

Name of Project: Improvement of Varanasi-Shaktinagar Road section of State Highway No.5A from Km 5.050 to Km 10.050 of SH-5A in Mirzapur district of Uttar Pradesh.

**COST BENEFIT ANALYSIS**

Purpose: Cost Benefit Analysis for Proposed Diversion of Protected Forest within Existing ROW of SH-5A for Widening Project.

**a) Parameter for Evaluation of Loss of Forests**

S.No.	Parameters	Descriptions
1.	Loss of value of timber, fuel wood and minor forest produce on an annual basis including loss of man hours per annum of people who derived livelihood and wages from the harvest of these commodities.	A. Total no. of trees affected in roadside plantation declared as Protected Forest=672 Nos. B. Total value of Trees=2378525 C. Cost of felling and extraction =Rs. 451087.00 <b>Total Cost: Rs. 2829612.00</b>
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, school, dispensaries, electric lines, railways etc) on forest land, or which would require forest land if these facilities were diverted due to the project.	Nil
5.	Environmental losses: (Soil erosion, effect on hydrological cycle, wildlife habitat, microclimate upsetting of ecological balance)	The total area of protected forest land along the project road required for the widening is 9.00 hect. The environmental loss for density 1.0 is Rs 126.74 lacs per hectare (As per Forest (Conservation) Act) for 50 years. Considering density of the forest as 0.4, the cost of environmental losses per hectare is Rs. 50.696 Lac. for 50 years. So, Environmental losses for total protected forest affected are Rs.456.264 Lakhs for 50 years. Therefore, Therefore, cost of current environmental loss will be=Rs.9,12,528.00
6.	Suffering to oustees	Nil

**Therefore Net Loss=28,29,612+9,12,528=37,42,140**

**b. Parameter for Evaluation of Benefit, notwithstanding Loss of Forests**

S.No.	Parameters	Descriptions
1.	Increase in productivity attributable to the specific project	In lieu of total trees to be affected in protected forest land, it is proposed to be undertaken atleast twice of affected trees as compensatory afforestation as per Forest (Conservation) Act. So the total trees to be planted as per compensatory afforestation = 1344 Trees cost of plantation considering for protected forest including trees guards under compensatory afforestation = <b>Rs. 3650958.00</b>
2.	Benefits of economy	So Economic benefit due to the project will be: better accessibility to social infrastructure like

S.No.	Parameters	Descriptions						
		<p>educational institutions, health facilitates, markets etc.</p> <ul style="list-style-type: none"> <li>• Saving in vehicle operating costs,</li> <li>• Saving in travel time,</li> <li>• Benefits to trade especially in movement of perishable goods.</li> <li>• Reduced maintenance costs,</li> <li>• Reduction in accidents, and</li> <li>• Overall enhancement of socio-economic condition of area along the project corridor.</li> </ul> <p>Based on economic analysis of the project, Economic Internal Rate of Return (EIRR) is as below:</p> <table border="1"> <thead> <tr> <th>Project</th> <th>EIRR(%)</th> <th>NPV@ Rs. 8.75 Lakhs</th> </tr> </thead> <tbody> <tr> <td>widening of existing road to 4 lane with paved shoulder</td> <td>12.5%</td> <td>78.75</td> </tr> </tbody> </table> <p>So benefit of Economy due to the Project=<b>Rs.78.75 Lakhs</b></p>	Project	EIRR(%)	NPV@ Rs. 8.75 Lakhs	widening of existing road to 4 lane with paved shoulder	12.5%	78.75
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3.	No. of population benefited	The project road is an important road connecting M.P., Jharkhand, Chhattisgarh, Bihar state . About 5 lakhs people residing along project corridor including Sonebhadra, Renukoot, Obra, Singrauli, Anpara, Shaktinagar, Beena Towns will be benefited due to the project/						
4.	Employment potential	About 200 employees will be working directly/indirectly in the project for the construction period of 2 years. Apart from direct employment, indirect employment will also be generated during construction of project road in the form of petty shops, local petty contractors, etc.						
5.	Cost of acquisition of facility on non-forest land wherever feasible	Nil						
6.	Loss of (a) agricultural & (b) animal husbandry production due to diversion of forest land	Nil						
7.	Cost of rehabilitating the displaced person as different form compensatory amounts given for displacement	Nil						
8.	Cost of supply f free fuel wood to workers residing in or near forest area during the period of construction.	No fuel wood will be supplied to the workers during the construction period. Contractor will supply fuel for the cooking and other purposes in the worker's camp to the workers.						

Therefore the Net Benefit due to the Project= 36.51+78.75=115.26 Lakhs.  
Benefit-Cost Ratio=115.26/37.42=3.08

Place:

Date:

  
प्रशासन (राजकीय)  
मोहा एवं वातावरण विभाग  
लखनऊ

  
(Signature of User Agency)  
मोहा एवं वातावरण विभाग  
लखनऊ

## लागत लाभ का विश्लेषण

यह एक पुराना राजमार्ग है, जिस पर पत्थर की गिट्टी, बोल्टर, सीमेन्ट, स्टील, पेट्रोलियम पदार्थ, बालू, अनाज, कृषि व स्टील के बायलर इत्यादि के वितरण एवं खदान उद्योग से सम्बन्धित विभिन्न वाहनों का आवागमन बढ़ जाने के कारण मार्ग का चौड़ीकरण एवं सुदृढीकरण आवश्यक है। मार्ग का विकास 4-लेन स्तर पर सार्वजनिक-निजी-सहभागिता से किया जाना है। परियोजना की लागत 52.69 करोड़ आकलित की गयी है। इस परियोजना के निर्माण से क्षेत्रीय जनता उत्तर प्रदेश, बिहार, झारखण्ड, छत्तीसगढ़ व मध्य प्रदेश के यातायात के आवागमन से सुविधा होगी तथा क्षेत्र का तीव्र गति से विकास होगा।

तिथि-

हस्ताक्षर

स्थान-

  
प्रबन्धक (तकनीकी)  
उ०प्र० राज्य राजमार्ग प्राधिकरण लखनऊ

  
महाप्रबन्धक (तकनीकी-पूर्वी)  
उ०प्र० राज्य राजमार्ग प्राधिकरण (उपशा) लखनऊ।