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European Imperialism and Ecological Change in the Colonies

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Abstract: This study focuses on the ecological element of European imperialism and how it appears in literature on the continent, founded on the connected anthropocentric and Eurocentric discourses. For the sake of advancing science and the economy, ecological imperialism refers to the willful destruction of the natural resources of colonial lands through exploitation, extraction, and transfer. Ecological imperialism is a term coined by American environmental historian Alfred Crosby to describe the successful colonisation of temperate areas by Europeans, including North America, South America, New Zealand, and Australia. According to Crosby, an essential ecological factor contributed to the success of European colonial development, which began around 1500 CE. "European emigrants and their descendants are everywhere, which necessitates explanations," he remarked. To create new areas appropriate for European farmers and establish themselves, white settlers from Europe transported plants and animals thousands of miles away to temperate regions. Crosby coined the phrase "Columbian exchange" to refer to the extensive movement of plants and animals from Europe to the New World. Its roots can be seen in the mechanical worldview that Ross Corey, and other thinkers of the era, including Crosby Alfred and Robert Boyle, promoted.

Keywords: Biotic, Abiotic, Ecosystems, Herbivores, Aboriginal, *Bananilba*

1. Introduction

Understanding the complex history of ecological imperialism is crucial when the world is entering a phase of intensified contests over natural resources, water bodies, forests, hills, mineral resources and fertile soil. In the contemporary context, capitalist countries dominate the world's natural resources exclusively for their benefit. Unequal distribution of natural wealth reproduces social inequalities based on class, nationality, ethnicity and gender. Thus, providing a historical perspective on ecological imperialism is essential to develop a critical perspective on contemporary society, especially when we face climate change as a significant issue.

The word "ecological imperialism" serves historians in explaining the socioeconomic effects of using the natural resources of colonies as products and raw materials for metropolis enterprises. [13] American environmental historian Alfred Crosby coined "ecological imperialism" to describe the Europeans' successful colonisation of temperate areas, including North America, South America, New Zealand, and Australia. According to Crosby, a robust ecological component played a crucial role in the success of European colonial development, which began around 1500 CE. He observed that European immigrants and their offspring are dispersed, which needs answers. The large-scale transport of plants and animals from Europe to the New World is called the "Columbian exchange." White European immigrants transported plants and animals thousands of miles from Europe to create new areas appropriate for European farmers and settlement. Crosby coined the phrase "Columbian exchange" to refer to the extensive movement of plants and animals from Europe to the New World. The primary ecological effects of European colonisation in New World countries like Canada, Australia, and New Zealand were the profound alteration of the complex of illnesses, plants, and animals and the subsequent extinction of indigenous socio-ecological life. On the other hand, due to the high population density and dominance of centralised regimes, Europeans could not create Neo-Europe in Asia and

Africa. However, Europeans consolidated their political hegemony to profit from local expertise and commercialise beautiful scenery. [9]

2. Understanding Ecology

The history of ecology has drawn much attention from academics during the last 60 years or more. Researchers have tried to comprehend ecology better so they can write history. Numerous research on ecology focused on a particular subject and one region, leaving out many other essential factors that academics should have considered. Ecology is related to many different sectors, such as climate, forests, animals, landscapes, health, etc.; thus, it cannot be justified. However, a focused ecology study offers a clear image for academics to comprehend nature. The aim is to demonstrate ecology and draw attention to topics that have yet to receive less consideration. In this paper, I attempted to interpret ecology in a framework that provides knowledge of a link between biotic and abiotic factors, with humans at the top. Ecology has traditionally been utilised in a broad meaning by scholars. In this concept, all biotic and abiotic natural phenomena interact with one another in a constrained area. The biotic and abiotic interaction changed the landscapes and produced a physical environment. [30]

Environmentalists contend that ecology may be more than just a component of science because it depends on the research of other scientists. For example, botanists see ecology as a subfield of botany, zoologists see it as the study of animals, physiologists see it as a component of general physiology, and others have defined ecology as the study of communities. German zoologist Ernst Haeckel coined "Ecology" in 1866 while researching environmental systems and determining the interactions between biotic and abiotic organisms. Taylor correctly identified ecology as studying how organisms interact with their environment. [30] According to Noyes, "We live in a setting that, in reality, is a universe, in which each component has relationships with every other environmental system and discovered how biotic and abiotic organisms interact." [30] Taylor correctly identified ecology as studying how organisms interact with their environment. According to Jawed Ashraf, "Ecology has been the study of relationships from its inception as an academic discipline; within plant and animal species, and among biotic and abiotic components of nature covering the entire diversity everywhere. [5] Ecology is the science that primarily investigates our interactions with the environment. [18] The term "Environment" refers to all living organisms (apart from humans) and their natural surroundings. Ecology, very simply, is the study of how living things interact with their surroundings. It is a component of the scientific study of biology, including the study of people, animals, plants, and all other forms of life, including microbes. Ecology created various levels of relationships between living and non-living things.

