

Cost Benifit Analysis

Benefit From Project

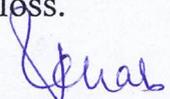
38 K.M Spur Line of East Rail Corridor
Considering a Life od 99 Years

S.No.	Head	Quantity	Rate	Amount(Rupess)
1.	Cost of Transportation of coal Etc.for 99 Year	38 K.M	-----	75000.00 Crore
2.	Employment Genration during Construction	75.33 lacs. Man days	223/-	220.00 Crore
3.	Employment Genration during operatioal life 99 years	275.3 lacs. Man days	223/-	61398.60 Crore
4.	Total Benifit From the project			136618.60 crore
5.	Cost of project	38 K.M.	8.00 Crore per K.M.	304.00 crore
	loss of forest	-----	-----	12.60 crore
	Total Loss			316.60 crore

Cost Benifit Ratio - 1:449.

Hence the project has very high Benifit to Country as compared to forest loss.

The Benifit Ratio is 449 times


Chief Operating Officer
Chattisgarh East Railway Ltd.
CSIDC Commercial Complex,
Raipur (C.G.)
2nd Floor, Raipura,
Raipur (C.G.)

EVALUATION OF LOSS OF FOREST
(w.r.t. annexure-II of Cost Benefit Analysis Performa)
CALCULATION DETAILS

NAME OF PROJECT CONSTRUCTION OF RAIL LINE EAST RAIL
CORRIDOR - SPUR

FOREST LAND NEEDED 26.181 HECT.
AVERAGE QUALITY OF FOREST IV B, VA
AVERAGE DENSITY OF FOREST 0.1-0.6
TOTAL NOS. OF TREES

(AS PER ENUMBERAATIONAL LIST/JOINT INSPECTION REPORT)

ESTIMATED TIMBER VOLUME 199.385 Cu.m
ESTIMATED FUEL VOLUME 384.000 Cu.m
ESTIMATED TOTAL VOLUME 583.385 Cu.m

A Item-I EVALUATION OF LOSS OF TIMBER, FUEL, MINOR FOREST PRODUCE, MANDAYS & EXPECTATION OFR POTENTIAL VALUE OF SHIL

a) Value of Timber Rs. 1200/-per Cu.m Rs. 2,39,262 = 00
b) Value of Fuel Rs. 900/-per Cu.m Rs. 3,45,600 = 00
c) Value of Minor Forest Produce = Revenue per Hect. x Area applied for
= 34716.00

I) Total Annual Revenue from M.F.P. in the division = Rs. 297946481
II) Total Forest area in the division = 224663.20 Hect.
III) Average annual revenue per Hect. From M.F.P is Rs. 297946481/224663.20
Rs.1326 per Hect.

d) Value of Mandays Mandays per Hect. x Area applied x Daily wages

i) Cost of coupe working
26.181 Hect. (583.385 Cu. M.)
@ Rs. 3162 per Cu. M. = Rs. 1844663 = 00

Mandays = Cost per Hect./Daily wages = Rs. 316.50
Therefore per Hect. Cost = Rs. 70,458.09 = 00
Mandays = Cost per Hect./Daily wages

ii) Cost of M.F.P. collection per hect. Is about 60% pf gross reveue per hect.
1326 x 60% = 795.60
Therefore mandays = Cost per Hect./ Daily wages
= 795.60/210
Mandays = 3.79 Say 99

Total mandays = 99.23

Total amount
= Manday per Hect. X Area applied x daily wages
= 99x26.181x210 Rs.= 544302.99

Chief Operating Officer
Chhattisgarh East Railway Ltd.,
CSIDC Commercial Complex,
2nd Floor, Raipura,
Raipur (C.G.)
[Signature]

e) I) Expection or potential value of soil:

$C_0 = r/1.0p^n - 1$
 Where R=Upset price of forest growth i.e. (a+b+c+d)
 = 2464321.00
 P = Rate of interest=4%
 N= period of rotation=40 years
 Reciprocal value of = $1/1.0 p^n - 1 = 0.2632$
 Hence $C_0 = \text{upset price} \times \text{Reciprocal value}$
 $C_0 = \dots 2464321 \dots \times 0.2632 = \text{Rs. } \dots 6,48,588 = 00$

ii) Revenue obtained from intermediate yied Nil

Note: Calculation for rotation of thinning is not prescribed.

iii) Fire Protection Chaarges:

$C = 25R^H A$
 Where $R_h =$ fire protection expenditure per Hect.i.e. Rs.225/-
 $A =$ Area applied i. e. 26.181 Hect.
 $C = 25 R^H A = 25 \times 225 \times 26.181 = \text{Rs. } 147268.125$
 Total item-I = $a+b+c+d+e = \text{Rs. } \dots 3,11,2826 = 00$

B) Item-2 Loss of value of Fodder (Grass)

- i) Estimated quantity of grass in MT based on consideration = Average production x Area applied
 that on closure an area is capable of yielding on an average = 3 MT x 26.181 Hect.
 2 to 4 MT of grass per Hect. = 78.54MT
- ii) Loss of value of fodder = 78.54 x 5000
 (Avg. local market rate Rs. 5000 per MT) = 392700.00

C) Item -3 Cost of Human resettlement: Nil

The forest land is not to be used for rehabilitation of the displaced persons,
 Hence the cost of human resettlement is: NIL

D) Item-4 Loss of public Facilities & Administrative Infrastructure: Nil

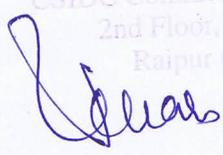
There is no loss of forest road and Nakas or other construction of forest.

E) Item -5 Valuation of Envirinmental Losses:

Environmental loss for over a period of 50 years=
 $\text{Standard loss per Hect.} \times \text{Area applied} \times \text{Actual density of forest}$
 In a fully stocked forest in laks In area appiled
 (Density-1)
 $= 181 \text{ Lakhs} \times 26.181 \text{ Hect.} \times 0.25 = 1184.69025$
 Environemetal losses per annum=Rs.

F) Item -6 Suffering of Ouste: Nil

GRAND TOTAL		
ITEM-1	Rs.	1268163 = 00
ITEM-2	Rs.	392700 = 00
ITEM-3	Rs.	-
ITEM-4	Rs.	-
ITEM-5	Rs.	118469025 = 00
ITEM-6	Rs.	-
Grand Total	Rs.	12,01,09,888 = 00

Chief Operating Officer
 Chhattisgarh East Railway Ltd.,
 CSTDC Commercial Complex
 2nd Floor, Raipura,
 Raipur (C.G.)



 DFO
 Raigarh Forest Division
 Raigarh