

### COST BENEFIT ANALYSIS

**Project Name:-** Additional Right of Way (ROW) Requirement for Development of Two Bridges Located at Km- 2+250 to Km- 3+350 and Km- 10+100 to Km- 10+ 560 or Chenani- Sudhmahadev Road (NH-244).

**Purpose:** This cost benefit analysis is being undertaken for proposed diversion of Forest Land (5.146 ha.) being affected due to Construction of Chenani-Sudhmahadev road NH-244 in the Union Territory of Jammu & Kashmir.

**Table A: Cases under which cost benefit analysis for Forest diversion Required**

S. No.	Nature of Proposal	Applicable /Not Applicable	Remark
1	All categories of proposals involving forest land upto 20 hectares in plains upto 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 forestland more than 20 hectares in plains and more than 5 hectares in hills including roads, transmission lines, minor, medium and major irrigation project, hydro project mining activity, railway lines, location specific installation like micro wave station, auto repeater centers, TV tower 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 strategic point of view and public interest.



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**Table B : Estimation of cost of forest diversion**

S.No.	Parameters	Cost	REMARK
1	Ecosystem services losses due to proposed forest diversion	NPV of the forest land which is being diverted i.e. Forest Land= 5.146 ha. X 8.45 lac = Rs. 43.48370 Lac <b>Total cost = Rs. 43.48370Lac, Say 43.48 Lac</b>	Cost has been decided as per norms of state govt. and will be paid by user agency.
2	Loss of animal husbandry productivity including loss of fodder	<b>NIL</b> Productivity of livestock will not be affected due to construction and widening of existing highway. This road is also a strategic road connecting Line of Control with Indo-Pak border. Therefore Loss of animal husbandry productivity including loss of fodder will also be nil.	
3	Cost of human resettlement	<b>Nil</b> No, as are is not habitat hence, there is no displacement of any oust sees in the project & therefore there would be no resettlement.	
4	Loss of public facilities and administrative infrastructure (Road, building, school, dispensaries, electric lines, railways, etc) on forest land which would require forest land if these facilities were diverted due to the project.	<b>Nil</b> As existing road is being widened with new construction in bypasses and tunnel with double lane specifications.	
5	Possession value of forest land diverted	<b>Nil</b>	
6	Cost of suffering to outees	<b>Nil</b> Loss of house/Habitat/Structure is NIL, hence not applicable.	
7	Habitat Fragmentation cost	<b>Nil</b>	
8	Compensatory afforestation and soil & moisture conservation cost	Compensatory Afforestation cost <b>9.43 lac (Approx 1.83 lac/ha.)</b> Soil and moisture conservation cost included in Compensatory	

		Afforestation cost.	
	Total Loss (Against the proposed forest land diversion)	Rs:- 52.92 Lacs	



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**Table C: Existing Guidelines for estimating benefits of Forest Diversion**

S.N.	Parameters	Descriptions
1	Increase in productivity attribute to the specific project.	National Highways & Infrastructure Development Corporation Ltd. (NHIDCL) a PSU under Ministry of Road Transport and Highways, Govt. of India has been entrusted with the working of widening and upgradation to 2 lane with paved shoulder configuration and geometric improvement on Chenani - Sudhmahadev Section of NH- 244 in the UT of Jammu & Kashmir. There is requirement of realignment in the geometry as per the required geometry of NH specifications at two sections of alignment portion of this project road i.e. from Km- 2+250 to Km- 3+450 and from Km- 10+100 to Km- 10+560 where additional land is required to pass through forest area. Hence development of this road will increase productivity of the local population. <b>Project cost Rs. 15504 lac i.e. 155.04 crores (approx) for 20 years.</b>
2	Benefits to economy due to the specific project.	As stated in Sl. 1 above development of the road will facilitate economic growth of the area. Directly it will be <b>438 lac (4.38 crore)</b> and many more in after completion of project as per feasibility report. It will help in trade and as an alternate route to Kashmir Valley via Doda and Kishtwar districts as well as local development of remote areas.
3	No. of population benefited due to specific project.	Development of road is going to benefit the population @ 6.00 lac approx of Udhampur, Doda and Kishtwar district as well as huge local and villagers of remote area.
4	Economic benefits due to of direct and indirect employment due to the project.	<p>During the development stage employment will be generated for skilled and unskilled manpower for a period of 24 months.  Man-days- 360000 (Approx)  Rs. 400/- Per Man-day  <b>Total Amount= 1440 lac (14.40 crore)</b></p> <p>Employment generated during operational life of 50 years for 30 Man-days per Day  Man-days- 547500  Rs. 700/- Per Man-day (Approx)  <b>Total Amount= 3832 lac (38.325 crore)</b></p>
5	Economic benefits due to Compensatory afforestation.	Compensatory Afforestation for <b>5.146 ha.</b> of degraded forest land @ <b>3.50 lac/ha.</b> for 50 Years (as per Guideline issued by MoEF vide letter No. 5-3/2007-FC/ Dated 05.02.2009) =

		Rs. 18.011 lac
	Total	Rs. 21232.011 lac (212.32 Crore)

**C. Cost Benfit Ration i.e. Project Benefit/Forest loss =  $21232/52.92 = 401:1$**

Hence the project has very high benefit to the country as compared to forest loss. **The benefit to loss ratio is approximate 401 times.**



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