

COST BENEFIT ANALYSIS

For

**Diversion of Forest Land over an Area of 66.02 Ha.
(57ha. for Mining Lease Area and 9.02ha. for Approach Road)**

WITH RESPECT TO

CHHOTEDONGAR IRON ORE MINES

OF

M/S SHRI BAJRANG POWER AND ISPAT LIMITED

The Composition of Forest Land

Total Applied area is 66.02 Ha. of Reserve Forest, compartment no. 267, 268, 269 and 252 of Narayanpur Forest Division Village- Chhotedongar, Tehsil: Narayanpur, District:Narayanpur, Chhatisgarh. The details of applied area are as under: -

Sl. No.	Type of Forest	Total Area in Hectare	Required Area in Hectare
1	RF Compartment Number (267,268,269 & 252)	66.02	66.02

TABLE : A

**Cases under which a cost-benefit analysis for
Forest Diversion is required**

Sl. No.	Nature of proposal	Applicable/ Not applicable	Remarks
1	All categories of proposals involving forest land up to 20 hectares in plain and up to 5 hectares in hills.	Not applicable	It is an Opencast Iron Ore Mine. The Project Involve 66.02 ha of Forest Land (Mining Lease Area 57.00ha. and Approach Road 9.02ha.)
2	Proposal for defense installation purposes and oil prospecting (prospecting only)	Not applicable	It is an Opencast Iron Ore Mine.
3	Habitation, establishment of industrial units, tourist lodges complex and other building construction.	Not applicable	It is an Opencast Iron Ore Mine.
4	All other proposals involving forest land more than 20 hectares in plains and more than 5 hectares in hills including roads, transmission lines, minor, medium and major irrigation projects, hydro projects, mining activity, railway lines, location specific installations like microwave stations, auto repeater centre TV tower etc.	Applicable	It is an Opencast Iron Ore Mine. In this Project a cost benefit analysis is necessary when diverting the forest land into non forestry use in the interest of National development.

TABLE : B
Estimation of cost of Forest Diversion

SI. No.	Parameters	Remarks
1	Ecosystem services losses due to proposed Forest Diversion	Economic value of loss of eco-system services due to diversion of forests at proposed villages in Chhotedongar (66.02 Ha) of Narayanpur Tehsil, District Narayanpur, Chhatisgarh shall be Rs. 12,28,590 Lacs/Ha (NPV rate as per ECO Value of Dense Forest Class III as per Guideline of MoEF & CC, Gol w.e.f. 29.12.2023). 1. Total Forest area : 66.02 Ha. 1a. Required Area : 66.02 Ha 2. Environmental Loss Due to Proposed Diversion Area: 66.02 Ha. x Rs.12,28,590 = Rs. 811.112 Lacs.
2	Loss of animal husbandry productivity, including loss of fodder	10% of the NPV (as per the cost benefit guideline) = 10% X Rs. 811.112 Lacs. = Rs. 81.112 Lacs.
3	Cost of human resettlement	Nil
4	Loss of public facilities and administrative infrastructure (roads, building, schools dispensaries electric line, railways etc,) on forest land if these facilities were diverted due to the project	There are no Roads, Schools, Buildings, Dispensaries & Railways on Forest land, so no loss of these public facilities.
5	Possession value of forest land diverted	The possession value of forest land diverted is taken as 30% of NPV due to loss of forest. All Right Area = 30% X Rs 12,28,590 X 66.02 = Rs. 243.334 Lacs Total possession value of Forest land = Rs. 243.334 Lacs.
6	Cost of suffering to oustees	Not Applicable as there is no any habitation within the proposed Mining Lease.
7	Habitat Fragmentation Cost	It is calculated @ 50% of NPV. Total NPV = Rs. 811.115 Lacs. 50% of NPV = Rs. 405.557 Lacs.
8	Compensatory afforestation and soil & moisture conservation cost	Cost @ Rs. 11696800/- per Ha. is taken for compensatory afforestation and soil moisture conservation. Hence amount will be = 66.02 Ha. x Rs.11,69,680 = Rs. 772.222 Lacs

Total cost due to diversion of Forest land. : Rs. 811.112 + Rs. 81.111 +Rs. 243.334 + Rs. 405.557 + Rs. 772.222 = **Rs. 2313.341 Lacs.**

TABLE: C
Existing guideline for estimating benefits of Forest Diversion in Cost Benefit Analysis

SI. No.	Parameters	Remarks
1	Increase in productively attribute to the specific project	Value of the available can be calculated as follows: - Total Mineral Resources is approx – 2.0489 Million Tonnes with average Grade of Fe 63.01% @ Rs 4912/Tonne (As per IBM price of Chhattisgarh March 2025 for the grade 62-65% Fe) = Rs. 10064196800.00 or 100641.96 Lac for entire period of 50 years.
2	Benefits to economy due to the specific project	Royalty@15% on Sale price = 736.8 DMF@30% on Royalty = 221.04 NMET@2% on Royalty = 14.736 (A) Total Royalty+DMF+NMET = 736.8+221.04+14.736= 972.576 @per tonne = Rs. 1992710966.00 or 19927.11 Lac (B) EC & IC@ 22.50 per Tonne = Rs.46100250.00 (C) Forest Royalty@ 57 per Tonne = Rs.116787300.00 Total benefits to economy = A+B+C = Rs. 2155598516.00 for entire period of 50 years.
3	No. of population benefited due to specific project	As per Mine plan benefit to the population: 1. We will provide Direct employment to 66 person of managerial/ staff / statutory requirements and 75 nos. employment through contractor. 2. Employment to be generated on non forest land for afforestation programme. 3. Residence of local village/ area will have income opportunity in various ancillary works like Hotel/ Garage/ Tea shops and income generating activity through JFMC of the proposed area.
4	Economic benefits due to of direct and indirect employment due to the Specific project.	Direct and Indirect employment wages & salary – @ Rs. 200 Per Tonne 2.0489 Million Tonne X Rs. 250 = Rs. 409780000.00 for Total 50 years.

5	Economic benefits due to compensatory afforestation	Rs. 1650.5 Lakhs Calculated as per Standard Compensatory Afforestation Restoration Factor (SCARF) adjustment Rate of 0.499Lakhs/Ha. for Dry Deciduous forest land proposed to be diverted and the benefits from such CA accruing over next 50 years based on study report of IIFM.
---	---	--

Total benefit due to diversion of Forest Land for non-forest activity = Rs. **10064196800.00** + Rs. **2155598516.00** + Rs. **409780000.00** + Rs. **165050000.00** = Rs. **12794625316.00**

COST BENEFIT ANALYSIS

Based on value of products:

A) Total Benefit to the Society = **Rs. 12794625316.00**

B) Total Cost to the Society = **Rs. 231334146.00**

Cost Benefit Ratio = $\frac{\text{Total Benefit}}{\text{Total Cost}}$

= $\frac{\mathbf{12794625316.00}}{\mathbf{231334146.00}}$

Cost Benefit Ratio = 1:55.30

For, Shri Bajrang Power & Ispat Ltd.


Director/Authorised Signatory