

Name of the work: Tinaighat – Castlerock – Caranzol Railway Doubling of South Western Railway (In the State Government of Karnataka).

Cost Benefit Analysis

(Based on the Guidelines of Forest land diversion-2017 issued vide MOEF & CC letter No.7-69/2011-FC (Pt) dated 01 August 2017)

Estimation of cost of forest diversion

Sl. No.	Parameters	Remarks
1	Ecosystem services losses due to proposed forest diversion	₹ 10 lakh/hectare [Net Present Value (NPV) based on the report of CESM, IIFM Bhopal and FSI, Dehradun.]
2	Loss of animal husbandry productivity, including loss of fodder	10% of NPV ₹1 lakh/hectare
3	Cost of human resettlement	No human settlement
4	Loss of public facilities and administrative infrastructure (Roads, building, schools, dispensaries, electric lines, railways, etc.) on forest land, which would require forest land if these facilities were diverted due to the project.	There are no public facilities and any infrastructure on the land proposed for Forest land
5	Possession value of forest land diverted	30% of NPV ₹ 3 lakh/hectare
6	Cost of suffering to oustees	NO oustees
7	Habitat Fragmentation Cost	50% of NPV ₹ 5 lakh/hectare
8	Compensatory afforestation and soil & moisture conservation cost	₹ 2.34 lakh/hectare
	Total	₹ 21.34 lakh/hectare

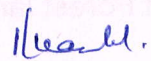
Forest land proposed for diversion = 10.45 hectare

Cost of Forest land proposed for diversion = 10.45 ha x ₹ 21.34 Lakh/hectare

= ₹ 223.00 Lakh

Benefits due to Railway Doubling

Sl. No.	Parameters	Remarks
1	Increase in productivity attribute to the specific project.	Net earnings due to doubling: ₹ 254 Cr/annum
2	Benefits to economy due to the specific project	a) Improved connectivity to Ports in Goa from Industrial area in Karnataka. b) Increased line capacity facilitates introduction of more passenger trains from different parts of the country to Goa which is a tourist destination. c) Rail transport being energy efficient, reduces fuel consumption and saves import cost/ Foreign exchange savings for the country. d) Reduces carbon emissions and promotes sustainable environment.
3	No of population benefited due to specific project	Trains from different part of the country, run on the track, population benefited cannot be directly quantified.
4	Economic benefits due to direct and indirect employment due to the project	<u>Direct Benefits</u> <ul style="list-style-type: none"> a) Improved employment opportunity during construction phase [3 years] b) Improved employment opportunity during operation phase c) All the benefits listed in para 2 above. <u>Indirect Benefits</u> <ul style="list-style-type: none"> a) Additional employment opportunity during construction phase due to construction activities in the area. b) Additional employment opportunity due to increase in the number of tourist due to introduction of more and more passenger trains. c) Additional employment opportunity in Ports due to increase freight handling. d) Additional employment opportunity in Industrial area due to increased raw material, and finished products handling.
5	Economic benefits due to Compensation afforestation.	Economic benefits due to Soil conservation, Moisture conservation, Gain in forest cover and benefits of carbon storage due to CA. It is assumed as equivalent of NPV of similar forest ₹ 10 lakhs/hectare


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