

(5.00 हे० से अधिक के प्रकरणों में लागू)

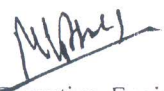
**Cost Benefit Ratio calculation Performa**

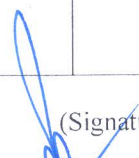
Name of the project — New construction Karanapryag-Nanisain-kandara to Kedarkot Motar Road.

Block- Karanprayag

District:-Chamoli

SL. NO.	Particulars	Amount in lakhs	Remark
1	Total cost (Investment incurred)		
(A)	Construction cost of the project	400.00	
(B)	N.P.V. Amount to be deposited 9.00lakh/Ha= 6.450x9	58.05	
(C)	Substutue/ Alternative Plantation Cost to be Deposited. 2x6.450x0.63	8.12	
(D)	Other cost if any maintenance cost	100.00	
	Grand Total	566.17	
2	Benefits	Estimated Cost/yearly	Total benefit during the life of the created development
	Benefits from 10km Road (taking age of road as 50 Years)		
(A)	EconomicBenefits-Market Development 15 Shopes are established after constructions of road talet to Karanapryag-Nanisain-kandara to Kedarkot Motar Road. Take minimum benefit per shop per day Rs. 40.00 Benefit for 20 shop per month 15x40x30=Rs. 18000.00 Benefit for 1 year-Rs 18000x12=Rs. 216000.00 Benefit for 50 year-Rs 216000.00x50=Rs. 10800000.00	108.00	
(B)	Diret Employment of labours- Benefit for annual mainteance of the road. Take 7 Beldar for one month@8000.00=Rs/ 56000.00 Benefit for 1 year-Rs 56000x12=Rs. 672000.00 Benefit for 50 year-Rs 672000.00x50=Rs. 33600000.00	336.00	
(C)	Employment Generation Due to other activities like Transportation market development etc. Take 6 people get employment per month one month@ 3000.00 =Rs/ 18000.00 Benefit for 1 year-Rs 18000x12=Rs. 216000.00 Benefit for 50 year-Rs 216000.00x50=Rs. 10800000.00	108.00	
(D)	Saving in travel time is of direct consequence to time saving by the average 20 passengers or commuters may be used for some useful purpose and increase in productive hours total increase productive time per commuters=2hr/day value in term of benefit=300 R.s./7hr x 2hr x20 = 12000/7 In one year= 12000 R.s. /7 x 365= 438,0000/7 In 50 years= 438,0000/7 x 50= 31285714.29	312.85	
	<b>Total benefits (A+B+C+D)</b>	<b>864.85</b>	
	<b>Hence cost benefit Ratio=</b> <b>566.17: 864.85=1:1.53</b> Therefore construction of above-mentioned road is economically and socially beneficial.		

  
Executive Engineer  
Ty. division P.W.D.  
Gauchar (Chamoli)

(Signature)  
  
Designation D.P.O. Badrinath  
बद्रीनाथ वन-भाग  
शिवपुर (चमोली)

## Annexure-VI (B)

Name of Project:- New Construction Karanpryag-Nanisain Kandara to kedarkot Motor Raod. Lenth- 10K


Parameter for Evaluation of loss Forests:-

Ditstrict:- chamoli

Sl No	Parameters	Roads, Tr. Lines & Railway Line
1	2	3
1	Loss of Value of timber, fuelwood and minor forest produce on an annual basis, including loss of man hours per annum of people who derived the livelihood and wage from the harvest of these commodities.	Only one time loss of vegetation occurs during construction and there is no loss of man-hours. Considering the NPV of 9.00 lakhs per hectare, the total loss of timber, fuel wood and minor forest produce for 6.450 hectare of forest may be calculated as 6.450 $6.450 \times 9.00 = 58.05$ lakhs
2	Loss of animals husbandry productivity including loss of food	NIL - There is no loss of any animal husbandry productivity, including loss of fodder.
3	Cost of human resettlement.	NIL - there is no displacement or any oustees involved.
4	Loss of public facilities and administrative infrastructure (Road, Building, Schools, Dispensaries, Electric lines, Railways etc.) on which would require forest land if these facilities were diverted due to be the projects.	NIL - no public facilities as well as administrative infrastructure in the area.
5	Environmental losses; (Soil erosion, effect on hydrological cycle. Wildlife habitat, microclimate upsetting of ecological balance.	Environmental losses is quantified as follows : Total forest area proposed for division - 6.450 Environmental value of one hectare of fully stocked forest (density 1.00) for a period of 50 year is = 126.74 lakhs Considering density of the proposed RF=0.4 Therefore, total environmental loss for a period of 50 years is worked out as $= 126.74 \text{ Lakhs} \times 0.4 \times 6.450 \text{ ha}$ $= 326.99 \text{ Lakhs}$
6	Suffering to oustees.	NIL - there is no displacement or any oustees involved.
	Total Loss (Calculated for 50 years)	<b>385.04 lakhs</b>

