

COST BENEFIT ANALYSIS**PROJECT Name: Construction of Bhaba Mud Sagnam Attargoo Road****Total forest area: 25.596 ha****Table –A: - Case under which a cost – benefit analysis for forest diversion is required.**

Sr. No.	Nature of Proposal	Applicable/NOT applicable	Remarks
1	All Categories of proposal involving Forest land up to 20 hectares in plain and up to 5 hectares in hills	Not Applicable	
2	Proposal for defense installation purpose and oil prospecting (prospecting only)	Not Applicable	
3	Habitation, establishment of industrial units, tourist lodge complex and other building construction.	Not Applicable	
4	All other proposals involving forest land more than 20 hectare in plains and more than 5 hectares in hills including roads, Transmission line, minor, medium and major irrigation project, hydro project, mining captivity, railway lines, locationspecific installation like micro wave station, auto repeater Centre, TV tower etc.	Applicable	These are cases where a cost benefit analysis is necessary to determined when diverging the forest land to non-forest land user in the overall public interest.

Table- B:- Estimation of cost of Forest diversion

SN	Parameters	Remarks	Monetary Equivalent
1	Ecosystem service losses due to proposal forest diversion	Economic value of loss of ecosystem service due to diversion of forest shall be the net present value (NVP) of the forest being diverted as prescribed by the Central Government (MoEF& CC.) Note: In case of National parks the NVP shall be ten (10) times the normal NVP or otherwise prescribe NVP by the ministry or any other competent authority	Considering the Net present value of forest area to be diverted be Rs.10.69 Lac per Ha æper open category in Eco class VI, losses to Eco system in Rupees is taken as Sarahan WL Div: $10.69 \times 5 \times 20.80 =$ Rs.11,12,24880 Kinnaur Division: $4.80 \times 10.69 = \text{Rs.}5133456$ Total NPV: 11,63,58336
2	Loss of animal husbandry productivity, including loss of fodder	To be quantified and expressed in monetary terms or 10% of NVP applicable whichever is maximum	Net Loss Rs. 1,16,35835 of loss of animal husbandry productivity including loss of fodder.
3	Cost human resettlement	To be quantified and expressed in monetary terms as per approved R& R plan	Nil. No human resettlement involved in the project.
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 thee project	To be quantified and expressed in monetary terms on actual cost basis at the time of diversion	NIL. No loss of public facilities and administrative infrastructure involved in the project.
5	Possession value	30% of environmental cost (NVP) due to loss of forests or circle rate of adjoining area in the district should be added area a cost component as possession value of forest land whichever maximum	The possession value of forest land diverted is calculated as Rs.3,49,07500. (30% of NPV)

6	Cost of suffering to oustees	The social cost	Not applicable for this project since there is no resettlement involved.
7	Habitat Fragmentation cost	While the relationship fragmentation and forest goods and services is complex for the sake of simplicity the cost due to fragmentation has been pegged at 50% of NVP applicable as a thumb rule.	Rs.5,81,79168. (50 % of NPV)
8	Compensatory afforestation and soiland moisture conservation cost	The actual cost of compensatory afforestation and soil moisture conservation and its maintenance in future at present discounted value	Cost of CA Rs. 20274633+1313263= 21587896 as per CA scheme of both the Forest Divisions
	Total		(11,63,58336+1,16,35835 +3,49,07500+5,81,79168+215 87896)= Rs. 242668735 say 24.27Cr

Table -C: Existing guideline for estimation benefit of forest-diversion in CBA

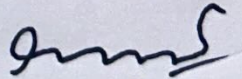
Sr No.	Parameters	Remarks	Monetary equivalent
1	Increase productivity attributed the specific project	To be quantified & expressed in monetary terms avoiding double counting	The proposed road will make a big difference in society. It boosts socio economic growth, irrigation, telecommunication facilities, health, education and overall economy of state. The lump sum monetary equivalent of above benefits considered as Rs. 8424 Lac
2	Benefits toeconomy due to the specific project	The incremental economic benefit in monetary terms due to the specific project	The monetary returns of the specific road project is considered Rs. 8006 Lac.

3	No. of population n benefited due to specific project	As per the Detailed project report	Population of whole area and its surrounding will get benefit by this project. This will help to provide better connectivity to 4080 households. It helps greatly to improve socio economy development of the area.
4	Economic benefits due to direct and indirect employment due to the project	As per the Detail project report	230000 man-days over a period of 3 years will be generated during the construction of the road. The monetary value shall be equivalent to Rs. 1300 Lacs
5	Economic benefits due to Compensatory afforestation	Benefits from such compensatory forestation accruing over next 50 years monetized and discounted to the present value.	Benefit from compensatory afforestation accruing over next 50 year in monetary terms Rs. 558.40 Lac.
Total benefits of the project (monetary equivalent)			(8424+8006+ 1300+558.40) = Rs. 18288 Lac Say Rs. 183Cr

Total environmental loss = Rs.24.27Cr

Total benefit to society = Rs.183 Cr

Cost Benefit Ratio = $24.27 / 183 = 1: 7.54$


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