Annexure-I

EVALUATION OF LOSS OF FOREST

(W.R.T. Annexure of cost benefit analysis Performa)
Upgradation of Ambikapur to Pathalgaon Section of NH-78(new NH-43) under Suguja ,Surajpur & Jushpur Forest Division)
(Reg. No. - **FP/CG/ROAD/12117/2015**)
Details of Calculation

1) Project : Upgradation and Widening of Ambikapur to Pathalgaon Section of NH-78(new NH-43)

2) Forest Land Required

Protected & Reserve Forest (Ha) & Revenue Forest (Ha)

(i) Surguja Forest Division = 23.077 Ha
(ii) Surajpur Forest Division = 7.185 Ha
(iii) Jushpur Forest Division = 0.842 Ha

Total = 31.104 Ha

3) Average site Quality of Forest: III & IV a Sal Forest

4) Average Density of Forest: 0.4 to 06

5) Total nos of tress: 685 Nos.

(i) Surguja Forest Division = 513 No's
(ii) Surajpur Forest Division = 172 No's
(iii) Jushpur Forest Division = Nil

Total = 685 No's
(as per enumeration list)

6) Estimate Total Volume: 489.715 Cumt.

(i) Surguja Forest Division = 366.065 Cumt.
(ii) Surajpur Forest Division = 123.650 Cumt.

Total = 489.715 Cumt.

7) Estimated Timber Volume: 211.630 Cumt.

(i) Surguja Forest Division = 154.805 Cumt.
(ii) Surajpur Forest Division = 56.825 Cumt.

Total = 211.630 Cumt.

8) Estimated Fuel Volume: 1480.755 Cumt.

(i) Surguja Forest Division = 211.260 Cumt.
(ii) Surajpur Forest Division = 66.825 Cumt.

Total = 278.085 Cumt.

9) (A) ITEM- I EVALUATION OF LOSS OF TIMBER, FUEL, M.F.P.,MANDAYS AND EXPECTATION VALUE OF SOIL:-

10) a) Value of Timber: 211.630 Cumt. X 7000/- = Rs. **14,81,410.00**
@ Rs. 7000/cmt.

11) b) Value of Fuel 278.085 Cumt. X 967/- = Rs. **2,68,908.00**
@ Rs.967/cmt.

12) c) Value of Minor Forest Produce (M.F.P)

= Revenue per hectare x Area applied for

= 507.00/- x 31.104 Ha =
Rs. 15,770.00

13) i) Total Annual Revenue form M.F.P.in the Division = Rs.25,56,91,593.00

(i) Surguja Forest Division = Rs 5,59,91,783.00
(ii) Surajpur Forest Division = Rs 19,96,99,810.00
(iii) Jushpur Forest Division = Nil

Total = Rs 25,56,91,593.00

14.) ii) Total Forest area of the Division = 5,95,436.955 Ha
(i) Surguja Forest Division = 1,44,015.367 Ha
(ii) Surajpur Forest Division = 1,76,193.088 Ha
(iii) Jushpur Forest Division = 2,75,228.50 Ha

Total = 5,95,436.955 Ha

14) iii) Average revenue per Ha. (i / ii) = **Rs. 507.00 /- per Ha**

(i) Surguja Forest Division = Rs. 389.00 per Ha
(ii) Surajpur Forest Division = Rs. 1133.00 per Ha
(iii) Jushpur Forest Division = Nil

Total = (1133+389+0) /3 = Rs. 507.00/-

15) d) Value of employment be lost : due to diversion of forest area (Add revenue and expenditure Incurred on works per annum And divide it by daily wages, it Shall provide average employment Generation/annum. Then divide

Employment generation in man day/ hectare x area applied x daily wages

75 MD x 31.104 ha x Rs. 210.00 = Rs. **4,89,888.00/-**

Loss of Man days: Man day per ha x Area applied for x Daily wages.

Employment generation by forest
Area of decision to get employment
Potential per ha.) or alternatively it
Can be calculated as follows :

16) i) Cost of Coupe working : 31.104 Ha @ Rs 507/-perCumt Ha

@ Rs. 507 /Cum. Therefore per Ha cost is Rs. 15770.00

Man days = Cost per ha/Daily Wages =15770/210 = 75 per ha=75 MD

17) ii) Cost of M.F.P. collection per ha is about 60% of gross revenue per ha

=507.00 x 60%=304.00/- Rs/Ha

Therefore Mandays = Cost per Ha/Daily wages=304/210=2 MD (say)

Total Mandays = 75+2 = 77 MD

Mandays X Area X Rate= 77 x 31.104 x 210=(**5,02,952.00**)

18) c) (i) Expectation value of soil :-

$$Co = \frac{(R)}{1.0p^{n-1}}$$

Where R = Upset price of forest growth
(a+b+c+d) = R = Rs(2774698.00)(a+b+c+d+e)
P = Rate of interest (4%)
n = Period of rotation (i.e.40 years)

$$\text{Reciprocal Value} = \frac{1}{1.0P^{n-1}} = 0.330$$

Co = Upset price x Reciprocal value = Rs (2774698) x 0.330= Rs 9,15,650.00

19) (ii) Revenue obtained from intermediate yield = NIL

20) (iii) Fire protection Charges C = 25 R "A

Where R" = Fire Protection expenditure /Ha = Rs 70/Ha.

A = Area applied for

C = 25 x 70 x 31.104 = Rs 54,432.00

Total :- (a+b+c+d+e+20) = Rs. 9,15,650.00 + Rs 54,432.00= 9,70,082.00

21) (B)ITEM 2:- LOSS OF ANIMAL HUSBANDRY PRODUCTIVITY, INCLUDING LOSS OF FODDER (GRASS)

22) i) Estimated quantity:- Average production x Area applied for consideration that on closer an area is capable of yielding 2 to 4 MT of grass per hector.

= 2 x 31.104 = 62.208 MT.

23) (ii) Loss of value of fodder = 62.208 x 2500 = **Rs 1,55,520.00** (Average local market cost is Rs. 2500.00 per MT.)

24) (C)ITEM 3:- COST OF HUMAN RESETTELMENT

--------nil----------

25) (D) ITEM 4:- LOSS OF PUBLIC FACILITIES OF ADMINISTRATIVE INFERASTRUCTURE (Roads, buildings, schools, dispensaries, electrical lines, railways etc.) on Forest land = **50.00 Lacs** (for building only 2 no's)

26) (E) ITMM 5:- VALUATION OF ENVIRONMENTAL LOSSES (Soil erosion, effect on hydrological cycle, wild life habitat, micro climate upsetting, ecological balance etc.)

Environment loss = Standard loss Per hectare (Rs. Lakhs/ ha) x Applied area in hectare x Actual density in the area applied for Diversion

= 150.50 lakh X 31.104 X (0. 4)
= Rs 1872.46 lacs .= 18.72 Cr

28) (F) ITEM :- SUFFERING TO OUSTEES –

-----nil------

GRAND TOTAL LOSSES = (A+B+C+D+E+F)= (1924.01)Rs in Lacs

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