

## **COST- BENEFIT ANALYSIS**

Name of Project: - जनपद नैनीताल में राज्य योजना के अन्तर्गत मंगोली खमारी थापला जलालगँव से देचोरी तक मोटर मार्ग का नव निर्माण।

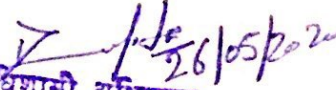
District: Nainital

S. No.	Particulars	Amount (Rs. in Lacs)	Remark
<b>1</b>	<b>Total Cost (Investment incurred)</b>		
(A)	Construction cost of the Project	Rs. 571.90	7km@Rs. 81.70 Lacs per Km
(B)	N.P.V. Amount to be deposited , Substitute/ Alternative Plantation Cost (CA) to be Deposited, Loss of Timber etc. Total Environmental Losses	Rs.132.47	5.44 Hs @ 9.20 Lacs per Ha
(C)	Other cost if any Land compensation:	Rs . 1.11	-
	<b>Grand Total</b>	<b>Rs. 705.48</b>	
<b>2</b>	<b>Benefits</b>	Estimated Cost	Total benefit during the life of the created development
2.1	Direct Economic Benefits		
	a. Loss recovery of fruits and vegetables:-	Rs. 400.00	
	b. Expansion of market and tourism:-	Rs. 577.50	
	c. Employment Potential indirect New shops:	Rs. 219.00	
	d. Employment Potential direct etc. :-	Rs. 64.74	
	e. Transportation etc. :-	Rs. 50.00	
	f. CA Benefits:-	Rs. 22.70	
	<b>Total direct benefits</b>	<b>Rs. 1333.94</b>	

$$\text{Cost Benefit Ratio} = (705.48/1333.94) = 0.53$$

**Note: Therefore Construction of road is economically viable and socially beneficial .**

  
 सहायक अभियन्ता  
 प्रान्तीय खण्ड लो० नि० वि०  
 नैनीताल

  
 सहायक अभियन्ता  
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 नैनीताल

# **COST- BENEFIT ANALYSIS**

(As per MoEF guideline no 7-69/2011-FC(Pt.) dated 1 August,2017)

**Table B: Estimation of cost of Forests Diversion**

Name of Project: - जनपद नैनीताल में राज्य योजना के अन्तर्गत मंगोली खमारी थापला जलालगॉव से देवोरी तक मोटर मार्ग का नव निर्माण।

Nature of Proposal :- Construction of Motor Road

S. No.	PARAMETERS	Estimated Cost
1	Ecosystem services losses due to proposed forest diversion.	The estimated NPV (Economic value of loss of ecosystem services) of 5.44 ha forest land is <b>Rs50.04 lacs</b>
2	Loss of animal husbandry productivity including Loss of fodder	10% of NPV= <b>Rs 5.004Lcs.</b>
3	Cost of human resettlement	There is no displacement due to the project . Therefore, the cost of human resettlement is = <b>Rs 0.00</b>
4	Loss of public facilities and administrative infrastructure (Road, Buildings, Schools, Dispensaries, Electric lines, Railways etc.) on which would requires forest land if these facilities were diverted due to the project	There is no presence of public facilities and administrative infrastructure in proposed site. Accordingly no loss of public facilities and administrative infrastructure is happening. Therefore loss is <b>Rs 0.00.</b>
5	Possession value of forest land diverted	30% of NPV= <b>Rs. 15.012Lacs</b>
6	Cost of Suffering to oustees	No Suffering to oustees. Therefore the cost of Suffering to oustees = <b>Rs 0.00</b>
7	Habitat fragmentation cost	50% of NPV= <b>Rs. 25.02 Lacs</b>
8	Compensatory afforestation and soil & moisture conservation cost.	The estimated cost of raising the CA in 10.88Ha is <b>Rs 17.00 Lac</b> for 10 years . Considering discounting rate 12%per ten year for future 50 years the present value is <b>Rs 37.40Lacs</b>
<b>The Total Environmental Losses:</b>		<b>Rs 132.47 Lacs</b>

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*17/5/2020*  
अविभागीय अभियन्ता  
जान्तीय ढण्ड, लो० नि० बि०  
नैनीताल.

## COST- BENEFIT ANALYSIS

**Table C: Estimation of cost of Forests Diversion**

Name of Project: - जनपद नैनीताल में राज्य योजना के अन्तर्गत मंगोली खमारी थापला जलालगँव से देचोरी तक मोटर मार्ग का नव निर्माण।

Nature of Proposal :- Construction of Motor Road

S. No.	PARAMETERS	Details
1	Increase in productivity attributable to the specific project.	Construction of new motor road to connect remote area will save the travelling time of farmers to send their production of fruits and vegetables to the nearest market will enhance productivity. <b>Framers Benefited:</b> 40 families will get extra benefit of Rs.10000 Per annum $(40 \times 10000 \times 100) = \text{Rs } 400.00\text{Lacs}$
2	Benefits to economy due to the specific project	The main objective of the project is to connect the remote village Daichori, Rokhad etc to the main State Highway. The remote productive village producing fruits & vegetables will facilitate with this connectivity. These villages with rich forest surroundings will attract the tourist of nearby world famous tourist destinations Nainital and Ramnagar Corbet National Park. Home stay will increase in this area which is common in the reason, therefore 5 home stay are taken in consideration. Local labour will be benefited in road construction & maintenance works. <b>A)Benefit due to tourist home stay activity:</b> 5 no tourists home stay may start after road construction taking benefit Rs. 300 per day per home stay $(300 \times 5 \times 365 \times 100) = \text{Rs } 577.50\text{Lacs}$ <b>B) New shop will start:</b> Taking 5 no Rs. 120 per day per shop and $(120 \times 5 \times 365 \times 100) = \text{Rs } 219.00\text{Lacs}$
3	No. of population benefited due to the	The remote village Daichori &

	specific project	Rokhad population approx. 540 will be directly benefited.
4	Economic benefits due to direct and indirect employment due to the project	<p>A) About 30 non-skilled and 5 skilled labour will get direct employment for construction period and 5 beldar will get employment for maintenance of the road.</p> <p>30x30x5x300= Rs 1350000.00</p> <p>5x30x5x833= Rs 624750.00</p> <p>5x30x100x300=Rs 4500000.00</p> <p>Total : Rs 64.74 Lacs</p> <p>B) Employment generation due to transportation Rs 50.00Lac approx.</p>
5	Economic benefits due to compensatory afforestation	<p>The annual value of timber and fuel-wood, carbon, NTFE, eco tourism, fodder and watershed services from CA is Rs 47292/annum (As assessed by Kanchan Chopra Committee-weighted average for Himachal Pradesh) Considering discounting rate 4% for future 50years, The present value = Rs 22.70 Lacs</p>
	Total benefits derived from the project:	Rs 1333.94 Lacs

Benefit cost ratio =  $1333.94/132.47=10.069:1$  i.e.  $> 1$

It is clear from above analysis that the construction of Mangoli Khamari Jalalgawn to Dechori Motor road is more beneficial than Environmental Losses.

*G. Singh*  
 सहायक अभियन्ता  
 प्रान्तीय खण्ड लो० नि० वि०  
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Signature of user agency

(Office seal)

*[Signature]*  
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