3. The Two Perspectives on Ecology and the Environment

Many academics equate ecology and environment, even though there are significant differences between ecology and environment. Andrew Dobson has made the distinction between ecology and environmentalism. Environmentalists, in contrast to ecologists, "take on a managerial approach for environmental problems, arguing that they can be resolved without fundamental changes in present values or patterns of production and consumption, whereas ecologists hold that a sustainable and fulfilling existence presupposes radical changes in our relationship with the non-human natural world and our mode of social and political life. [13] The understanding of ecology will become complicated if attempts are made to make distinctions between ecology and the environment. Every discipline, including anthropology, physics, science, and social studies, must be free to follow their interests and inquiries in ecology. Most of the topics have created original methodologies and are used in ecology. Environmental researchers have developed their vocabulary during the past 60 years, using terms like community, ecosystem, food chain, etc. Ecosystems have no natural boundaries, according to studies. Each level of ecology symbolises a unique relationship with plants, social groupings, and communities. Ecology is organised on several levels. Plant species by themselves make up the initial stage. At the second level, social groups are placed, and the third level is community. Different species of plants and animals interact with each other at all levels and form their special relationship within the environment. Individual species of plant tried to effectively adjust to the conditions of their habitat and consistently compete with the other species of community to continue to live. Sometimes, species individuals and communities support each other and reproduce more species. Communal species provide security to individual species from enemies; in return, unique species offer them food. The second level is a social group that may include the same species cooperating. Many kinds of plants and animals, including humans, are like to live in groups. All those plants and animals that live together in the same situation and are ecologically interrelated constitute a community. [12] Usually, directly or indirectly, all species, for their development, are dependent on each other. For example, plants transform solar energy into carbohydrates, fats, and proteins. Green plants are used as food by herbivorous animals and humans. And herbivores animals were eaten by carnivores which helped grow plants. This is an excellent example of an interconnected and interdependent food chain within the ecologic community. In the third stage, all plants and animals live together in the same habitat and ecologically constitute a community. However, the district allowed fewer other species because it's adjusted to the community. In this ecosystem, individual species cannot adapt to the changing conditions of their habitat.

Since the Middle Ages, human activity has altered

biodiversity; for instance, farmers worldwide observed their progress towards increasing production through the overuse of the soil, forests, and marshlands. Additionally, they produced animals, which was made possible by increased revenues. Landscapes and plant species diversity were altered due to increased agriculture and animal populations. Grazing pressure directly impacted rising agricultural prices in the Scottish upland starting in the 16th century. The impact of grazing pressure and changes in biodiversity were directly related. Scotland's rural area was mainly used for sheep and cattle grazing in the 16th century. Since the Middle Ages, the ecological interaction between people and the climate in Europe, America, Asia, and Africa has significantly changed. Individual and community species can occasionally recover from periods of high mortality due to environmental changes, predation, parasitism, and completion. Communities in this circumstance are more likely to succeed since they typically can adapt and cannot reproduce their species. Due to environmental change, and human and animal migration, other communities of species invaded the older species. New invaders, animals and humans also brought significant mortality to native species.

4. European Imperialism and Ecological Change in Colonies

Rapid ecological changes in the conquered nations were brought about by European immigration beginning in the fourteenth century. Natural landscapes in Africa, Asia, Australia, South America, and America were mostly the same by locals before the arrival of the Europeans. Nevertheless, new alien plant and animal species that were unique to these nations were introduced by Europeans. Because native plants and animals cannot compete with invasive species, many native species are rapidly vanishing. [4] Numerous literary works describe the ecological repercussions of diseases and soil erosion brought on by deforestation. According to the sources, European colonisation not only had a significant negative impact on the ecosystem but also led to the eradication of numerous native species. This was especially true for the African and Asian continents in the seventeenth and early nineteenth centuries, when the colonial government's overzealous hunting and unsustainable agricultural practices led to the extinction of many native species and the rapid spread of alien species that altered the landscapes and occupied prime real estate. [29] They also took valuable natural resources, which resulted in widespread deforestation and the destruction of the native people on many colonial islands. [6] The migration of Europeans into Asia, Africa, Australia, New Zealand, South America, and other tiny islands throughout the sixteenth and seventeenth centuries is an example of this process. Because the Europeans hunted animals for no discernible reason, numerous animal and bird species vanished from their colonies. The native species eventually came under pressure as alien animals and plants quickly multiplied and grew out of control. [1] Native plants were eliminated in new regions by imported weeds because they were produced more quickly.