  
J.E.

  
A.E.

  
E.E. अभियन्ता  
पर्यावरण संरक्षण विभाग  
नैनीताल



## Annexure-VI (C)

Name of Project:- New Construction Karanpryag-Nanisain Kandara to kedarkot Motor Raod.


## Parameter for Evaluation of Benefit, notwithstanding loss of Forest Nature of Proposal:-

SI No	Particulars	Amounts in Lacs
1	2	3
1	Increase in productivity attributable to the specific project.	saving by the average 20 passengers or commuters may be used for some useful purpose and increase in productive hours total increase productive time per commuters=2hr/day Value in term of benefit = $300 \text{ R.s./7hr} \times 2\text{hr} \times 20 = 12000/7$ In one year = $12000 \text{ R.s./7} \times 365 = 438,0000/7$ In 50 years = $438,0000/7 \times 50 = 31285714.29$ i.e. = 312.85 lakhs
2	Benefits to economy.	Economic Benefits- Market Development 15 Shoppes are established after constructions of road talet to Karanapryag-Nanisain-Kandara to kedarkot motor road. Take minimum benefit per shop per day r.s 40.00 Benefit for 20 shop per month $15 \times 40 \times 30 = \text{Rs } 18000.00$ Benefit for 1 years-R.s $18000 \times 12 = \text{R.s } 216000.00$ Benefit for 50 years-R.s $216000 \times 50 = \text{R.s } 10800000.00$ i.e 108 lakhs
3	No. of population benefited.	ग्राम कण्डारा व कोट में 230 परिवार की 921 जनसंख्या इस मोटर मार्ग के बनने से लाभान्वित होंगे।
4	employment potential.	(i)-Diret Employment of labours- Benefit for annual mainteance of the road. Take 7 beldar for one mont@8000.00= Rs 56000.00 Benefit for 1 year R.s $56000 \times 12 = \text{R.s } 672000.00$ Benefit for 50 years R.s $672000.00 \times 50 = \text{R.s } 33600000.00$ (ii)-Employment Generation Due to other activities like Transportation market development etc. Take 6 people get employemt per month one month@3000.00= Rs./18000.00 Benefit for 1 years Rs $18000 \times 12 = \text{R.s } 216000.00$ Benefit for 50 years R.s $216000.00 \times 50 = \text{R.s } 10800000.00$ Total Employment potential= 44400000.00 i.e 444.00 lakhs
5	Cost of acquisition of facility on non forest land wherver feasible.	NIL - there is no displacement or resettlement/ rehabilitation involved.
6	Loss of (a) agricultural & (b) animal, husbandry production due to diversion of forest land.	There is no eminent loss on agriculture & animal husbandry production due to diversion
7	Cost of rehablitation the displaced persons as different form copensatory amounts given for displacement.	NIL - there is no displacement or resettlement/ rehabilitation involved.
8	Cost of supply of free fuel-wood to workers residing in or near forest area during the period of construction.	NIL - there is no human population in & around the area.
	<b>Total Benefits</b>	<b>864.85 Lakhs</b>

Hence Cost Benefit Ratio=  $385.04 : 864.85 = 1:2.25$  Therefore construction of above mentioned road would be advantageous in monetary terms.

  
J.E.

  
A.E.

  
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E.E.  
अस्थाई जम्हा लो० नि०  
मोहर