

COST BENEFIT ANALYSIS

NAME OF THE PROJECT: Consultancy Services for preparation of DPR for development of Economic Corridors, Inter Corridors and Feeder Routes to improve the efficiency of freight movement in India under Bharatmala Pariyojana (Lot-1) Package 1A (Bilasipura-Chapar-Tulungia-Jogighopa-Gendera-Paikan-Dudhnoi-Guwahati Road (Length 225.000 km) in the State of Assam)

NATURE OF PROPOSAL: Diversion of Forest Land under FCA, 1980 for road widening.

PURPOSE: This Cost Benefit Analysis is being undertaken for Proposed Diversion of Forest Land being affected due to **up gradation of Bilasipura-Chapar-Tulungia-Jogighopa-Gendera-Paikan-Dudhnoi-Guwahati Road (Length 225.000 km) for Goalpara district, in the State of Assam**

TABLE –A: ESTIMATION OF COST OF FOREST DIVERSION

Sl. No	Parameters	Description
1	Ecosystem services losses due to proposed forest diversion	<p>Rs.254.037 Lakhs</p> <p>1.Proposed forest area to be diverted Total= 27.054 Ha</p> <p>2.Crown density of the proposed area: 0-60%</p> <p>3.Forest Cover Area in Ha:</p> <p style="padding-left: 40px;">A. Class: Eco-Class I</p> <p>Total Area: 27.054 Ha</p> <p>(i) Moderately Dense Forest: 27.054 Ha</p> <p>4.As per Supreme Court's Order dated 28.03.2008 in WP(C) No. 202/1995:</p> <p>I. Forest type of the propose diversion area : Eco-Class I</p> <p>II. Net present value:</p> <p style="padding-left: 40px;">(a) Moderately Dense Forest Area: 27.054 Ha @ Rs.9.39 lakhs = Rs.254.037 lakhs</p> <p>TOTAL NPV = Rs.254.037 lakhs.</p>
2	Loss of animal husbandry productivity, including loss of fodder	10% of NPV= 10% of Rs.254.037 Lakhs = Rs.25.404 Lakhs
3	Cost of human resettlement	<p>Nil</p> <p>The cost of Human Resettlement for diversion of Forest Land is Nil.</p>


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Sl. No	Parameters	Description
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.	Electric Lines & Poles, Water Pipe Lines, Water Tank etc. public facilities which are being affected -have been considered in the budget. Also the budgets for affected CPRs have been considered.
5	Possession value of forest land diverted	30% of environmental cost (NPV) = 30% of Rs. 254.037 lakhs= Rs.76.211 lakhs.
6	Cost of suffering to oustees	Nil The widening and strengthening of the project road is to be undertaken on the adjoining land of the existing road, so there are no sufferings to oustees.
7	Habitation Fragmentation Cost	As per thumb rule: 50% of NPV = 50% of 254.037 lakhs = Rs.127.019 lakhs.
8	Compensatory afforestation and soil & moisture conservation cost	Compensatory Afforestation cost of 54.108 Ha land for 27.054 Ha proposed Forest Land Diversion = Rs.108.216 Lakhs (including Rs.10.82 Lakhs as soil & moisture conservation cost which is 10% of CA item work cost for a maintenance period of 8 years)
TOTAL (TABLE - A: COST OF FOREST DIVERSION) = Rs 590.886 Lakhs		

TABLE –B: ESTIMATION OF BENEFITS OF FOREST DIVERSION

Sl.No	Parameters	Description
1	Increase in productivity attribute to the specific project	$(374000 * 1.05^3) \times (10.1/309) \times (10\% \times 5 + 5\% \times 10 + 2\% \times 15) = \text{Rs. 18396.95 Lakhs Cr.}$ Economic Improvement in the Project District (Goalpara) considering enhanced growth in the GDP against normal growth rate due to the project. This benefit will be for 5years at enhanced rate of 10%, 10 years for enhanced 5%rate & 15 years for enhanced rate of 2% (Current GDP of the state@ 3.74 lakhs Crore / annum in 2019-20, Population of Assam is 3.09cr) and Golapara District is (10.1 Lacs).
2	Benefit to economy due to the specific project	Rs.192.71 Cr. x 30 years = Rs.5781.30 Cr. Saving in VOC is Rs.192.71crore per year.
3	No. of population benefited due to specific project	Entire population along NH-17 Goalpara District (10.1 Lakhs) shall be benefited from the project. In addition, the project will boost the agricultural and industrial development of the surrounding area which will eventually boost the economic growth.


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Sl.No	Parameters	Description
4	Economic benefits due to direct and indirect employment due to the project	<p>1. Employment Potential -Construction</p> <p>a. Skilled Manpower: 353 nos. x Rs.377/day x300 days x 3 years= Rs 11.97Cr.</p> <p>b. Semi-skilled Manpower: 118 nos. x Rs.302/day x 300 days x 3 years= Rs.3.21Cr.</p> <p>c. Technical People: 23 nos. x Rs.2000 /day x 300 days x 3 years = Rs.4.14Cr.</p> <p>2. Employment Potential - Maintenance</p> <p>a. Skilled Manpower : 23 nos. x Rs.377/day x300 days x 30 years= Rs.7.80 Cr.</p> <p>b. Semi-skilled Manpower: 12 nos. x Rs.158/day x300days x 30 years= Rs.3.26Cr.</p> <p>c. Technical People : 5 nos. x Rs.2000/day x 300 days x 30 years = Rs.9.0Cr.</p>
5	Economic benefits due to Compensatory Afforestation	25972 Mandays as per prevailing wage rate for a maintenance period of 8 years of @ present wage rate Rs. 302 Mday = Rs.0.784Cr.
TOTAL (TABLE - B: BENEFIT OF FOREST DIVERSION) = Rs. 24,218.421Cr.		


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