

Name of Project: Upgradation of Sitapur -Pratap Nagar of NH-330D in the State of Uttar Pradesh to Two/ Four Lane with Paved Shoulder Configuration (Package-01, From Ch: 0+000 to 38+853) under Forest Division Sitapur and Forest Division Hardoi.

Cost Benefit Analysis

Table B: Estimation of Cost of forest diversion

S. No	Parameters	Details	Remarks
1.	Ecosystem services loses due to proposed forest diversion (36.987 ha)	354.25 lakhs	Rs. 957780 per hectare (Eco Class III, OF)
2.	Loss of animal husbandry productivity, including loss of fodder	35.42 lakhs	10% of NPV
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.	1057.00 lakhs	Public facilities like Electric poles, Hand Pump & Street lights need to be shifted. Estimates from the respective departments have been received.
5.	Possession value of forest land diverted	106.275 lakhs	30% of NPV
6.	Cost of Suffering to oustees	Nil	-
7.	Habitat fragmentation Cost	177.12 lakhs	50% of NPV
8.	Compensatory afforestation and soil & moisture conservation cost	151.57 Lakhs	CA to be raised on double degraded forest land in lieu of 36.987 ha proposed forest land
	Total	1881.63 lakhs	

S. No	Parameters	Details	Remarks
1.	Increase in productivity attributable to the specific project	Compensatory afforestation will be raised on double degraded forest land in lieu of 36.987 ha forest land to be diverted.	Over the years productivity of the forest will definitely increase.
2.	Benefits of economy due to the specific project	<p>Road length: 38 km (approx.)</p> <p>Average mileage: 14km/ letter (approx.)</p> <p>After improvement of the project</p> <p>Average Mileage 20 km/ litre (approx.)</p> <p>Fuel saving: $38/14 - 38/20 = 2.714 - 1.9 = 0.814$ litre</p> <p>Fuel saving on 6274 PCU $= 0.814 \times 6274 = 5107.036$ Litre per day (approx.)</p> <p>Average fuel cost = Rs. 100 per litre</p> <p>Savings (in monetary terms) $= 5107.036 \times 100 = 510703.6$ Rupees per day</p> <p>Total benefits in 5 years ($5 \times 365 = 1825$ days)</p> <p>$= 1825 \times 510703.6 = 932034070$</p> <p>= 9320.34 Lakhs</p>	Saving in vehicular operating and maintenance cost, better connectivity, safer journey to commuter and reduce travel time.
3.	No. of population benefited due to specific project	Entire population residing in the villages/ towns situated along the project road in Hardoi and Sitapur districts will direct be benefited from the project road.	As per the detailed project report
4.	Economic benefits due to direct and indirect employment due to the project.	<p>A Total of 349600 man day's employment will be generated during construction phase for skilled/unskilled labour.</p> <p>Average wages inclusive of all costs of living is 500 per day.</p> <p>Total financial implication will come out to be $= 349600 \times 500 = 174800,000$</p> <p>Rs 1748.00 Lakhs</p>	As per the detailed project report.
5.	Economic benefits due to Compensatory Afforestation	It is proposed to undertake Compensatory Afforestation on 73.974 hectare of degraded forest land (Double of 36.987	

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	haforest land to be diverted). The ecological value for a 50 years period for the density of 10 is Rs. 887.00 Lakhs per hectare. Ecological gain for the project would be 261 lakhs X 73.974 = Rs. 193.07 laks	
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Summary of Cost –Benefit Analysis for the Project


S.No.	Loss (in Lakh)	Benefit (Lakh)
1.	Ecosystem services losses Rs354.25lakhs	Ecology gain for Compensatory Rs. 9320.34 laks
2.	Loss of Animal Husbandry Productivity including loss of Fodder = 35.42lakhs	Total financial implication will come out to be = 349600X500= 174800,000 Rs 1748.00 Lakhs
3.	Loss of Public facility Rs1057.00 Lakhs	Economic benefits due to Compensatory Afforestation = Rs. 193.07 Lakhs
4.	Possession Value of Forest Land diverted= 106.275lakhs	
5.	Habitat Fragmentation Cost = Rs177.12lakhs	
6.	Compensatory Afforestation and Soil and Moisture Conservation= Rs.151.57Lakhs	
Total Loss = Rs. 1881.63 lakhs		Total Benefit = Rs. 11261.41 Lakhs

Benefit Cost Ratio =Total Benefit /Total Loss

Rs. 11261.41Lakhs/ Rs. 1881.63Lakhs = 5.98 which is more than 1 hence, project is viable.


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