

PROVINCIAL DIVISION

PUBLIC WORKS DEPARTMENT, MIRZAPUR

PROPOSED RESERVED FOREST LAND TO BE DIVERTED FOR NEW CONSTRUCTION OF DIFFERENT
ROADS BHATWARI-MATWAR, MATWARIA-MATWAR, BADOHI-PARSIA, FULIYARI, SILHATA,
MEZA BAND- SAGRA AND KHARIHAT-TIDWAR ROAD IN TEHSIL: LALGANJ
DISTRICT: MIRZAPUR (UTTAR PRADESH)

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	<p>Economic Value of Ecosystem services due to diversion of forest = Proposed Forest area x NPV Rate per Ha Net Present Value (NPV) for forest land of Eco-class III (density 0.3) = 9,57,780/- per Ha.</p> <p>Therefore, Ecosystem services losses due to proposed diversion of :</p> <p>NPV of 34.202 Ha forest land in Kaimur Wildlife Sanctuary = 163789957.80/- NPV of 14.504 Ha non-forest land in Kaimur Wildlife Sanctuary = 13891641.12/- NPV of 0.7 Ha forest land outside Kaimur Wildlife Sanctuary = 670446.00/- Total NPV value is = 178352044.92/-</p> <p>No. of Trees that will be affected due to proposed diversion of forest land are: 156 trees in Kaimur Wildlife Division.</p> <p>Therefore, total trees value will be = 27144.0/-</p>
2.	Loss of animal husbandry, productivity including loss of fodder	Nil
3.	Cost of human resettlement	Nil
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 proposed diverted forest land.

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5.	Environmental losses (soil erosion, effect on hydrological cycle, wild life habitat, microclimatic upsetting of ecological balance)	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 follows:- <table><tr><th>Division</th><th>Proposed Forest Area (ha)</th><th>Density</th><th>Environmental Loss in INR.</th></tr><tr><td>Kaimur Wildlife Division Mirzapur</td><td>34.902</td><td>0.3</td><td>132704384.40/-</td></tr><tr><td>Total</td><td colspan="3">132704384.40/-</td></tr></table> Total environmental loss for the project is 1327.04 Lakhs.	Division	Proposed Forest Area (ha)	Density	Environmental Loss in INR.	Kaimur Wildlife Division Mirzapur	34.902	0.3	132704384.40/-	Total	132704384.40/-		
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Kaimur Wildlife Division Mirzapur	34.902	0.3	132704384.40/-											
Total	132704384.40/-													
6.	Possession value of forest land	30% of environment costs due to loss of forests = 30% x 132704384.40/- = 39811315.320/-												
7	Suffering to outsee	Nil												

Therefore, Current Environment Net loss

= 178352044.92 (Ecosystem Losses) + 27144.0 (Trees Values) + 132704384.40 (Environmental Loss) + 39811315.320 (Possession Value of forest land) = INR **350894888.64/-**

Expenditure for development and maintenance of the project for 15 years

= Cost of Project + Renewal cost of BC for two cycle


= INR 237570000.0 + 118785000.0

= INR 356355000.00/-

Net Total Losses/Cost = INR 350894888.64/- + 356355000.00/-

= INR **707249888.64/-**

(b) Parameters for evaluation of Benefit Not withstanding Loss


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Sr.No.	Parameter	Description
1	Increase in productivity attributable to the	In Lieu of total area to be affected in forest land it is proposed to undertake at least twice of the affected trees as compensatory afforestation as per Forest (Conservation) Act, 1980. Since, due to the current project there will be total 156 no. of felling of trees thus;

	specific Project	<p>The CA will be done in 34.902 Ha of equivalent non-forest land, which is down the line after ten years would be having the density of 1.0. The Compensatory Afforestation cost will be INR 6021732.00/-</p> <p>The ecological value for a 50 years period of density of 1.0 is 126.74lac per hectare. By considering the min 0.5 density the ecological gain for this project would be INR 221173974.00/-.</p>										
2	Benefits to economy due to specific project	<p>Socio economic benefits due to the railway line project include:</p> <ul style="list-style-type: none">• Construction of proposed road will allow connectivity of villages to major roads.• The project will generate employment to several unemployed, thus reducing the rate of unemployment and will lead to increase in GDP of India.• Easy transportation of public and goods.• Easy transportation of industrial products reach by town and rural areas.• In general there will be enhancement of socio-economic condition of the area along the project corridor. <p>The overall mission is to increase the GDP of the said region and make it comparable with the nation GDP.</p>										
3	No. of population benefited due to specific project	<p>The average Population of 200000 People from district Mirzapur will be benefited directly or indirectly.</p>										
4	Economic benefit due to direct and indirect Employment Potential	<p>Approximately 2 man days of permanent employment and 2000 man days of temporary employment will be generated due to the Project.</p>										
5	Economic benefit due to specific Project	<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 cost after 50 Years</th><th>Current Cost Involve in Construction Project</th><th>Net Profit in 50 years</th></tr><tr><td>Proposed Reserved Forest Land to be diverted for New Construction of different roads Bhatwari- Matwar,Matwaria- Matwar,Badohi- Parsia,Fulivari, Silhata.</td><td>8%</td><td>11878.5Lac</td><td>2375.7Lac</td><td>9502.8Lac</td></tr></table>	Project Details	Increasing Rate of Cost year	Project cost after 50 Years	Current Cost Involve in Construction Project	Net Profit in 50 years	Proposed Reserved Forest Land to be diverted for New Construction of different roads Bhatwari- Matwar,Matwaria- Matwar,Badohi- Parsia,Fulivari, Silhata.	8%	11878.5Lac	2375.7Lac	9502.8Lac
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		Meza Band- Sagra and Kharihat-Tidwar Road(Total Length:37.79km) in Tehsil:Lalganj District: Mirzapur (U.P.)				
		So benefit of economy in 50 years = 9502.8Lac. Total NPV of the project = 178352044.92/- . So, total NPV of the project is INR 334.284 Lacs.				

Therefore Project Benefit

= 6021732.00 (CA cost) + 221173974.00 (Ecological value) + 950280000.00 (Economic gain) +
178352044.92 (NPV)

Net Profit=INR 1355827750.92/-

Therefore Benefit cost ratio = **1355827750.92/707249888.64**
= 1.917


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 (Authorised Signatory)
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