

## COST BENEFIT ANALYSIS

NAME OF THE PROJECT :	Widening and improvement of Package- IV of Imphal-Jiribam Road Section of NH-37 (NH-53) into two laning of existing Ch. 67+496 km from Khumji village to Ch.103+557 km near Khongsang village of Noney 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- IV of Imphal-Jiribam Road Section of NH-37 (NH-53) into two laning of existing Ch. 67+496 km from Khumji village to Ch.103+557 km near Khongsang village of Noney 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. 635.611 Lakhs		
		<b>1) Propose Area to be diverted</b> 87.070 Ha <b>2) Crown density of the proposed area</b> 0-60 % <b>3) Forest Cover Area</b> Area in Hectare (i) Very Dense Forest 0.000 (ii) Moderately Dense Forest 0.000 (iii) Open Forest 87.070 (iv) Scrub 0.000 <b>Total Forest Diversion Area = 87.070</b> 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)
		(a) Very Dense Forest	0.00	10.43
		(b) Moderately Dense Forest	0.00	9.39
		(c) Open Forest	87.070	7.30
		(d) Scrub	0.00	0.00
		<b>Total = 635.611</b>		
2	Loss of animal husbandry productivity, including loss of fodder	10% of NPV = 10% of Rs. 635.611 Lakhs =		
		<b>63.561 Lakhs</b>		
3	Cost of human Resettlement.	<b>Nil</b>		
		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. 635.611 Lakhs =		
		<b>190.683 Lakhs</b>		
6	Suffering to oustees	<b>Nil</b>		
		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. 635.611 Lakhs =		
		<b>317.806 Lakhs</b>		
8	Compensatory Afforestation and Soil & Moisture Conservation Cost	Compensatory Afforestation cost of 174.14 Ha land for 87.07 Ha proposed Forest Land Diversion = Rs.348.28 Lakhs (including Rs.34.83 Lakhs as soil & moisture conservation cost which is 10% of CA item work cost for a maintenance period of 8 years)		
		<b>348.280 Lakhs</b>		
<b>TOTAL (TABLE - A: COST OF FOREST DIVERSION)</b>				<b>1,555.941 Lakhs</b>

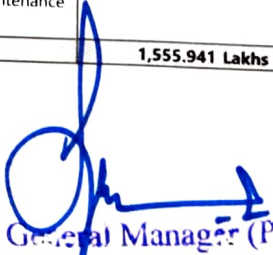
  
 General Manager (P)  
 NHIDCL, PMU-Noney

TABLE - B: ESTIMATION OF BENEFITS OF FOREST DIVERSION						
Sl.	Parameters	Description				
1	Increase in Productivity and Economy	{[(18000*(1.05)^5) x (2.71/30) x {(10%x5 + 5%x10 + 2%x15)}] x (Package Length / Road Length)}			460.649 Lakhs	
		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				
2	Benefits on vehicle operation & maintenance cost due to improvement of the project Road	6630 Lakhs per year x 30 years for Saving in VOC			198,900.00 Lakhs	
3	No. of Population benefited due to specific project	Population along NH-37 Noney District 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	83587 Mandays as per prevailing wage rate for a maintenance period of 8 years of @ present wage rate Rs. 225 Mday =			188.071 Lakhs	
TOTAL (TABLE - B: BENEFIT OF FOREST DIVERSION)					200,568.165 Lakhs	

  
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