

ASOLAMENDHA PROJECT RENOVATION DIVISION NO.1 MUL.

BENEFIT-COST RATIO

Asolamendha project

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

S. No.	Nature of proposal	Applicable/ not applicable	Remarks
1	All categories of proposals involving forest land upto 20 hectares in plains and upto 5 hectare in hills.	Not applicable	These proposals may be considered on a case-to-case basis and value judgment.
2	Proposal for defense installation purposes and oil prospecting (prospecting only).	Not applicable	In view of national Priority accorded to these sectors, the proposals would be critically assessed to help ascertain that the utmost minimum forest land is diverted for non-forest use.
3	Habitation, establishment of industrial units, tourist lodges complex and other building construction.	Not applicable	These activities being detrimental to protection and conservation of forest, as a matter of policy, such proposals would be rarely entertained.
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 centers, TV towers etc.	Applicable	These are cases where a cost-benefit analysis is necessary to determine when diverting the forest land to non-forest use in the overall public interest.

Table-B: Estimation of cost of forest diversion

S. No.	Parameters	Remarks									
1	Ecosystem services losses due to proposed forest diversion.	<p>Economic value of loss of eco-system services due to diversion of forests land and in this project total forest land to be diverted is 315.74 ha. Hence, following are the calculations are made on the basis of NPV Guidelines issued by Government of India, Ministry of Environment, Forest and Climate Change. (Forest Conservation Division). New Delhi vide no. File No.5-3/2011-FC(Vol-1) dated 6th January 2022.</p> <table border="1"> <tr> <td>Particulars</td> <td>Area</td> <td rowspan="2">X</td> <td>NPV Rate</td> <td>Amount</td> </tr> <tr> <td>Dam</td> <td>315.74</td> <td>1228590</td> <td>387915007</td> </tr> </table> <p>= Rs. 3879.15 Lakh</p>	Particulars	Area	X	NPV Rate	Amount	Dam	315.74	1228590	387915007
Particulars	Area	X	NPV Rate	Amount							
Dam	315.74		1228590	387915007							
2	Loss of animal husbandry productivity, including loss of fodder.	<p>Estimated loss of animal husbandry productivity due to diversion of @ 10% of NPV $10\% \times 1228590 \times 315.74\text{ha} = \text{Rs. } 387.91 \text{ Lakhs}$</p>									

3	Cost of human resettlement.	Loss of Human Settlement = Rs. 0 Lakhs
4	Loss of public facilities and administrative infrastructure (Roads, building, schools, dispensaries, electric lines, railways, etc.) on forest land, which would require forest land if these facilities were diverted due to the project.	Loss of public facilities and administrative infrastructure (Roads, building, schools, dispensaries, electric lines, railways, etc.) on forest land. Hence, Rs. 0 Lakhs
5	Possession value of forest land diverted.	30% of NPV = Rs. 1163.745 Lakhs
6	Cost of suffering to ousties.	Nil
7	Habitat Fragmentation Cost.	50% of NPV i.e. Rs 1939.575 Lakhs
8	Compensatory Afforestation and soil & moisture conservation cost.	a) The actual cost of compensatory afforestation scheme for an area of 315.74 ha = 2730.10 b) Forest conservation and its maintenance in future = Rs.309.96 Lakhs c) Valuation of Plantation of FDCM Area 71.99 ha= 1362.76 Lakh d) Cost of Wild life Mitigation Plan= 4938.00 Lakh Total (a+b+c+d)= 9340.82 Lakh.

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

Sr. No.	Parameters	Remarks
1	Increase in productively attribute to the specific project.	Rs. 28000 Lakhs (50 years evaluation)
2	Benefits to economy due to the specific project.	Growth of Ancillary industries, Development of surrounding area etc = Rs 3350 Lakhs (50 years evaluation)
3	No. of population benefited due to specific project.	Overall, 118 villages will be benefited in the command areas due to this project. Total population of these villages is 47200 persons. Total number of families benefited will be @9440 families. Assuming increase in income per family Rs.30,000/- per year to these families on this account for 50 years, for 9440 families will be Rs. 141600 lakh.
4	Economic benefits due to of direct and indirect employment due to the project.	Employment generated during construction period. Generally, in construction project, ratio of labour component cost to material component cost is 30:70. The total cost of the project is 87400 Lakhs. Labour employment will be about 30% i.e Rs.26220 Lakhs..
5	Economic benefits due to Compensatory afforestation.	7.145 Lakh per year = 7.145x50 years = 357.25 Lakhs

Cost-Benefit Analysis
ASOLAMENDHA PROJECT

Calculations of Benefit Cost Ratio

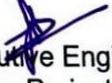
Total Cost (as per Table-B calculation) = Rs. 16711.2 Lakhs

Total Benefits (as per Table-C calculation) = Rs. 199507.25 Lakhs

Hence, Benefit/Cost Ratio = 11.93


Junior
Engineer


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