



Rail and Tree: The Story of the Cochin Forest Steam Tramway

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Summary: *The British were well known for their introduction of the railway system in the Indian subcontinent for their own needs. This article is a close look at a rail innovation that drove the commercial needs of the empire.*

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The hallmark of the British process of empire-making and colonialism in the Indian subcontinent was the accumulation and exploitation of natural resources, including forests. The mechanics of this exploitation were supported by the compliance of the local governments, highlighting the history of technological advancements that shaped the functioning of the state in the later years. The introduction of technological innovation was preceded by the surveys of forests and other natural resources, which were commodified to meet the colonial government's needs.

Early Colonial Forest Policies

During the early years of British rule, forests were viewed as a timber source, leading to the widespread clearing of forest areas as they directed policy towards agricultural development. They regarded land solely as a revenue-yielding commodity and considered its ownership the foundation of Western wealth. However, in the early years of the nineteenth century, colonial administrators began to open their eyes to the swift destruction of forests and their inability to meet the needs of the imperial government.

Thus, the British experiments began to regulate the forest and its resources in the South, focusing on creating a timber monopoly. This prerogative was initiated after the capture of Malabar by the British East India Company. The Court of Directors instructed its officials to survey and identify potential commodities for trade in the region. This opened up the forests of Kerala to the Company as potential holdings for securing timber.

In 1800, the British appointed a commission to assess the extent of forest wealth, and

it reported that the Company had procured a monopoly on all the timber grown in the province. The statistics implied that the Company had taken control of the access to teak wood from the indigenous population and could also restrict the type of tree that could be cut for timber: they wanted the trees to reach their peak before they could be cut. This led to the passing of regulations prohibiting the felling of teak below two inches in girth¹. In 1805, a forest committee was formed to inquire about the capacity of forests and the status of proprietary rights in them. The committee recommended that more distant parts of forests could be exploited by road construction. Thus, they intended to invade the interior part of the forest and exploit the forest wealth under the pretence of infrastructural development. This led to the proclamation of prohibition of 'unauthorised' cutting of trees with the additional appointment of Captain Watson of the police as the Conservator of Forests for Malabar and Travancore on November 10 1806.

In 1842, the first teak plantations in Nilambur were established by the then Collector of Malabar, Mr H V Conolly, with Chathu Menon's help. His efforts made the Court of Directors recognise the need to conserve and improve the forests of South India.

The first Indian Forest Act, after India came under the rule of the British Empire, cited as 'The Government Forests Act' was passed on May 1 1865. It would allow the British to obtain timber for railway sleepers to establish railway connections throughout the subcontinent. The primary

¹ Joseph, Sebastian. *Cochin Forests and the British Techno-Ecological Imperialism in India*, 2016. http://books.google.ie/books?id=i1COjwEACAAJ&dq=Cochin+Forests+and+the+British+Techno-ecological+Imperialism+in+india&hl=&cd=1&source=gbs_api.

aim of the Act was to establish control over the forests by declaring forest areas as State forests. The provisions of the Act led to the demarcation of Reserved and Unreserved Forests and the listing of reserved trees.

The Indian Forest Act of 1878 (amended in 1890, 1901, 1918 and 1919) divided the forests into three classes: (1) reserved forests, (2) protected forests and (3) village forests, with the first class being claimed as state forests for the commercial interests of the British and the second with registered but unsettled private rights². This Act also established the notion that forest use by the local villagers was not a right but a privilege. The Forest Policy of 1894 emphasised that the sole object of the Forest Administration was the public benefit by extending agriculture to forest areas. The Indian Forest Act of 1927 (amended in 1930 and 1933) classified the legal matters and procedures for trial in forest offences. These Acts paved the way for the British to have a commercial monopoly over the forests in South India.

Colonial Intervention in Cochin Forests

Following Tipu Sultan's defeat by the British, Cochin state entered into a subsidiary alliance with the British under the Madras government. The forests were home to the Kadars and Malayars, who did not harm the timber wealth. The British introduced the departmental forest management system, and forested areas were leased out to the colonisers to establish plantations.

