

Proposal for diversion of 35.94 ha. forest land in favour of SUNFLAG IRON & STEEL COMPANY LIMITED in Loharadodngri Iron Ore Block, Taluka Bramhapuri, District Chandrapur in the state of Maharashtra

COST BENEFIT ANALYSIS

As per Forest (Conservation) Rules 2003, Rule 6, Form "A" S.No. 1(v) and guidelines-application of forest Act 1980, Chapter II (2.6) and revised guidelines issued by MoEFCC vide No. 7-69/2011-FC(pt.) dated 1st August, 2017.

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

Sr. No.	Nature of proposals	Applicable/ Not applicable	Remarks
1	All categories of proposals involving forest land upto 20 hectares in plains and upto 5 Hectares in hills	N/A	
2	Proposal for defence installation purposes and oil prospecting (prospecting only)	N/A	
3	Habitation, establishment of industrial units tourist lodges complex and other building construction.	N/A	
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 micro-wave stations, auto repeater centers, TV towers etc.	Yes. Applicable	Total forest land of 35.94 Ha. involving 35.73 ha. area for Opencast mining and 0.21 ha. area for approach Road to mining site.

For Sunflag Iron & Steel Co. Ltd. Nagpur



(Hemant Hinge)
Geologist
Authorized Signatory

Table-B: Estimation of cost of forest diversion

Sr.No.	Parameters	Remarks
Evaluation of loss of Forest		
1.	Ecosystem services losses due to proposed forest diversion	Total cost NPV = Rs. 4,41,55,524/- (@12,28,590/- per ha. for 35.94 Ha. forest land).
2.	Loss of animals husbandry productivity including loss of fodder	10% of NPV = 44,15,552/-
3.	Cost of human resettlement	Nil. No human displacement are involved in forest area
4.	Loss of public facilities and administrative infrastructure (Roads, buildings, schools, dispensaries, electric lines, railways etc.) on forest Land, which would require forest land if these facilities were diverted due to the project.	There is no loss of public facilities and administrative infrastructure (Roads, buildings, schools, dispensaries, electric lines, railways etc.) on forest land due to the project.
5.	Possession value of the forest land diverted	30% of NPV = Rs. 1,32,46,657/-
6.	Cost of Suffering of oustees.	No PAPs in forest area. Hence no cost.
7.	Habitat fragmentation cost	50% NPV = Rs. 2,20,77,762/-
8.	Compensatory afforestation and soil and moisture conservation cost	Compensatory afforestation and soil and moisture conservation cost if Rs. 3,92,81,038/-

Therefore, the total loss of forest as per the approved parameters, works out to as under

Parameter No.	Description	Cost (Rs.)
	Environmental losses	12,31,76,533/-

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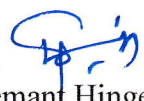

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Table C : Existing guidelines for estimating benefits of forest diversion in CBA

S.No	Parameters	Remarks																				
Benefit of cost of forest diversion																						
1.	Increase in productivity attribute to the specific project	During mining activities period temporary employment generation - 27 people for 50 years = 486000 man-days. During operation period of 50 years, generation permanent employment for 10 people.																				
2.	Benefits of economy due to specific project	More local people will be benefited due to employment generation.																				
3.	No. of population benefited due to specific project	148 = (27+10)x4																				
4.	Economic benefits due to of direct and indirect employment due to the project report	Economic benefits due to of direct and indirect employment due to the project report:- <table><tr><td>Description</td><td>No.</td><td>Wage</td><td>Amount (Rs.)</td></tr><tr><td>Skilled</td><td>20</td><td>645</td><td>23,54,40,000/-</td></tr><tr><td>Unskilled</td><td>7</td><td>437</td><td>5,50,62,000/-</td></tr><tr><td>Highly skilled</td><td>10</td><td>762</td><td>13,71,60,000/-</td></tr><tr><td colspan="3">Total</td><td>42,76,62,000/-</td></tr></table>	Description	No.	Wage	Amount (Rs.)	Skilled	20	645	23,54,40,000/-	Unskilled	7	437	5,50,62,000/-	Highly skilled	10	762	13,71,60,000/-	Total			42,76,62,000/-
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Highly skilled	10	762	13,71,60,000/-																			
Total			42,76,62,000/-																			
5.	Economic benefits due to Compensatory afforestation	(i) Compensatory afforestation land transferred to forest department = 35.94 Ha. (ii) Compensatory plantation 1100 plants/Ha. (iii) Total plantation = 1100 x 35.94 = 39,534 (iv) Benefit over next 50 years monetized and discount to the present value 39534 x 1030 Rs. 4.07 Crores																				

Therefore, the total benefit due to project, work out to as under:-

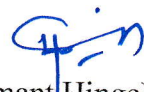
Ser.No.	Description	Benefit (Rs.)
	Benefit due to employment Generation and compensatory afforestation.	$42,76,62,000/- + 4,07,20,020/-$ $= 46,83,82,020/-$

Therefore, benefit / cost ration works out as under:-

Benefit / cost = $46,83,82,020 / 12,31,76,533$

Cost benefit ratio = 1:3.802

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EMPLOYMENT POTENTIAL

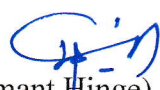
Employment generation direct and indirect due to the project during the mining activities phases of project;

1. Temporary employment of manpower during mining operation period.
 - Skilled and Unskilled Man Power : 27 people for 50 years = 486000 man-days.
2. Permanent employment of manpower during mining operation period.
 - Highly skilled Man Power : 10 people for 50 years.

Employment generation during the mining activities phases of project;

Description	No.	Wage	Amount (Rs.)
Skilled	20	645	23,54,40,000/-
Unskilled	7	437	5,50,62,000/-
Highly skilled	10	762	13,71,60,000/-
Total			42,76,62,000/-

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