The first historian who likely recognised the detrimental effects of European imperialism on ecology was Alfred W. Crosby. According to Alfred W. Crosby, who wrote about immigrants in various nations, 90% of the population of Europe went to North America and Canada. [11] The percentage of Europeans in Australia, New Zealand, Argentina, and Uruguay was 95%, 98% in Argentina, and 99% in Uruguay; consequently, several nations lost their indigenous populations. [10] He asked how this extraordinary influx of Europeans ended up in these nations. What effect it has on ecology is still another critical topic. The answer to this query is crucial for historians as well. Alfred W. Crosby stated that European conquest had driven aboriginal peoples from their ancestral lands, resulting in demographic victories for them. After arriving in the new globe, their population quickly grew, especially in the United States, from 18% in 1650 to 30% in 1900. In his account of European immigration, Charles Darwin, a biologist rather than a historian, noted correctly that death seemed to peruse the Aboriginals wherever the Europeans had trod. [11] He added that although the indigenous people of America, Australia, and New Zealand had access to iron tools and weapons, they could not fight with muskets or rifles.

Alfred W. Crosby has categorised the effects of the European empire into four groups: (1) humans, (2) animals, (3) diseases, and (4) weeds. Migration significantly impacted the first category; Great Britain alone exported over twenty million people, and Europe exported almost sixty million. The headlong movement was most noticeable in the United States, Canada, Australia, Uruguay, and New Zealand. This condition was dubbed "Lands of the Demography Takeover" by Crosby. European immigrants quickly displaced the native population; in many colonies, it vanished or blended with the alien population. Their previous traditional identities and cultures have been gone.

5. Introduces New Flora, Fauna and Diseases

Europeans brought their cattle, sheep, goats, horses, and pigs to America, Canada, Australia, Brazil, Uruguay, and New Zealand. Because their animals multiplied quickly, they impacted the new world's environment. Predators posed little threat to alien creatures, while domestic pets escaped human control and went berserk. These creatures reproduced considerably more quickly than people and were adept at adjusting to new environments. European rats and rabbits have also significantly contributed to ecological destruction in Australia and New Zealand. They were the worst pests since neither diseases nor predators could manage their population.

Another problem for locals was infections; with the entrance of Europeans, new diseases that the Indians were unaware of were discovered. When Europeans conquered new lands, they brought epidemic diseases like smallpox,

measles, tuberculosis, influenza, etc., without realising it. Natives were exposed to new pathogens through contact with Europeans. Because they lacked adequate defences against them, the epidemic decimated the native populations of Mexico, Peru, Hawaii, and other places. The Europeans brought many weeds into the new world, radically changing the ecology. It was estimated that approximately 60 per cent of weeds were introduced in Canada by Europeans. A similar situation was for New Zealand's weeds, and most European weeds had created ecological disturbances in Australia, Argentina and Uruguay.

Ecological changes made by Europeans can be seen, for instance, on Madeira Island. Southwest of Lisbon, Portugal, is this volcanic island in the Atlantic Ocean. Joao Goncalves Zarco, a Portuguese explorer, first set foot on Madeira Island in 1425, when there was no habitat. Except for bats and Madeira wood pigeons, Madeira was entirely covered in the deep forest. Only 57 kilometres and 22 km separated the two. Portuguese colonists on this island cut down trees for business and agriculture. Unknown numbers of native flora and insects perished due to Portuguese fires that were started to clear woods for agriculture. Portuguese also brought a lot of domestic animals to Madeira, and after about 15 years, they became wild animals. Goats devastated the vegetation; alien cats, mice, and rats destroyed native birds. Ecological changes made by Europeans can be seen, for instance, on Madeira Island. Southwest of Lisbon, Portugal, is this volcanic island in the Atlantic Ocean. The Madeira Portuguese also unintentionally and intentionally brought exotic plants together with invasive weeds, which led to the extinction of numerous native plant species. The National Park's director, Henrique Costa Neves, backed this position by claiming that an alien plant, specifically *banana* (Malayan ginger), escaped from their garden, grew into thickets, and suffocated other native species. J. Donald Hughes [19] provided a similar account "After being introduced to the nearby island of Porto Santo, rabbits swarmed everywhere, eating everything and briefly driving the human residents off the island." [20]