² Bandopadhyay, Arun. "The Colonial Legacy of Forest Policies in India." *Social Scientist* 38, no. 1/2 (January 2010): 57.

Between 1800 and 1895, the British government established the Forest Department to monopolise valuable timbers.

Further developments were borne from the prolonged efforts and correspondence between Raja Rama Varma, Cochin's monarch, and the British government. Fascinated by the British departmental system, the Raja frequently met with the British Conservators of Cochin forests to change the forest administration of Cochin. The primary issue that paved the way for these discussions was the smuggling of timber into Trichur and Ollur, which reached the British territories. The Raja knew that teak trees were cut down on a massive scale at the Chittur Kanam (Chittur Forests), depriving the Cochin Kingdom of its due share of revenue, and it lost vast areas of forests, prompting the Durbar to restructure the administration of forests. These actions culminated in formulating the Cochin Forest Regulation under Foulkes' guidance. His report, 'Suggestions Regarding Forest Administration in the Cochin State,' stressed the importance of appointing foresters and the need for adequate transport facilities to access the Parambikulam forests.

A Plan for a Tramway

The conventional method for transporting timber utilised the elephants, which became obsolete due to the incapacity of elephants to drag logs to the depots³. The suggestion was to open cart roads through the forests to facilitate continuous supply in the durbar. At the same time, J C Kohlhoff, the Conservator of Forests, 1894, recommended the construction of a

³ Joseph, *Cochin Forests and the British Techno-Ecological Imperialism in India*.

tramway to explore the virgin forests of Parambikulam.

Timber from other forests was floated down to the deposit points through the river, making the Chalakudy River a viable transportation channel. Robert E. Haffield was appointed in 1900 to survey and report on the possibilities of this proposition. The report discovered that the higher ends of the river were full of hurdles, and a land route with suitable transportation would tap a longer and richer forest region year-round. This proposal led to the establishment of the Forest Tramway.

Building the Tramway

The Forest Department designed the tramway to work the virgin forests of Parambikulam and Orukomban⁴. It covered a distance of 83.20 km from its starting point, Chalakudy. The work began in 1901 and was completed in 1907⁵. The only one of its kind in India, the tramway continued as the significant mode of timber transportation from 1907-1960. In its final course, it ran about 2700 ft above sea level. The main block of the forests worked by the tramline was the Parambikulam area, located in the eastern regions of the state forests. Interestingly, although its original purpose was to serve the Forest Department, private traffic was also allowed as the tramway transported fuel, canes, reeds and sleepers extracted by private contractors.

⁴ Thomas. "Forest- Human Interface: The Forest Policy of the Native State of Cochin (1800-1947)." *Proceedings of the Indian History Congress* 55 (1994): 616. <https://www.jstor.org/stable/44143418>.

⁵ "Forest- Human Interface: The Forest Policy of the Native State of Cochin (1800-1947)."

Parts of the Tramway

The second section had 12 zigzag curves through which the tramway ascended and descended the mountains, called *madakku vazhikal* in Malayalam. The workers referred to these curves as 'three points climb up' and 'two points climb down'. In these climbs, the train moved through an extended line to an endpoint and started moving backwards in reverse, rolling along the main line until it reached another reverse point. These movements took the train up and down the climbs.

In the final section, the train ran from Komalapara to the last point at Chinnar in the Parambaikulam range. The line passed through the five zigzag lines and descended to Mylappadan.

The West German Company, Orenstein & Koppel, supplied the locomotives for the Cochin Forest Steam Tramway from 1904 to 1907. It was founded on 1 April 1876 in Berlin by Benno Orenstein and Arthur Koppel. In 1905, they could build 600 locomotives a year as they reached their peak of production before the Second World War. During this time, the firm supplied eight locomotives for the CFST. The Tramway Department also established a full-fledged workshop at Chalakudy. This workshop manufactured and maintained the machines. After the tramway was commissioned in 1907, the workshop was used to produce spare parts for the system.

The Tramway staff consisted of Permanent Way Inspectors, Loco Foreman, Drivers, Strikers, Traffic Inspectors, Guards and Brake Coolies in addition to the administrative staff. It also employed Tribals like the Kadars and the Malayars as watchers and coolies in the tramway service.

