] E.P. Stebbing, Vol.I, op.cit., pp. 523-524.
- [30] C.R. Strachey, R.E., Secretary to the Government of India to the Secretary to the Government of Bombay in the Public Works Department, Letter No. 78F/2728, 21 June 1864, Simla, MSA/RD, Vol. 13 of 1865, p.197.
- [31] R. Guha, An Early Environment Debate: The Making of the 1878 Forest Act, The Indian Economic and Social History Review, Vol. XXVII, No. 1, January to March 1980, p. 66.
- [32] E.P. Stebbing., Vol. II, op.cit, p. 137.
- [33] R. Guha, *Forestry in British and Post-British India*, Part II, p. 1941.
- [34] Stebbing, Vol. II, op.cit., pp. 470-471.
- [35] M. Gadgil, R. Guha, *This Fissured Land, An Ecological History of India*, Oxford University Press, Delhi (1992) p. 137.
- [36] N. Rao, Forest Ecology in India Colonial Maharashtra 1850 1950, Cambridge University Press, New Delhi (2008) p. 116.
- [37] R. Tucker, Forest Management and Imperial Politics, Thana district, Bombay 1823-1887, The Indian Economic and Social History Review, Vol. 16, No. 3, pp. 285-286.
- [38] N. Rao, op.cit., p.117.
- [39] Bombay Forest Commission Report, Vol.1, Bombay Government Press, Bombay (1887) pp. 1-11.
- [40] Ibid., pp. 127 -169, See also N. Rao, op.cit., 2008, p.129.
- [41] N. Rao, Ibid., pp.129-130.
- [42] J.A. Voelcker, *Report on Indian Agriculture*, Calcutta, 1897, p.16 quoted in Guha, 'Forestry in British and Post-British India A Historical Analysis', Part I, 1887.
- [43] J.B. Lal, *India's Forests: Myth & Reality*, Natraj publishers, Dehradun (1989) p. 20.
- [44] S. Kulkarni, op.cit., p. 2143.
- [45] Ibid., p. 2144.

- [46] Forest Administration Report of the Province of Bombay, 1941-1942, Government Press, Bombay, 1942, pp. 31-32.
- [47] M. Gadgil, R. Guha, op.cit., p. 134.
- [48] G.F. Taylor III, 'The Development of Forest Policy in India-The Forgotten Policy. Sir Herbert Howards's Post War Policy of 1944,' Indian Forester, 108, No. 3, March 1982, p.198.

[49] Ibid., p. 199.

Publisher's Note: Research Plateau Publishers stays neutral with regard to jurisdictional claims in published maps and institutional affiliations.