

UTTAR PRADESH PUBLIC WORKS DEPARTMENT
Protected Forest Land Proposed to be diverted for 11 KV Transmission line on
NH-76(Allahabad-Banda) Road from km.349 to 332(RHS) in Chitrakoot District
COST.BENEFIT ANALYSIS

Purpose: This cost benefit analysis is being undertaken for proposed diversion of forest Land being affected due to construction of access controlled

(a) Parameters for Evaluation of the loss of Forests

1.	Ecosystem Services losses due to Proposed forest diversion	Economic Value of Ecosystem services due to diversion of forest be the Net Present Value (NPV) IN THIS Project = Proposed Forest area X NPV Rate per Ha. =25.5x626000 = 1,59,63,000/- No. of Trees 92 trees of magnitera Indica, Azadirachta Indica Terminilia etc. will be Affected due to the Project. Total Value of trees= INR 16008/- No livelihood of people will be affected due to proposed diversion of forest land.												
2.	Loss of animal husbandry, productivity including loss of fodder	Nil												
3.	Cost of human resettlement	No resettlement in the forest land that are diverted for the Project												
4.	Loss of public facilities and administrative infrastructure(roads, buildings, schools, dispensaries, electric lines, railways etc) on forest land or which would require forest land if these facilities were diverted due to: the Project	There are no Public facilities and administrative infrastructure (roads buildings, schools, dispensaries, electric lines, railway etc.) on forest land where diversion :												
	Environmental losses(soil erosion, effect on hydrological cycle, wild life habitat, microclirnatic upsetting of ecological balance)	As per Forest As per forest (conservation) Act 1980 the environmental loss for a 50 years period for the density of 1.0 is INR 126.74 Lacs per hectare, The division wise environment loss is as follow <table><tr><td>Division</td><td>Forest</td><td>Density</td><td>Enviroment Loss in INR.</td></tr><tr><td>Chitrakoot</td><td>25.5</td><td>0.4</td><td>129274800/-</td></tr><tr><td>Total</td><td colspan="3"></td></tr></table> Hence on calculation the current total loss is INR =569600 per hectare and total environmental loss for the project is 1292.748 Lac.	Division	Forest	Density	Enviroment Loss in INR.	Chitrakoot	25.5	0.4	129274800/-	Total			
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Chitrakoot	25.5	0.4	129274800/-											
Total														
	Possession value of forest land	30% of environment costs(NPV) due to loss of forests = 30%x129274800 = INR 38782440/-												
	Suffering to ousters	Nil												

There for Current Environment Net loss in – INR =
1,59,63,000 (Ecosystem Losses)+16008(Trees Value) +129274800(Environmental Losses) +
38782440(Possession Value of forest land) = INR 533078208/-
Expenditure for development and maintenance of the project for 15 years
= Cost of Project +Renewal cost of BC for two cycle = INR 37400000+= INR 187000000/-
Net Total Loss = INR 533078208+56100000
= 589178208

(b) Parameters for evaluation of Benefit. Notwithstanding Loss

S.No.	Parameter	Description										
1	Increase in productivity attributable to the specific Project	<p>In Lieu of total to be affected in forest land it is proposed to be undertake at least twice of the affected trees as compensatory afforestation as per forest (conservation)Act 1980. So the net productivity will increase. Apart from compensatory Plantation it has been proposed to develop green belt in either side of project road throught project stretch.</p> <p>The trees to be planted as per compensatory afforestation are 45900 no. of trees in Chitrakoot The Compensatory Afforestation cost will be INR 22950000. The CA will be done in 51Ha of degraded forest land,which is down the line after ten years would be having the density of 1.0. The ecological value for a 50 years period of density of 1.0 is 126.74lac per hectare. By considering the min 0.8 density the ecological gain for this project would be INR 517099200(Calculated the value for remaining 40 years after achieving 0.8 density)</p>										
2	Benefits to economy due to specific project	<p>Socio economic benefits due to The road project will provide the connectivity to state capital to district head quarter with high speed corridor leading to reduced travel time and fuel consumption.</p> <p>2-The benefits to trade specially in moment of perishable goods.</p> <p>3. Access to new industrial areas.</p> <p>Overall enhancement of socio-economic condition of the area along the project corridor.</p> <p>Though overall mission to increase the GDP of the said region and make it comparable/abobe the nation GDP of the benefit of the</p>										
3	No.of population benefited due to specific project	The Population of 115000 People from district Chitrakoot and Banda will be benefited direct										
4	Economic benefit due to direct and indirect Employment Potential	Approximately 5000 man days of temporary employ-Ment will be generated during the construction of the Project for a period of 2 year										
5	Economic benefit due to	<p>The benefit of Economy shown in table below</p> <table><tr><th>Project Details</th><th>Increasing Rate of Cost year</th><th>Project after 50 Years</th><th>Current Cost Involve in Construction Project</th><th>Net Profit in 50year</th></tr><tr><td>Protected Forest Land Proposed to be diverted for 11 KV Transmission line on NH-76(Allhabad-Banda)</td><td>8%</td><td>1496Lac</td><td>374Lac</td><td>1122Lac.</td></tr></table>	Project Details	Increasing Rate of Cost year	Project after 50 Years	Current Cost Involve in Construction Project	Net Profit in 50year	Protected Forest Land Proposed to be diverted for 11 KV Transmission line on NH-76(Allhabad-Banda)	8%	1496Lac	374Lac	1122Lac.
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Protected Forest Land Proposed to be diverted for 11 KV Transmission line on NH-76(Allhabad-Banda)	8%	1496Lac	374Lac	1122Lac.								

		11 KV Transmission Line from km.349 to 332(RHS) in Chitrakoot District				
		<p>So benefit of economy in 50 years =1122 crore. GDP will increase 3.46%(1122/32400) current GDP of Chitrakoot. Saving due to less consumption of fuel and fatalities=100 crore</p> <p>Total NPV of the project Chitrakoot 25.5x 8.03(0.4% density) =204.765 Lacs. the total NPV for the project is INR Lac The result of economic evaluation show that the proposed development of project road economically viable with EIRR 15.2%</p>				

Therefore Project Benefit

INR.22950000+917099200+20476500+**100000000+112200000**

Net Profit=414176100

Therefore Benefit cost ratio =**117272700/589178208**

=1.99


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