

Dharan-Leuti

Road Tunnel Project



Government of Nepal
**Ministry of Physical Infrastructure
and Transport**



Background

The Dharan-Leuti section is a crucial segment of the Koshi Highway, forming part of Nepal's North-South corridor. It serves as a vital link between the Indian border at Biratnagar (Rani) and the Chinese border at Kimathanka. This project represents another significant step towards tunneling infrastructure development in Nepal. It is accessible from both ends of the Koshi Highway, with one end located on Dharan Side and the other on Dhankuta Side. The tunnel's alignment passes through the catchment areas of the Khardu and Dharapani Rivers. This project intends to shorten the travel distance along the Koshi Highway, thereby enhancing connectivity in the region.



Sector

Transportation



Location

Start Point: Dharan, Sunsari District
End point: Sangurigadi, Dhankuta District



Tunnel Length

3.868 Km

Salient Features:

- Modified Horseshoe Shape Tunnel
- Length of approach Road at Dharan: 568.5 m
- Length of approach Road at Leuti: 674.5 m
- Double Lane
- Longitudinal Gradient ~ 2.5%

Project Rationale:

- Shortest route for international trade between China and India
- Improve Koshi Highway making it more reliable, safe, and short
- Increase mobility for people in Sunsari and Dhankuta districts
- Enhance accessibility and reduce travel distance

Project Components



Tunnel Inlet and
Outlet



Main traffic
tunnel



Escape
Tunnel



Emergency
Lane



Ventilation



Lighting
system



Safety
Equipment

Project Outcomes



Gain of NPR 187.3 million per
year by travel time saving



Gain of NPR 1.1 billion
by fuel savings



0.63 hours time saved
by each vehicle



8212 hours time saved
by all passenger



19,953 liters of fuel saved per
day by shortened distance

Financial Indicators

Estimated Project Cost

NPR 11.31 Billion
USD 89.95 Million



Economic IRR
15 %



Economic NPV
NPR 8.7 Billion



Benefit Cost
Ratio
1.91

(1 USD= NPR 125.73 as per 2022)
Discount Rate = 10%

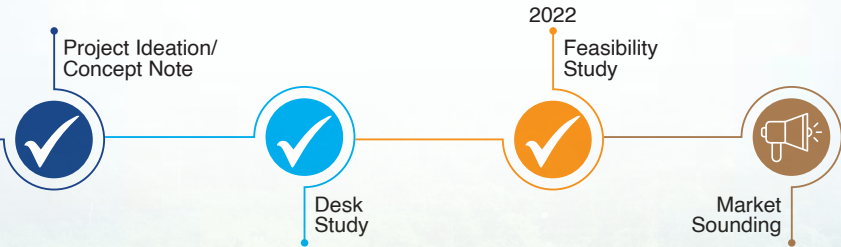
(Information is based on Feasibility Study report prepared in 2022)

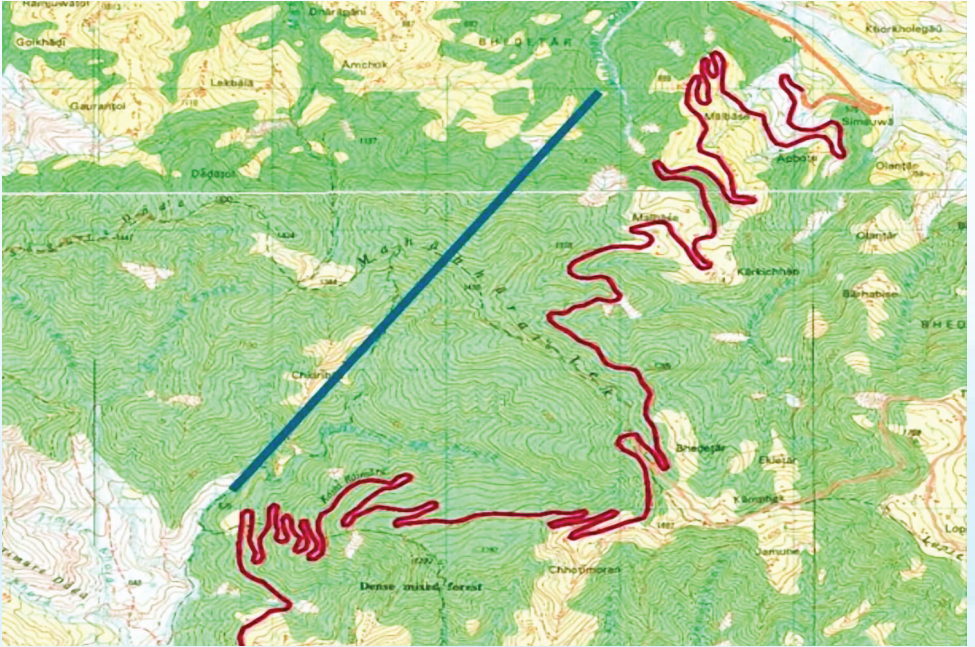
Project Implementation Modality



Public Private Partnership
(PPP)

Project Implementation Timeline





Relevant Agencies

- Ministry of Physical Infrastructure and Transport
- Department of Roads

About the Agency

Ministry of Physical Infrastructure and Transport

The Ministry of Physical Infrastructure and Transport (MoPIT) is the government body of Nepal dedicated to integrating various geographic and economic regions to foster the economic and social development of the country by prioritizing the construction of road, rail, and water transport infrastructure. The ministry aims to ensure the appropriate development of the national transport system, focusing on connecting rural areas with markets, fostering economic activities, and overseeing various economic sectors such as tourism, agriculture, and electricity production. Facilitating and coordinating various activities and projects related to infrastructure and transportation is the primary function of MoPIT.

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