

Cost Benefit Analysis for Construction of New BG Railway line in Forest Lands in Various Villages of Shivamogga and Davanagere District in favor of Deputy Chief Engineer, Construction, South Western Railway, Mysuru.

Proposal number : FP/KA/RAIL/155505/2022

Table-A: Cases under which a cost-benefit analysis for forest diversion are required

SL No	Nature of proposal	Applicable/ not applicable	Remarks
1	All categories of proposals involving forest land up to 20 hectares in plains and up to 5 hectare in hills.	Not applicable	These proposals may be considered on a case-to-case basis and value judgment.
2	Proposal for defense installation purposes and oil prospecting (prospecting only).	Not applicable	In view of national Priority accorded to these sectors, the proposals would be critically assessed to help ascertain that the utmost minimum forest land is diverted for non-forest use.
3	Habitation, establishment of industrial units, tourist lodges complex and other building construction.	Not applicable	These activities being detrimental to protection and conservation of forest, as a matter of policy, such proposals would be rarely entertained.
4	All other proposals involving forest land more than 20 hectares in plains and more than 5 hectares in hills including roads, transmission lines, minor, medium and major irrigation projects, hydro projects, mining activity, railway lines, location specific installations like micro-wave stations, auto repeater centers, TV towers etc.	Applicable	These are cases where a cost benefit analysis is necessary to determine when diverting the forest land to non-forest use in the overall public interest.

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Table-B: Estimation of cost of forest diversion

Sl No.	Parameters	Remarks	UOM	Value (in Lakhs)
1	Ecosystem services losses due to proposed forest diversion	Economic value of loss of ecosystem services due to diversion of forests shall be the net present value (NPV) of the forest land being diverted as prescribed by the Central Government (MoEF & CC). = Rs. 957780 per hectare * 38.87 Ha =Rs. 1116900 per hectare * 9.04 Ha	INR	473.26
2	Loss of animal husbandry productivity, including loss of fodder.	10 % of the NPV (Environmental service losses)	INR	47.326
3	Cost of human resettlement	There is no loss involved on account of Human Resettlement	INR	0
4	Loss of public facilities and administrative infrastructure (Roads, building, dispensaries, electric lines, railways, etc.) on forest land, which would require forest land if these facilities were diverted due to the project.	No roads, buildings, schools, dispensaries, electric line, railway, etc. are affected due to diversion of forest land to this project. There will be no loss involved on this account	INR	0
5	Possession value of forest land diverted.	30 % of NPV (environmental service losses)	INR	141.978
6	Cost of suffering to oustees.	No Ousteas	INR	0
7	Habitat Fragmentation Cost.	50 % of the NPV (environmental service cost	INR	236.63
8	Compensatory Afforestation and soil & moisture conservation cost.	Compensatory Afforestation charges are Rs. 18,36,000 per Hectare and Compensatory Afforestation will be carried over twice the extent of Forest area being diverted = Rs. 18,36,000 per hectare * 2 * 47.91 Ha	INR	1759.25
		Total	INR	2658.444
	Total In Crores		Cr	26.58

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Table-C: Estimation of cost of forest diversion

1	Increase in productively attribute to the specific project	Net earnings due to construction of new BG line: 579.24 Crore for a span of 30 years Total capital cost of the project: Rs. 994.47 Crore Total: Rs. 1573.71 Crore (approx.)
2	Benefits to economy due to the specific project.	a) The proposed new BG line will serve extensively for Haveri & Shimoga Districts in Karnataka b) Improved connectivity between Shivamogga and Ranebennur covering the distance of 102.90 Kms when compared to the existing route that takes a roundabout via Birur covering a distance of 214 Kms. c) The proposed new BG lines covering the distance of 102.90 thus saving a distance of around 110.27 kms between Ranebennur and Shivamogga.
3	No. of population benefited due to specific project.	1. Shimoga district as on 31.03.2000 in its industrial area has 9779 no. of units with an investment of Rs. 11715.90 lakhs, employing 41000 persons. 2. Under the rural artisan's category, there are units like traditional carpentry, black smithy, leather crafts, pottery, beekeeping, stone cutting, handlooms, agarabathi and sandal carving etc. There are about 13126 artisans spread over the entire district under various crafts. These products have been displayed in various trade and exhibitions. Some articles are being exported through KSHDC.
4	Economic benefits due to of direct and indirect employment due to the project.	Direct Benefits: a) Improved employment opportunity during construction phase [3 years] b) Improved employment opportunity during operation phase c) All the benefits listed in para 2 & 3 above Indirect Benefits: 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) All employment benefit listed in para 2 & 3 above
5	Economic benefits due to Compensatory afforestation.	There will be various employment generated for execution as well as maintainance of the CA work
	Total Benefit	Rs. 1573.71 Crore
	Total Loss of the forest	26.58 cr
	Cost Benefit Ratio	1:59.21

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