


COST BENEFIT ANALYSIS FOR FOREST LAND DIVERSION - 2017

Table A: Cases under which a cost benefit analysis for forest diversion are required

No.	Nature of proposal	Applicable/ Not Applicable	Remarks
1	All categories of proposals involving forest land upto 20 hectares in plains and up to 5 hectare in hills.	Not Applicable	
2	Proposal for defence installation purposes and oil prospecting (prospecting only)	Not Applicable	
3	Habitation establishment of industrial units, tourist lodges complex and other building construction	Not Applicable	
4	All other proposals involving forest land more than 20 hectares in plains and more than 5 hectares in hills including roads, transmission lines, minor medium and major irrigation projects, hydro projects, mining activity, railway lines, location specific installations like micro-wave stations, auto repeater centres, TV towers etc.	Applicable	Proposal of 24.92755 hectares land for diversion of protected forest land.

Table B: Estimation of cost of forest diversion

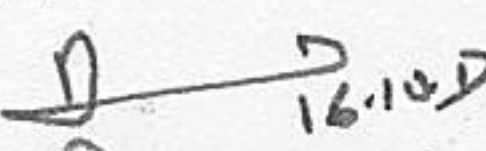
S.N.	Parameters	Remarks
1	Ecosystem services losses due to proposed forest diversion.	Equal to NPV Rs. 20016823.00
2	Loss of animal husbandry productivity, including loss of fodder.	10% of NPV Rs. 2001683.00
3	Cost of human resettlement.	No human resettlement required in the diversion of the land.
4	Loss of public facilities and administrative infrastructure (road, building, schools, dispensaries, electric lines, railways etc.) on forest and, which would require forest land if these facilities were diverted due to the project.	No public facilities and administrative infrastructures are to be disturbed.
5	Possession value of forest land diverted.	30% of NPV = 6005047.00


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6	Cost of suffering to oustees.	There is no suffering of outees in this land.
7	Habitat fragmentation cost.	50% of NPV = 10008411.00
8	Compensatory afforestation and soil & moisture conservation cost.	Rs. 14317000.00

Table C: Existing guidelines for estimating benefits of forest diversion in CBA

S.N.	Parameters	Remarks
1	Increase in productively attribute to the specific project	The project shall bring about an increase in GDP of both the districts. Assuming an increase of 2% over and above the current combined GDP (2016-17) at current prices 2004-05 of both the district i.e. INR 2142.18 Crore (Source: data.gov.in/cataiog/district-wise-gdp-and-growth-rate-current-price2004-05) for the design period of 12 years, the net benefits accrued in monetary terms is: INR 419000000.00
2	Benefits to economy due to the specific project.	This project connected to Agra Kanpur (NH-2) & Kanpur Aligarh (NH-91) This road connects Agra a major tourist place for Taj Mahal, Red Fort etc. Saving in vehicular operating and maintenance cost. Assuming a saving of 10 min in travel time for a CVPD of 2781 between the districts. Saving in fuel in 10 minutes = 1 lit. Saving in fuel for CVPD per day = $2781 \times 1 = 2781$ Design Period = 15 years Cumulative saving in fuel over the design period = $2781 \times 15 \times 365 = 15225975.00$ lit Hence, Saving in INR (assuming cost of fuel as INR 60 per lit) $= 15225975 \times 60 = 913558500.00$
3	No. of Population benefited due to specific project.	The population of 4355194 people from Districts Mainpuri & Firozabad will be benefited directly from the proposed development
4	Economic benefits due to of direct and indirect employment due to the projetct.	3200 skilled and semiskilled will be used and approximately 2.00 lacs mandays will be generated. $3200 \times 300 = 960000.00$ $200000 \times 174 = 34800000.00$ Total = 35760000.00
5	Economic benefits due to compensatory a forestation.	$20016823 \times 50 = 1000841150.00$


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COST BENEFIT RATIO

B- COST OF FOREST DIVERSION

$$20016823 + 2001683 + 6005047 + 10008411 + 14317000 = 52348964.00$$

Say = 5.23 CRORES

C- ESTIMATING THE BENIFTS OF FOREST DIVERSION.

$$419000000 + 913558500 + 35760000 + 1000841150 = 2369559650.00$$

Say = 236.96 Crores

BENEFIT COST RATIO: - (Total Benefit) / (Total Cost)

$$236.94/5.23 = 45.3 > 1$$

HENCE, PROJECT IS FOUND VIABLE.

16.10.17
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मार्ग के निर्माणोपरान्त अवशेष भूमि की विवरण तालिका।

प्रस्ताव संख्या— FP/UP/ROAD/25364/2017

(As Per R.O.W. Sheet Attached)

Sl. No.	Width of ROW from the Center (m.)	Center verge (m.)	Width of Bituminous Surface (m.)	Width of Paved shoulder (m.)	Width of Earthen shoulder with slop (m.)	Total (m.) 3+4+5+6	Width of land left after construction (2-7) (m.)
1	2	3	4	5	6	7	8
1	16.76	1.25	7.00	1.75	2.50	12.50	4.26

16.10.17

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16/10/17