

## COST BENEFIT ANALYSIS (CBA)

**Tab- B: Estimation cost of forest diversion**

SN	Parameters	Details (Rs. in Lakhs)	Remarks
1	Ecosystem services losses due to proposed forest diversion.	42.08	NPV of Forests
2	Loss of animal husbandary productivity including loss of fodder.	4.21	10% of Net Present Value (NPV)
3	Cost of human resettlement	NIL	As per resettlement & rehabilitation (R & R) cost
4	Loss of public facilities and administrative infrastructure (Roads, buildings, schools, dispensaries, electric lines, railways etc.) on which would require forest land if these facilities were diverted due to the project.	NIL	As per actual cost basis
5	Possession value of forest land diverted	12.62	30% of NPV
6	Cost of suffering to oustees	NIL	Estimated as 10% of R & R
7	habitat Fragmentation Cost	21.04	50% of NPV
8	Compensatory afforestation and soil & moisture conservation cost.	77.48	As per the actual cost of compensatory afforestation and soil & moisture conservation
Total		136.39	

**Tab- C: Existing guidelines for estimating benefits of forest - diversion in CBA**

SN	Parameters	Details	Remarks
1	Increase in productivity attribute to the seccife project.	In lieu of total trees to be affected in forest land under Tehri Forest Division in Tehri Garhwal district, it is proposed to undertake Compensatory afforestation of 12.81 hectares (double of 6.405 ha) of land as per Forest (Conservation) Act and Uttarakhand Govt. under 397/XVII(III)/2012. At present the density of forest is 0.1, which may increase to 0.5 (assuming 50% servility of the plants in the compensatory afforestation). Thus, an amount of Rs. 108.25 lakhs will be predicted due to increase in productivity attribute.	Net present Value (NPV) for density of 0.1 for ecoclass V is Rs. 6.57 lakhs and NPV for density of 0.5 eco - class V is Rs. 8.45 lakh

  
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2	benefits to economy	The Government of India Has highlighted the task of Linking the unconstitutional habitat in the hilly area with any outside link road for the purpose of generating a large amount of agricultural income and production employment opportunently in rural areas and permanently reducing poverty. In the above order, the order number of the Utrakhnad government number - 2091/III(2)/16-44 (प्र०३१०)/2016 Dated - 26.07.2016 (Length-10 Km) Approval received for cost 51.40 Lacs. The said proposed route passes through the Village - Pokhar - Gewal (Bhilang), whose population is approximately - 841. Gram sabha pokhar - Gewali (Bhilang) will be benefited by the construction of the motor road. In the future, this route will be connected to the Ranigarh - Laini - Bdwasour motor road. This path will also work in the intervening (Bypass) work and the all around development of the area. Savings in travel time and vehicle operating cost for 50 years in Rs. 312.85 Lakhs. Employment Generation due to other activities like transportation, Market Development etc 12 person get 3000 per month An amount of Rs. 216.00 lacs (for 50 Years), 07 Beldar /month @Rs.8000 for annual maintenance of road An amount of Rs. 336.00 lacs (for 50 Years).	
3	No. of population benefited due to the specific project.	Entire population of Pokhar and Gewali Village in Bhilangna Block in Tehri Garhwal District (641) shall be benefited for project.	
4	Economic benefits due to direct and indirect employment due to the project	Direct Employment of labours (1) Unskilled 24 @ Rs. 350.00 employed during construction for 24 months @ 312 working days per year i.e. 52.42 lakh (2) Skilled 10 during operating stage for 24 months @ Rs. 495.00 @ 312 working days per year i.e. 30.89 lakh. Total 83.31 lakhs. In addition to that further employment shall generated due to religious tourism and adventure tourism.	
5	Economic benefits due to Compensatory Afforestation	Rs. 108.25 lakhs @ Rs. 8,45,000 per hectore of eco-class V with density 0.5 (assuming 50% servility of the plants in the compensatory afforestation) for 12.81 hectares (double of 6.405 ha) of compensatory afforestation land.	benefits calculated as per compensatory afforestation accruing over next 50 years
Total		1056.41 lacs	

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