

COST BENEFIT ANALYSIS

NAME OF THE PROJECT :	Widening and improvement of Package- VI of Imphal-Jiribam Road Section of NH-37 (NH-53) into two laning of existing Ch.134+821 km from Kambiron village of Noney district to Ch.175+105 km near Nungkao village of Tamenglong district in the State of Manipur by NHIDCL
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 "Widening and improvement of Package- VI of Imphal-Jiribam Road Section of NH-37 (NH-53) into two laning of existing Ch.134+821 km from Kambiron village of Noney district to Ch.175+105 km near Nungkao village of Tamenglong district in the State of Manipur by NHIDCL"

TABLE - A: ESTIMATION OF COST OF FOREST DIVERSION				
Sl.	Parameters	Description		
1	Eco-system Services Losses due to Proposed Forest Diversion	Rs. 534.639 Lakhs		
		1) Propose Area to be diverted 88.009 Ha 2) Crown density of the proposed area 0-60 % 3) Forest Cover Area Area in Hectare (i) Very Dense Forest 0.000 (ii) Moderately Dense Forest 46.878 (iii) Open Forest 12.939 (iv) Scrub 28.192 Total Forest Diversion Area = 88.009		
		4) As per Supreme Court's Order dated 28.03.2008 in WP(C) No. 202/1995 (i) Forest type of the proposed diversion area : Eco-Class I (ii) Net Present Value :		
		Forest Class	Area (Ha)	Rate (Lakhs/Ha) Amount (Lakhs)
		(a) Very Dense Forest	0.00	10.43 0.00
		(b) Moderately Dense Forest	46.878	9.39 440.18
		(c) Open Forest	12.939	7.30 94.45
		(d) Scrub	28.192	0.00 0.00
		Total = 534.639		
2	Loss of animal husbandry productivity, including loss of fodder	10% of NPV = 10% of Rs. 534.63912 Lakhs =		
		53.464 Lakhs		
3	Cost of human Resettlement.	Nil		
		The cost of Human Resettlement for diversion of Forest Land is 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.	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 CRSs have been considered.		
5	Possession Value of Forest Land Diverted	30% of NPV = 30% of Rs. 534.63912 Lakhs =		
		160.392 Lakhs		
6	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	Habitat Fragmentation Cost	50% of NPV = 50% of Rs. 534.63912 Lakhs =		
		267.320 Lakhs		
8	Compensatory Afforestation and Soil & Moisture Conservation Cost.	Compensatory Afforestation cost of 176.018 Ha land for 88.009 Ha proposed Forest Land Diversion = Rs.352.04 Lakhs (including Rs 35.2 Lakhs as soil & moisture conservation cost which is 10% of CA item work cost for a maintenance period of 8 years)		
		352.036 Lakhs		
TOTAL (TABLE - A: COST OF FOREST DIVERSION)				1,367.850 Lakhs

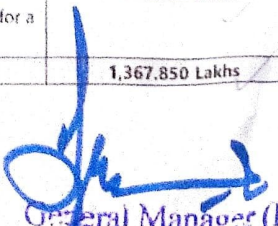
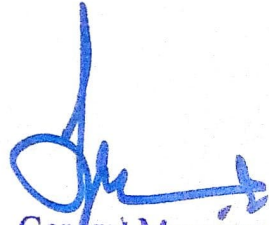

 General Manager (P)
 NHIDCL, PMU-Noney

TABLE - B: ESTIMATION OF BENEFITS OF FOREST DIVERSION						
Sl.	Parameters	Description				
1	Increase in Productivity and Economy	$\{[(18000 \times (1.05)^5) \times (2.71/30) \times \{(10\% \times 5 + 5\% \times 10 + 2\% \times 15)\}] \times (\text{Package Length} / \text{Road Length})\}$ <p>Economic Improvement in the Project District (Churachandpur) considering enhanced growth in the GDP against normal growth rate due to the project. This benefit will be for 5 years at enhanced rate of 10%, 10 years for enhanced 5% rate & 15 years for enhanced rate of 2% (Current GDP of the state @ 18,000 Crore / annum in 2014-15, Population of Manipur is 30 Lacs and Noney District is</p>			501.514 Lakhs	
2	Benefits on vehicle operation & maintenance cost due to improvement of the project Road	7492 Lakhs per year x 30 years for Saving in VOC			224,760.00 Lakhs	
3	No. of Population benefited due to specific project	Population along NH-37 Noney & Tamenglong Districts 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.				
4	Economic benefits due to direct and indirect employment due to the project	1. Employment Potential – Construction				
		Type	No.	Rate / Day	Years	Amt (Lakhs)
		Skilled	50	600	3	328.500
		Semi Skilled	16	350	3	61.320
		Technical	3	2,500	3	82.125
						471.945
		2. Employment Potential – Maintenance				
		Type	No.	Rate / Day	Years	Amt (Lakhs)
		Skilled	3	600	30	197.100
		Semi Skilled	2	350	30	76.650
Technical	1	2,500	30	273.750		
				547.500		
Total Employment Potential =				1,019.45 Lakhs		
5	Benefit from Compensatory Afforestation	84489 Mandays as per prevailing wage rate for a maintenance period of 8 years of @ present wage rate Rs. 225 Mday =			190.100 Lakhs	
TOTAL (TABLE - B: BENEFIT OF FOREST DIVERSION)					226,471.060 Lakhs	


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