The tramway was not directly under the Forest Department's control but rather under the control of a tramway engineer who was directly responsible to the Diwan and held a special position in the Cochin Legislative Council.

Imperial Control and Destruction of Forests

Some members of the Cochin Legislative Council opposed the tramway for fiscal and ecological reasons⁶. The system was crucial for the British during the Second World War because it quickly supplied the needed timber, implying the direct involvement of the Cochin State in the war. Many private agencies also supplied larger quantities of wood to the British. On the other hand, large areas of forests were leased out to private European landowners to start plantations.

As the bulk of the loads were headed to Thrissur and Ernakulam, the Diwan, in conference with the South Indian Railway, agreed on the direct running of the tramway trains to Ernakulam and Thrissur through the rail line. This started in 1909, and the number of trains increased in the consequent years.

In the subsequent years, Cochin saw massive destruction of its forests. The Finance Committee formed in 1926 discovered that the total quantity of timber extracted from the Orukomban Working Circle was less than anticipated. It also found that catering to the exigencies of the imperialists and in the absence of proper planning for extracting timber from the

forests, the tramway was spending more than its operations had earned it.

In 1923 Cochin, the Cochin Legislature Council Regulation was passed, and under it, in April 1925, the Legislative Council was elected. C A Ouseph, the elected member from Chalakudy, attacked the colonial forest policies and questioned the prolonged working of the tramway after deviating from its original plan. Some council members exposed the smuggling of timber to British regions of the Malabar province from Cochin and the wrongful imposition of taxes on tribals for collecting bamboo from the forests. Even the Conservator of Forests called the tramway 'a necessary evil' till the state worked out all the timber of the Parambikulam forest, making plain the British authorities' interest in continuing the tramway's functioning⁷.

Backlash and Resistance

Agitated over the irregular functioning of the Forest Department and the continuation of the tramway, the council members moved several motions to reduce the allotment of funds for the Forest Department and the tramway. Despite the strong resistance from the non-official elected members, the funds for the Forest Department were passed by the Cochin State Legislative Council without any reduction, and the grant for the tramway was allowed without any cut. This action exposes the fact that the native state was under heavy pressure from the British government, and the notion of bringing the forest resources under the control of the state and the British government had materialised. As Cochin State was concerned with revenue generation, they

⁶ Joseph, *Cochin Forests and the British Techno-Ecological Imperialism in India*.

⁷ Cochin Legislative Council Proceedings, vol 1, 30 July 1925, p. 278

decided to connect the tramway with railway stations to exploit forests untouched by the tramway. This decision resulted in the excessive felling of trees in the Parambikulam area. Meanwhile, the government also discussed the proposal of entrusting the work of the tramway to private companies on lease, which was positively received by companies based in Madras. While the tramway was already an ecologically destructive entity, it became a profitable concern for the British during the Second World War.

The War and the Forest

India was the only supplier of timber to the Middle East and the allied forces in Iraq and the Persian Gulf⁸. In the case of Cochin during the period of both world wars, it became the supplier of timber necessary in the war front⁹. In 1940, a Timber Directorate was set up in Delhi to channel the supplies of forest produce from the provinces. The Annamalai Timber Trust and the Bombay Burma Trading Corporation were some of the companies that were given licences to cut trees which led to the severe destruction of evergreen forests in Vazhachal and Peringal. So, the strategic value of Indian forests, which was evident in the building of the railway network, was forcefully highlighted during the world wars. Thus the wars necessitated the destruction of the forest resources of the Cochin state.

Timber and Shipbuilding

The tramway was hailed for the speedy supply of timber extracted from the interior forests. This led to the Cochin

⁸ Joseph, *Cochin Forests and the British Techno-Ecological Imperialism in India*.

⁹ "Forest- Human Interface: The Forest Policy of the Native State of Cochin (1800-1947)."

Forest Department working as a major liaison between the Timber Supply Circle of Madras and the Timber Directorate of Delhi. This further led to the allocation of extra funds for the Tramway and the Forest Department by the Forest Conservator. The government also opened up roads into forests untapped by the Forest Department, which were utilised by private timber contractors after the end of the war, causing mass destruction to the interior forests. The South Indian Corporation also built many ships for the British Navy. This revival of the shipbuilding industry was due to the continuous supply and availability of sufficient timber and trained labour brought to the notice of the War Department. This was an inevitable consequence of the imperialist policies of the British.