There were other new islands, including Cape, St. Helena, and others, which Europeans colonised and destroyed the ecology in addition to Madeira. Another illustration is the British invasion of Australia. In the eighteenth century, the British occupied Australia, and this colonisation resulted in several ecological changes since they introduced many foreign plants, animals, trees, and new illnesses unknown to the native population. The indigenous people nearly vanished within a few decades due to British policies and a disregard for the environment, and lush landscapes had become desolate. Egypt served as another illustration of human exploitation. The construction of a tall dam on the Nile River at Aswan throughout the 20th century can be attributed to an ecological change. Many environmental changes appeared within a decade; rising water table, salt accumulation, and other environmental problems happened due to the dam.

6. Environmental Effects of European Industrialization in Colonies

Ross Corey added another justification for the ecological disturbance. He claimed that industrialisation, which had a significant negative influence on the environment, was fueled mainly by cotton. It became the most important commodity on the planet in the nineteenth century. According to Ross Corey's estimation, 1.5% of the world's population was directly or indirectly employed by the cotton industry in the nineteenth century. James A. B. said, "It is little wonder that contemporary observers viewed cotton as nothing less than a 'world power. [20] Scherer. In the USA, Asia, and Africa, cotton has a tremendous impact on land use and farming practices. Cotton planting helped spark a revolution in the USA when people started cultivating cotton instead of other crops. This resulted in an ecological problem because the soil fertility in many places decreased. Cotton growing resulted in the conversion of extensive woodlands to fields. Large cotton mills destroyed rural vistas and polluted rivers and lands. Around three-quarters of all cotton produced worldwide in the 1860s was grown and exported by the United States. The US shipped over 90% of the cotton used in France, with the remaining 10% going to the German Zallverein and the other 25% to the British. [11] However, cotton shipments had decreased from 3,5 million bales to 10,000 within a year of the US Civil War. The shutdown of thousands of textile factories caused significant losses for the European industry. British and French officials were concerned about the situation since a wave of violent unrest had started throughout Europe. No crisis in contemporary times has been as closely followed, and no European war or revolution has severely jeopardised the interests of England, according to The Times of London. [21] India benefited from this crisis since it became a prime contender for cotton exports due to the shortage of cotton. India decreased British reliance on US cotton, and the East India Company began steps to increase Indian cotton production to increase output. [17] Indian farmers began to cultivate more cotton on their land in place of wheat as a result. It was entirely caused by the high price of cotton on the world market, and in the years that followed, transportation advancements paved a wide path for cotton expansion.

Egypt also benefited from this catastrophe at the same time. Egyptian cotton production increased fourfold and, on average, nearly fivefold by 1865, occupying around 40% of Lower Egypt's total arable land. Over the same period, exports to Europe nearly tripled. Due to the extensive clearing of vast forests and acacia woodlands for cotton farming, both Egypt and India soon brought about ecological disasters. According to Bombay's income statistics from 1911, cotton plantations in Bombay Provinces, particularly in Deccan and Karnataka, took up twice as much space from the early 1860s to 1910s. The Berar government offered monetary rewards for killing wild animals.

Muhammad Ali's promotion of cotton crops in Egypt resulted in significant ecological changes. By constructing

massive dams, highways, and canals, Muhammad Ali started modernisation in Egypt; the outcome became apparent later when ecological issues surfaced. The Aswan Dam negatively impacted the fisheries, which caused silt and fertility issues in the Nile River's lowlands. Malaria and other unwanted aquatic illnesses had spread to Egypt and caused health issues. [28]

