

COST BENEFIT ANALYSIS

A. PARAMETERS FOR EVALUATION OF LOSS OF FORESTS:

Sl.No.	PARAMETERS	MEDIUM & MAJOR IRRIGATION, HYDRO ELECTRIC, LARGE MINING & OTHER MISC. PROJECTS.
1	Loss of value of timber, fuel wood and minor forest produce on annual basis including loss of man hours per annum of people who livelihood and wages from the harvest of these commodities.	The loss fuel wood to a tune of 3t/Ha @Rs. 300/tons. For 4.4Ha. i.e $4.4\text{Ha} \times 3 \times 300 \times 20 = 79,200/-$. No loss of man hours as no one depends for livelihood on this land.
2	Loss of animal husbandry productivity including loss of fodder.	The loss of fodder estimated for 167.63Ha will be (Hill grass cost @5T/Ha @ Rs.100/Ton.) $4.4 \times 5 \times 100 \times 20 \text{ years} = \text{Rs.} 44,000/-$.
3	Cost of human resettlement	There is no human settlement in the Mining lease area. Hence, the cost of human re-settlement does not apply.
4	Loss of public facilities and administrative infrastructure on forest land, or which would require forest land if these were diverted due to project.	There is no roads and electrical lines passing in the proposed area. There is no loss of public facility in the area.
5	Environmental losses: (Soil erosion, effect on hydrological cycle, wild life habitat, Microclimate, upsetting or Ecological balance).	The estimated loss as per the guidelines, for a tree density of 1.0 will be Rs.126.74Lakhs to accrue over a 50years period. Therefore, the environmental loss for 4.4ha., for a density of 0.1 over a period of 20years (Life of mine) would be $4.4 \times 126.74 \times 0.1 \times 20/50 = 22.30\text{Lakhs}$.
6	Suffering to oustees.	Nil. There are no oustees from this area.

B. PARAMETERS FOR EVALUATION OF BENEFITS, NOTWITHSTANDING LOSS OF FORESTS

Sl.No.	PARAMETERS	NATURE OF PROPOSAL: MINING PROJECT
1	Increase in productivity attributable to the specific project	The Iron ores at Kumaraswamy Mine occurs over a length of more than 4kms on top of hills mostly in the forest area. Out of 186 MT of Iron Ore reserves in the Mine lease area, as much as 128 MT occurs in the forest area. It is envisaged to mine initially about 7 MT of Iron Ore per annum to meet the demands of steel plants coming up in the Bellary-Hospet region and when the need arises for other area steel plants. Thus the mine will provide a sustained supply of raw materials of assured QUALITY & QUANTITY . In order to achieve the targeted production of 7 MTPA, the existing road needs to be smoothened and widened with good curvatures and gradient for easy movement of men, materials and HEM Equipments.
2	Benefits of Economy	As result of mining of Kumaraswamy Iron Ore, a multitude of Government Departments, agencies and the like, including local population will derive direct benefit by way of : Earnings for state Govt. of Kamataka. A. Royalty on tonnage basis to Dept of Mines & Geology. B. Electricity charges to KEB C. Electricity charges to Tungabhadra Reservoir

		Dvn, PWD. D. Cess on welfare department. E. Port charges on export F. Transportation charges to the railways G. Rents, taxes etc. to the Govt H. Miscellaneous (includes setting up of Community hall, free medical treatment, co-operative societies for the nearby villages)
3	No. of Population benefited	About 5000 people will be benefited.
4	Employment potential.	Direct employments to the 1000 people are generated, besides indirect and ancillary employment to more than 1000 people is likely to arise.
5	Cost of acquisition of facility on non forest land wherever feasible.	Not applicable since it is site specific project.
6	Loss of (a) agricultural (b) animal husbandary production due to diversion of forest land.	There are no agricultural and animal husbandry operations in the mine lease area. Though it is a forest land, the tree growth is poor due to hostile rocky conditions. Due to hilly terrain inadequate nutrient availability and water, the land is not amenable to agriculture. Since there is no habitation within forest areas applied for diversion, animal husbandry operations are also not observed.
7	Cost of rehabilitating the displaced persons as different from compensation amount given for displacement.	As there is no human habitation in the mine lease area, rehabilitation does not arise.
8	Cost of supply of free fuel-wood to workers residing in or near forest area during the period of construction.	The workers would be provided with kerosene oil and LPG for cooking purposes. Subsidized electricity would be provided for lighting purposes. As such dependence on forest wealth for fuel purposes would be discouraged.

C. SUMMARY OF COST BENEFIT ANALYSIS FOR THE PROJECT OVER A PERIOD OF MINES LIFE

Loss (A)	Rs. In Crores	BENEFIT (B)	Rs. In Crores
1. Environmental Loss	0.223	Profit from mining after Deducting the expenses (@Rs.1500 per tonne) i.e 128MT X 1500	19200
2. Loss of Fuel Wood	0.008		
3. Loss of Fodder	0.004		
4. Supply of Fuel wood	Nil		
TOTAL	0.235		19200

Net benefit from the project over 20 years period = $19200 - 0.235$

= Rs. 19199.76 Crores.

Hence cost benefit Ratio = 1: 81702