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## Background To The Construction Of The Darjeeling Himalayan Railway By The British And Its Socio-Economic And Cultural Impacts

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### Abstract:

The Darjeeling Himalayan Railway (DHR) which is also famous as 'Toy Train' is one of the most important aspects of the lives and culture of the people of Darjeeling hills. Apart from tea, the DHR is another feature of the area which made it world famous. Constructed by the British for the purpose of transportation of tea, timber, coal and other essential goods to and from the area at first, it gradually became an indispensable part of the people of the area which greatly affected their socio economic and cultural lives. The small hill area which was chosen by the British as sanatorium for their sick soldiers and officers, after the construction of the DHR, now became a world-famous destination for the tourists around the world. The World Heritage site status given by the UNESCO on 5<sup>th</sup> December, 1999 only enhanced its reputation as the cultural heritage and emotional aspect the people of the area engaged with.

**Key words:** Toy Train, British policy, sanatorium, World Heritage Site, cultural aspects

The Darjeeling Himalayan Railway (DHR), UNESCO World Heritage Site, is a narrow-gauge railway that has connected New Jalpaiguri to Darjeeling since its completion in 1881. Known for its engineering marvels, such as Batasia Loop and steep gradients, the railway has had profound socio-economic impacts on the Darjeeling region.

The DHR was built during British colonial rule to address the logistical challenges of transporting goods and people between the plains and the hilly region of Darjeeling. Its construction was prompted by the need to transport Darjeeling tea, timber and other commodities, as well as to provide easier access for British officials and tourists. The railway's innovative design, including loops, Z-reverses and narrow-gauge tracks, set a benchmark for mountain railway engineering.

At present DHR runs through the route of New Jalpaiguri to Darjeeling via passing through several stations of terai and hills (Siliguri Town, Siliguri Junction, Sukna, Rongtong, Tindharia, Gayabari, Mahanadi, Kurseong,

Tung, Sonada, and Ghoom. The Darjeeling Himalayan Railway which covers the total distance of 88 km (55 miles), between NJP to Darjeeling and takes approximately 7 hours 30 minutes to reach the destination

The construction of the Darjeeling Himalayan Railway (DHR) between 1879 and 1881 was a remarkable engineering feat, considering the challenging terrain of the Himalayan foothills. This process involved innovative techniques, meticulous planning, and labor-intensive efforts to overcome geographical logistical obstacles.

## **Background and Conception**

In the mid-19<sup>th</sup> century, Darjeeling emerged as a significant tea growing region and a summer retreat for the British colonial officials. However, the lack of efficient transportation hampered economic growth and connectivity between the plains of Bengal and the hills of Darjeeling. Franklin Prestage, an agent of the Eastern Bengal Railway, proposed the construction of a railway to connect the plains with Darjeeling. His vision aimed to reduce the cost and time required for transporting goods and people. The British government approved the project in 1879 and surveys were conducted to map the route. The engineers opted for a narrow-gauge (2 feet) tract to navigate the steep slopes and curves.

The main objective of the railway was to provide transport facility of traffic and freight in the hilly terrain, which at that time was a favourite destination of the Europeans, Eurasians and the rich Indians along with the convalescent soldiers and sick foreigners in the sanatorium. The cost of living in the hills during the summer season was very dear to the people of Bengal due to the conventional modes of transportation. The transportation involved number of porters starting from fifty to fifteen hundred to reach the hill station and the same or greater number to come down the hills. Beside the greater possibilities of porters leaving on the middle of journey with rare help expected in the midst of roads surrounded by jungles were not uncommon in those days. Specially for the children, old and disabled the journey was not at all smooth. In 1860s the Cart Road was constructed and considered as one of the best mountain roads but the conveyance was not so fast and comfortable to most of the European visitors. Hence when the proposal of laying a tramway was presented to the government of Bengal there was no question of not granting the permission. The government had to bear one lakh to one and a half lakh of rupees annually to maintain the cart road due to the damages done by the onset of monsoon, the Tramway agreed to maintain the cost of the road on the terms that a two feet gauge was given for the usage of the Tramway from the Cart Road. The two feet Narrow Gauge (NG) steam engine started from its station Siliguri Terminus at an altitude of 395 ft above sea level to Sukna Station from where the climb gradually starts up to 7408 ft at Ghum station, the highest altitude on the line and descends down to the Darjeeling station. In course of its 52 miles of journey, thirteen stations are crossed by this diminutive train and in certain places the alignment of the cart road was so steep that it was unworkable with the engine. Therefore, some ingenious methods of engineering were applied in the form of 'Z' reverses or zigzag, loops or curves, etc. that made the mountain journey unique.

