

Table-A : Cases under which a cost-benefit analysis for forest diversion are required

SI No.	Nature of proposals	Applicable / Not applicable	Remarks
1	All categories of proposals involving forest land up to 20 Ha In plains and up to than 5 Ha In hills.	Not applicable	These proposals are to be considered on case-to-case basis and value judgment.
2	Proposals for defense installations purposed and oil prospecting (prospecting only)	Not applicable	In view of National priority accorded to these sectors the proposals would be originally assessed to help ascertain these the utmost minimum forest land above is diverted for non-forest use.
3	Habitation, establishment of Industrial units, tourist lodges/complex and other buildings construction.	Not applicable	These activities being detrimental to protection and conservation to forest as a matter of policy such proposals would be rarely entertained.
4	All other proposals involving forest land more than 20 Ha. In plains and more than 5 Ha. In hills including roads, transmission lines, minor and major irrigation projects lines located specific installation like micro wave stations auto repeater centers T.V towers etc.,	Applicable	<p>These are cases where a cost benefit analysis is necessary to determine whether diverting the forest land to non forest land use is in the overall public interest.</p> <p>This is a Mining Project Proposal submitted for Forest Diversion under FC Act 1980.</p>

Table-B Estimation of cost of forest diversion

SI No.	Parameters	Remarks
1	Ecosystem services loss due to proposed forest diversion.	Economic value of loss of eco-system due to diversion of forests shall be the NPV of the forest land being diverted. (NPV for Eco Class-III is Rs.13.57 Lac/Ha) NPV is 13.57Lacx48.20Ha= 654.07 Lac
2	Loss of animal husbandry productivity, including loss of fodder	To be quantified and expressed in monetary terms or 10% of NPV applicable whichever is maximum. 10% of NPV = Rs. 65.40 Lakhs.
3	Cost of human resettlement	No resettlement involved
4	Loss of public facilities and administrative infrastructure (road, building, schools, dispensaries, elec. Lines, railway etc.,) on forest land, or which would require forest land if these facilities were diverted due to the project.	Not applicable
5	Possession Value of forest land diverted.	30% of NPV due to loss of forests or circle rate of adjoining area in the district should be added as a cost component as possession value of forest lands whichever is maximum. 30% of NPV = Rs.196.22 Lakhs.
6	Suffering to oustees	No one is ousted from the area as no one stays in the area of mining lease hold.
7	Habitat Fragmentation Cost	While the relationship between fragmentation and forest goods and services is complex, for sake of simplicity the cost due to fragmentation has been pegged at 50% of NPV applicable as a thumb rule. 50% of NPV = Rs.327.03 Lakhs.
8	Compensatory afforestation, soil & moisture conservation cost.	The actual cost of compensatory afforestation, soil & moisture conservation its maintenance in future at present discounted value. CA cost is 48.20 Ha×18.30 L/Ha= 882.06 Lakhs

TABLE C Existing guidelines for estimating benefits of forest-diversion in CBA

SI No.	Parameters	Remarks
1	Increase in productivity attributable in the specific project.	The area has a rich Iron ore deposit with presently explored and estimated resources of approximate 16.32 million tons. Which will increase on 2 nd stage exploration. The presently explored ore can be mined in the next 11.33 years, at an avg. rate of 1.44 MTPA or 14.4 lakh ton/year to meet the market demand. Apart from Iron Ore, manganese deposit of 31332 Tones is available and will increase after 2 nd stage exploration, presently explored ore can be mined in approximately 4 years at an average rate of 9000 T/Annum.
2	Benefits to economy due to the specific project.	In 11.33 years period, a quantity of about 16.32 million tons could be produced fetching Rs. 2284 Crores @ Rs.1,400 ex-mine.
3	No. of population benefited due to specific project.	1800 people can live on this project directly and indirectly.
4	Economic benefits due to direct & indirect employment due to project.	100 workers and staff could be employed directly and 500 workers indirectly.
5	Economic benefits due to compensatory afforestation.	Benefits from such compensatory afforestation accruing over the next 50 years monetized & discounted to the present value i.e Rs.981.10 Lakhs

Details of Mining cost & other Taxes paid to state & central exchequer per ton

SI no	Description	Amount in Rs.
1	Mining Cost	640
2	Royalty (15% of sale value)	210
3	TCS (2% of Royalty)	4.50
4	DMF (30% of Royalty)	63
5	NMET (2% of Royalty)	4.50
6	NPV & CA Land	10.50
7	Infrastructure Cost (Maintenance & Amortization)	175
8	CSR (2% of the profit)	4.50
	Total	1112

**SUMMARY OF COST BENEFIT ANALYSIS FOR THE PROJECT
OVER A 50 YEARS PERIOD**

Sl No.	Loss	Total amount in lakhs	Benefit	Total amount in lakhs
1	Eco-System loss	654.07	<p>[A] Profit from mining after deducting the expenses and payment to the state & central exchequer in terms of taxes & duties is Rs. 1112/- per tonne i.e. 16.32 Million tons x Rs.288 = Rs.47001 Lakhs</p> <p>[B] Economic Benefit from Compensatory Afforestation is Rs. 981.10</p>	<p>Margin Over a period of 50 years</p> <p>[A]+[B]= 47982.1</p>
2	Loss of animal Husbandry including fodder.	65.40		
3	Cost of human resettlement	-		
4	Loss of Public Facilities & infrastructure.	-		
5	Possession Value of forest land diverted.	196.22		
6	Cost of suffering to outies	-		
7	Habitat Fragmentation Cost	327.03		
8	Compensatory afforestation, soil & moisture conservation cost.	882.06		
Total loss		2124.78	Total profit	47982.1

Therefore, Net benefit from the project over a 50 years period

= Rs. 47982.1 Lakhs – 2124.78 lakhs

= Rs. 45857.32 Lakhs

Cost benefit ratio = 1: 22.58

For Mineral Enterprises Private Limited.,


 Authorised Signatory