War Consequences on the Public

With the advent of the Second World War, the Cochin state faced the crisis of acute shortage of food due to the drop in import of rice after the annexation of Rangoon by Japan which had the immediate effect of a rise in the price of rice. To resolve this issue, the Hill Paddy Scheme was started by the Forest Department in 1942. According to this programme, the cultivation was done by forest officials and workers hired by them and later, the forests were opened up to private individuals. The regions selected for this scheme were the borders of dense forests and different localities including the Anamalai Block, the Killanur Block and Vadakancheri Block. The forests were leased out to the officials without proper documentation and large areas of peripheral forests were cleared. Despite the launch of the scheme, the price of rice remained high and uncontrolled as the cost of production for the scheme was high.

The excessive timber supply also caused an acute shortage of firewood for civilian consumption. The authorities introduced control mechanisms such as the rationing system, which was initially started in municipalities and later extended to rural areas. The ration quota for a family was fixed at 1 ton per month. The government provided licences to private contractors to collect firewood from the forest and entrusted them with the responsibility of rationing firewood supply. Thus, the destruction of forests continued as a ceaseless process.

The Government and the Plantation Industry

The colonial forest policy promoted the plantation industry. The government leased acres of forest to European planters for meagre rates and provided all infrastructural facilities to encourage the plantation industry. European planters exerted immense pressure to construct new roads and improve old ones to the forest from the main markets.

This issue was investigated in 1916 by Diwan Sir Joseph Bore, the outcome of which was a survey and an estimate for the construction of the road connecting Chalakudy with Annamalai Road in Malakkipara estate. The British authorities realised that infrastructural improvement was necessary to safeguard the interests of the European planters. The priority was the plantation industry, not the conservation of forest resources.

E. Ikkanda Warriar, the member from Cheruthuruthy opposed furthering the interests of the capitalist planters in Annamalai. The nominated European member of the Council, H J Walmesley, and the planter's nominee, V J Mathews, fought for the project on a war footing as the

connection of Chalakudy with Pollachi was vital for European Trade. Despite the criticism, the motion favoured the planters and can be considered a final dismissal of the state's argument that the forests were reserved for conservation purposes.

The Termination of the Tramway Services and its Aftermath

The tramway continued to function in Cochin even after Independence. With the formation of the state of Kerala, the relevance of the system was questioned and a debate between the tramway staff and the Forest Department ensued. In 1950 a special committee was set up under the chairmanship of the Chief Conservator of Forests to evaluate the situation. Based on the Conservator of Forests report in 1951, it decided to discontinue the tramway as the report pointed out that it was not economically viable, a white elephant causing great loss of revenue for the state. However, in 1953, another commission under the Chairmanship of Mr. B.V.K. Menon, Retired Chief Secretary of the former Cochin State was appointed to evaluate the possibilities of reviving the tramway. The Commission reported that the system should be revived due to its monumental status and heritage value. In 1957, the forest minister suggested that the tramway be repurposed for tourism. However, this option was rejected after the fall of the Communist Ministry. The Tramway Employees Union advocated for the system's continuance arguing that the tramway wasn't a financial burden and the transportation of timber was transparent and free from malpractices by the contractors. Finally, the motion presented by the Forest Department to discontinue the tramway service was accepted by the

then government, and the tramway was discontinued in 1963.

Conclusion

The construction of the tramway can be considered an engineering marvel for its infrastructural brilliance and how it straddled Kerala's unique topography to benefit the trade and industrial interests of the colonial power. According to Sebastian Joseph, It is an example of the techno-ecological imperialism practised by the British to promote their commercial interests. However, the colonial policies played a detrimental role in changing and destroying the natural resources, especially during the war, which led to the loss of forest cover not only in Cochin state but also in other parts of the subcontinent, which has had consequences on people dependent on forests and thus signified a parasitic invasion on nature empowered by capitalism and colonialism.

Further Readings

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