

Table 4: WORKSHEET FOR CALCULATION OF COST BENEFIT RATIO
For Constn. Of Imphal Kangchup Tamenglong road
COSt (Evaluation of Loss of Forest)

Sl. No.	Parameters	Details of calculations	Rate	Amount (Rs. in lakhs)
1	Loss of value of timber, fuel wood and minor forest produce on an annual basis including loss of man hour per annum of people who derived livelihood and wages from the harvest			
		Area / Vol/ha	Qty	Rate
A)	Fuel wood	91.43 ha	26	2377.18
B)	Trees as per enumeration	91.43 ha	180.58 m ³	1400
	506no/ha			231.15
2	Loss of animal husbandry productivity, including	NI	-	NI
3	Loss of fodder	NI	-	NI
4	Cost of humane resettlement	-	-	7716.47
5	Loss of public facilities and administrative infrastructure (Roads, building, Schools, dispensaries, electric lines, railways etc.) on forest land if these facilities were diverted due to the project)	-	-	771.65
6	Environment losses: (Soil erosion, effect on hydrological cycle, wildlife habitat, microclimate upsetting of ecological balance)			
a)	Medium Dense forest	26.63	12674000	3375.09
b)	Open forest	45.31	5089600	2297.04
c)	Degraded forest	18.12	5089600	229.65
d)	Very dense forest	1.37	12674000	173.63
7	Cost of Project			84881.00
Total :				99687.57

BENEFITS (Evaluation of Benefits)

Sl. No.	Parameters	Details of calculations	Rate	Amount (Rs. in lakhs)
1	Economic Improvement in the project Districts considering 15% Enhanced growth rate in the GDP against the normal growth rate of 5% due to the project on current GDP of the state @ Rs.10, 188 crores per annum as per Manipur Census-2011.	(1018800 x .15 x 3.5 x 10.10)	27.22	198463.89
2	Benefit on vehicle operation and maintenance cost due to improvement of the project road	440.48x30	440.48 crores/ annum for 30yrs	1321440.00
3	Employment potential - Construction stage: Skilled Labour force	100 x 350 x 26 x 12 x 3.5		382.20
	Semi skilled Labour force	150 x 300 x 26 x 12 x 3.5		491.40
	Technical: Engineer's/Key personals Office support staffs	88 x 3000 x 26 x 12 x 3.5		2682.88
4	Maintenance: Technical personals	30 x 3000 x 26 x 12		280.80
	Labours	30 x 350 x 26 x 12		32.76
Total :				1523973.93
Cost Benefit Ratio :				99687.57 : 1523973.93

1 : 15.29