The tea plantation industries and cinchona industry were well developed before the railway in the hills. The movements of goods, traffic, machines, building materials, etc. were greatly facilitated by the inauguration of the Darjeeling Himalayan Railway. The number of days of travelling from Calcutta to Darjeeling was cut short from many folds. At the same time the cost, difficulty of the journey was all smoothed. The troops and mails were also carried by the DHR. Labourers were transported to the foothills by the DHR and thence from there to distant places for the usages in construction of roads' purposes. The largest help was for the plantation industries. But as the DHR was the only mountain railway in Darjeeling it had no competitor to check and balance, as a result the monopoly of railway in its fare charges was quiet high compared to other mountain railway of that time.

### **Engineering Challenges and Innovations**

Although the British government gave its green signal to construct the railways to connect Darjeeling hills and the plain but the process of its construction was never going to an easy task. Building a railway in the rugged Himalayan terrain presented unique challenges:

#### **Steep Gradients:**

The region's steep slopes required the use of innovative solutions, such as loops and Z-reverses (zigzag tracks), to allow trains to ascend and descend safely. A railway Z-reverses or switchback is a railway operation in which a train is required to switch its direction of travel in order to continue its journey. While this may be required purely from an operations standpoint, it is also ideal for climbing steep gradients with minimal need for tunnels and heavy earthworks. For a short distance (corresponding to the middle leg of the letter (Z), the direction of travel is reversed, before the original direction is resumed.

#### **Curves and Narrow-Gauge Tracks:**

The tight curves and the decision to use a narrow gauge allowed the railway to adapt to the limited space and sharp turns of the terrain.

#### **Manual Labor:**

The project relied heavily on manual labor for cutting through rock, laying tracks and constructing infrastructure. Local workers and laborers from other parts of India contributed to the effort.

### **Construction Phases**

As the process of the construction of the railway from plains to the hill town of Darjeeling required several technological marvels, extensive labor force and well drawn-out plan, it was carried out in several phases.

## Phase 1: Siliguri to Tindharia (1879)

The first phase connected Siliguri to Tindharia. Tindharia is a village in the Kurseong subdivision of the Darjeeling district. Here a railway workshop for the Darjeeling Himalayan Railway was constructed. The workshop was built at the present location in 1881. It was built temporarily during the last part of the 19<sup>th</sup> century for the maintenance of locomotives and carriages and wagons of Darjeeling Himalayan Railway. Construction of the Tindharia workshop at the present location started in 1913 and started operation in 1925. Engineers encountered their first major challenge in the steep gradient at Sukna, which required the construction of the first zigzag track.

## Phase 2: Tindharia to Kurseong (1880)

This segment introduced engineering marvels like the Agony Point loop, which became famous for its sharp turns.

## Phase 3: Kurseong to Darjeeling (1881)

The final phase brought the railway to Darjeeling passing through picturesque landscapes and dense forests. Ghoom Railway Station, one of the highest railway stations around the world, was constructed during this phase. It is situated at an altitude of 2,258 meters (7,407 ft). It has become, since then, one of the most significant tourist destinations. The iconic Batasia Loop was built near Darjeeling to address the steep ascent. Although the Loop was built for the technical reason, but the mesmerizing view of mount Kanchanjunga and the surrounding beautiful hilltop areas gave this place a unique identity. At present Batasi Loop, where a war memorial is built, is a most sought-after visiting place for the domestic as well as foreign tourists.

The project of Darjeeling Himalayan Railway was completed in 1881 and officially inaugurated the same year. It stretched over 88 kilometers (55 miles) from New Jalpaiguri (later extended) to Darjeeling, climbing from an altitude of about 100 meters to over 2200 meters.

## Socio-Economic impacts of the Darjeeling Himalayan Railway (DHR)

The Darjeeling Himalayan Railway has significantly influenced the socio-economic landscape of the Darjeeling region since its inception in 1881. By connecting the plains with the hills, it transformed transportation, facilitated economic growth and shaped the social and cultural fabric of the area.