Europeans were closer to the African colonies to ease their concerns about the cotton shortage. There were large areas that were appropriate for growing cotton. Tens of thousands of hectares of Uganda have been cultivated for cotton while the British pushed cotton planting along the Kenyan coast. [23] African farmers were hesitant to plant cotton in their fields, however. However, Europeans had taken over vast swaths of land and made Africans cultivate cotton there, which incited intense anger. Africa's preoccupation with ecological issues first surfaced during the colonial era's eighteenth and nineteenth centuries as a response to crises of starvation and drought in various regions of the continent. Early accounts of African climatic history have centred on the interactions between the climate and human activity. Because agriculture and other economic activities impacted Africa's physical landscapes, humans have affected the continent's ecology directly or indirectly.[8] The most important climatic element restricting African food production is rainfall, not temperature. Indeed, the stark split of the African continent is primarily a result of temperature and precipitation. The timing of rain, which impacted cropping patterns and animal rearing, is another facet of Africa's climate history. Environmental historians must notice this part of the colonial period's impact on Africa's climate history. Environmental historians mainly focused on drought, famines, and transient climate catastrophes. Environmental historians have recently shifted their focus to attempt and investigate the climate history in mediaeval Africa. The West African Sahel saw multiple climate epochs between 800 and 1600 AD. [23] She added that the years from 1300 to 1450 A. D. were drier, and those from 800 to 1300 A. D. were relatively moist. The amount of rainfall had been changing in mediaeval Africa, but unlike now, the continent's boundaries were fluid, and humans had access to the vegetation. A zone with 100 mm of rainfall separated the Sahel from the Sahara Desert. In contrast, the southern limit of the Sahel and the area where drought-tolerant crops were grown were defined by the 400 mm rainfall line. Food production in mediaeval Africa was impacted by temperature; in dry regions, sorghum and millet were cultivated primarily because they were drought-resistant; maize, an alien crop introduced to Africa by Europeans after 1500, offered significantly higher yields and quickly gained popularity throughout the continent. The humid and semi-humid climate of Africa proved ideal for the maize crop. Africa's savanna regions were wonderful for farming, but tsetse flies made an excellent barrier for raising cattle.

Rubber was a crucial plant in Asia, Africa, and Latin America during the colonial era, dramatically altering trade and the environment worldwide. According to Ross Corey, until the 1800s, rubber in Europe was merely a curiosity. [10] But rubber underwent two improvements, elevating its value on the world market. Charles Goodyear created durable rubber, and John Boyd Dunlop developed pneumatic tyres. The bicycle industries in Europe and America benefited from these developments, and from 1875 to 1900, the annual rubber production increased from about ten thousand to fifty thousand tonnes. Despite a rising need for rubber on a global scale, its natural form was mainly gathered from forests, with South America serving as its primary source. The colonial government and private investors from Europe started to establish plantations in other territories as the demand for rubber kept rising. Malaysia, Indonesia, Ceylon, and southern Indochina were all former South Asian possessions that made appropriate locations for rubber plantation experiments. Large land areas were initially needed for rubber farming, which destroyed forest, swamp, and scrub regions. The expansion of rubber farming had other effects besides destroying trees, such as soil loss. Malaria was a further issue caused by rubber crops. According to Ross Corey's estimation, the fatality rate from malaria in Malaysia was 50/1,000 in 1901. In 1911, it registered a 63/1,000 death rate. Despite a high malaria death rate, over 4 million hectares of Southeast Asia were turned into rubber fields between 1900 and 1940. In 1940, 3.5 million hectares of land in Malaysia and the East Indies were used to cultivate rubber, yielding 1.1 million tonnes. Two-thirds of this output, almost entirely headed for the industrial world, was used to make tyres for cars, buses, and trucks. [10]

7. In the Particular Case of India

For India, especially Uttarakhand, the British imperialist power brought significant ecological changes in the forest region. Uttarakhand was known for its dense forests before the British's seizure. An early commissioner of Kumaun, investigating sources of feed for a proposed iron mine, was bold enough to declare that the forests of Kumaun and Garhwal are boundless and, to all appearances, inexhaustible". [15] When the British annexed this region, it came under the North-West provinces and Oudh. The North-West provinces and Oudh were divided into three circles, i. e., the central circle, the Oudh circle and the school circle. [25] With the establishment of British rule, the destruction of forests by timber cutters, charcoal burners and, above all, nomadic cultivation was allowed to go on everywhere unchecked. The extension of tillage was considered the chief care of the government, and no regard was paid to the improvident waste of jungle on all sides. The idea of exploitation of forests in this state originated with Wilson. First, he took a shooting license and permission to collect such 'forest produce' as munal plumage, musk pods, skins and heads of wild animals. When he saw the majestic Deodar, he took a general license from the Durbar in 1850 to use the forest produce.[26] He introduced the unique method of transporting timber by floating it through rivers, down to the plains". [14] This was the time of the beginning of modern

industries in India under colonial rule. The forests in their own country were utterly exhausted, and the commercialisation of forests was introduced to feed the growing demand for forest-based raw materials. This system of floating logs of wood submitted by Wilson became very helpful and economical, as it minimised the transportation cost of forest produce to the industrial and commercial centres in the plains and the seaports.