### 1. Economic impacts

#### a. Boost to the Tea Industry:

- The Darjeeling Himalayan Railway played a critical role in the growth of the Darjeeling tea industry, a globally renowned brand.
- It enabled faster and more efficient transportation of tea from plantations to markets, reducing costs and increasing exports.
- The railway became a lifeline for tea estates, linking them to ports like Kolkata for global trade.

## b. Growth of Tourism

- The Darjeeling Himalayan Railway made Darjeeling accessible, transforming it into a premier hill station.
- It attracted British elites and later domestic and international tourists, boosting the local economy
- Heritage tourism around the Darjeeling Himalayan Railway including joyrides, remains a significant source of revenue. Its iconic status has also promoted films, literature, and cultural festivals centered on the railway. Moreover, revenue from tourism and heritage activities has contributed to improving local infrastructure, including roads, sanitation and public spaces.

## c. Trade and Commerce

- The railway facilitated the movement of goods such as timber, coal, and agricultural produce, fostering trade between the hills and the plains.
- It helped establish Darjeeling as a trading hub, spurring economic activity in the region.

## d. Employment Generation

- The construction and operation of the railway created jobs for engineers, laborers and railway staff. It also fosters indirect employment through tourism-related activities.
- Ancillary industries, including maintenance services, coal supplies, and hospitality, flourished, creating indirect employment opportunities.

## 2. Social Impacts

### a. Urbanization and Infrastructure Development

- The railway catalyzed the growth of towns like Siliguri, Kurseong and Darjeeling. The railway construction engaged many labors from outside the area. Gradually many settled in Darjeeling and around leading to the urbanization of Darjeeling and other areas.
- It contributed to the development of markets, schools, hospitals, and administrative centers in these areas.
- Improved connectivity encouraged the migration of workers and settlers, diversifying the population.

### b. Improved Mobility and Access

- The Darjeeling Himalayan Railway provided an affordable and reliable means of transportation for local communities, improving their access to education, healthcare, and markets.
- It bridged the geographical divide between the plains and the hills, fostering social integration.

### c. Cultural Exchange

- The railway became a conduit for cultural exchange between different communities living in the plains and the hills.
- It played a role in the spread of ideas, languages, and traditions, enriching the region's cultural fabric. The DHR has brought global attention to Darjeeling, encouraging investments in the region. Festivals and events centered on the DHR help generate communal pride and cultural preservation.

### d. Preservation of Heritage and Identity

- The Darjeeling Himalayan Railway, as a UNESCO World Heritage Site, has become a symbol of pride and identity for the local community. Local communities are increasingly involved in heritage conservation initiatives, promoting sustainable practices.
- Efforts to preserve the railway have also highlighted the rich history and culture of the region.

## Challenges faced by the Darjeeling Himalayan Railway

The primary challenges faced by the Darjeeling Himalayan Railway are the susceptibility to natural disasters. The region is prone to landslide and earthquakes, which possess a constant threat to the stability of the tracks and infrastructure which requires large efforts and investments in maintenance and restoration to ensure the safety and reliability of the railway. Upgrading the infrastructure to meet modern standard without comprising its heritage value is a delicate balance that requires careful planning and execution. Another significant challenge that has led to a decline in the demand is the slow-paced journey offered by the DHR.

## Conclusion

The socio-economic impacts of the Darjeeling Himalayan Railway are profound and multifaceted. It has been instrumental in shaping the economic, social and cultural landscape of the region. Despite challenges like environmental concerns and competition from modern transport, the Darjeeling Himalayan Railway remains a symbol of heritage and progress, continuing to benefit the people of Darjeeling and contributing to the region's global significance. The Darjeeling Himalayan Railway proved to be a mile stone for not only Darjeeling but also for the entire northern part of Bengal. It facilitated trade and commerce of the area and simplified the transportation system for Britishers as well as the local people. The DHR gave Darjeeling a unique identity which has only increasing since its inception. The World Heritage site status given by the UNESCO to the Darjeeling Himalayan Railway on 5<sup>th</sup> December, 1999 aptly justify the role of the DHR with regard to the cultural heritage of the area. The Darjeeling hill is world famous for its tea and the construction of the railway aided another element for its popularity. "Toy Train" the synonym of DHR is ever since its creation gaining more popularity among the visitors from various parts of India and foreign countries alike.

The socio-economic impacts of the DHR are immense which greatly changed the lives of the thousands engaged directly or indirectly with the DHR and its relevance as a cultural heritage of the area is becoming stronger with time.

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