To promote the commercial interest of the empire, the great trees of sal, Teak and Deodar were mercilessly felled for railway sleepers. Wood was supplied to the plains for the manufacturing of sleepers for railways. The big example of forests for commercial purposes is seen in 1876, "when the forest department entered into an engagement to supply 70,500 deodar sleepers to the Scindia state railway. Moreover, railways helped in British commercial activities. It became easy for them to transport cheap machine-made goods to the Indian market. [7] Gandhi criticised the establishment of railways, as it led to the decline of traditional handloom industries in India. He said modern machine-based industries would concentrate power and riches in one section of society. [14] It would also be against the notion of self-sufficient villages, which could only be achieved through cottage industries and small-scale projects. [16] The commercial policies of the British would enslave man and alienate him from himself and society. Karl Marx also observed that the British established a railway to fulfil the capitalist class's demands and exploit the resources of countries like India. He mentioned that the "English millocracy intend to endow India with railways with the exclusive view of extracting at diminished expenses the cotton and other raw material for their manufacturers" [2]. Even though their own country's forests were utterly exhausted, they were treating Indian forests in the same manner. This type of timber operation directly impacted the inhabitants of the hilly region, as deforestation leads to annual floods destroying whole villages.

The next significant threat which resulted in the clearing of giant species and displacement of the natives of the hill region was the construction of roads and bridges. However, roads and bridge construction were relatively slow until the late 19th century. In the Garhwal division (1889), the total length of the road constructed was just 16 miles. The constructed roads include Gonjera sol road, Gali Rewarh Road, Chota Rhulia Road and Delidinga sot road. These roads were mainly built for commercial purposes" [22]. In Kumaun division, the Dhanour-Kathal road of 6 miles length was constructed, and in Garhwal division, 7 miles of new cart road was built in 1897" [23]. The construction work was negligible in this period. It was mainly after the 1940s that the construction of roads and bridges was in full swing. However, there were some slight improvements in the year 1907. A total of sixty-one miles of new road was constructed, and 4191 miles of existing roads were repaired at Rs. 54,072.

On 1st September 1905, the three forest circles in the United Provinces were reconstituted into two new processes, 'Eastern' and 'Western'. The status of the forest school at Dehradun had been raised, and it got converted into Imperial Forest Research Institute and College. The total area of reserved forest was 23,103 acres. [27] In the protected forests, there was a decrease of 21,493 acres mainly due to the exclusion of the size of fee simple grants in the Almora district" [2]. In eastern and western circles, the condition of forests and the natives of the hill region have remained the same. The forest policies of the British Indian government were exploitative in nature. Still, the area faced the same threats to the forests, i e., felling trees for commercial use, grazing practice, fire and construction of roads and bridges. Moreover, droughts were adding to these threats. "In Nainital and Jaunsar divisions (1908), droughts killed not only the seedlings of exotic trees but also the established forests" [24]. The forests were ravaged further to an unprecedented extent by fire. Because of the scarcity of fodder, 78441 acres of forest were fired in the hope of including further grass growth. In Kumaun district forests, it was observed that the number of undetected fire cases was huge.

In brief, Uttarakhand's Forest had been drastically reduced because British authorities required teak wood on a large scale for the rail sleeper construction. They formed many acts regarding the forest rights.

8. Conclusion

In history, European immigrants brought ecological changes to the new world. Historians have noted that the eighteenth and nineteenth centuries carried massive environmental disturbances. Many parts of the globe experienced abnormal weather; this period witnessed a severe cold climate. The sources highlighted that European expansion was not only environmentally destructive but also responsible for permanently eliminating many native species. This was particularly true in Africa, Asia, Australia, and New Zealand in the eighteenth to nineteenth century, where excessive hunting and exploitative agriculture eliminated many species. In the early modern period, European explorers, merchants, travellers, and immigrants spread worldwide. As a conqueror, they modified the ecosystem of colonies by introducing animals and plants. They extracted maximum natural resources, deforested, and decimated the indigenous population. This phenomenon can be seen in the sixteenth and seventeenth centuries with the expansion of Europeans to Africa, Asia, Australia, South America and other small islands.

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