

COST - BENEFIT ANALYSIS FOR PROJECTS INVOLVING FOREST LAND


APPLICATION FOR DIVERSION OF 649.3014 Ha. OF FOREST LAND for VK COAL MINE

I. Estimation of Costs

Sl No.	Parameters	Value in Rs lakhs	Remarks	Guidelines for Estimation
	Ecosystem Services losses due to proposed forest diversion	5213.89	NPV OF 649.3014 Ha. OF FOREST LAND @ Rs 8.03 Lakhs/Ha	Economic value of loss of eco-system services due to diversion of forests shall be the net present value (NPV) of the forest land being diverted as prescribed by the Central Government (MoEF & CC). Note: In case of National Parks, the NPV shall be ten (10) times the normal NPV and in case of Wildlife Sanctuary the NPV shall be five (5) times the normal NPV or otherwise prescribed by the ministry or any other competent authority.
	Loss of Animal Husbandry productivity, including loss of fodder	521.39	10% of NPV	To be quantified and expressed in monetary terms or 10% of NPV applicable whichever is maximum
	Cost of Human Resettlement	2000.00	As per the prevailing R&R Package towards 100 Nos of PDFs @ Rs 20.00 Lakhs / PDF	To be quantified and expressed in monetary terms as per approved R&R Plan
	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.	2000.00	Towards diversion of PWD Road from Kothagudem to Vijayawada, (NH-30) 5km @ Rs 4 Cr/km.	To be quantified and expressed in monetary terms on actual cost basis at the time of diversion.
	Possession Value of forest land diverted	1564.17	30% of NPV	30% of environmental costs (NPV) due to loss of forest or circle rate of adjoining area in the district should be added as a cost component as possession value of forest land whichever is maximum

Cost of Suffering to Oustees	362.70	1.5 times of two years wage cost of PDFs as per Minimum Wages	The social cost of rehabilitation of oustees (in addition to the cost likely to be incurred in providing residence, occupation and social services as per R&R Plan) be worked out as 1.50 times of what oustees should have earned in two years had he /she not been shifted.
Habitat Fragmentation Cost	2606.95	50% of NPV	While the relationship between fragmentation and forest goods and services is complex, for the sake of simplicity the cost due to fragmentation has been pegged at 50% of NPV applicable as a thumb rule.
Compensatory afforestation and soil & moisture conservation cost	8440.92	Cost of compensatory afforestation and soil & moisture conservation @ Rs 6.5 Lakhs per Ha for twice the forest land involved	The actual cost of compensatory afforestation and soil and moisture conservation and its maintenance in future at present discounted value
TOTAL COSTS	22710.01		

Forest Division Officer
Kothagudem Division



General Manager
Singareni Collieries Company
limited,
Kothagudem Area

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II. Estimation of Benefits

Sl No.	Parameters	Value in Rs lakhs	Remarks	Guidelines for Estimation
	Increase in productivity attributable to the specific project	6729.28	NPV of Project net cashflow at 100% performance level @ 10% discount rate	To be quantified & expressed in monetary terms avoiding double counting
	Benefits to economy due to the specific project	334540.51	NPV of benefits to economy over project life @ 10% discount rate Royalty @ 14% of Basic ROM Price 2% on Royalty for National Mineral Exploration Trust 30% on Royalty for District Mineral Foundation Trust GST Compensation Cess @ Rs 400/T GST 5%	The incremental economic benefit in monetary terms due to the activities attributed to the specific project
	No of population benefited due to specific project	900 Nos.	Project Manpower (Departmental 300 + Outsourcing 600)	As per Detailed Project Report
	Economic benefits due to the direct and indirect employment due to the project	114796.02	NPV of estimated Wages for Project manpower and indirect benefits calculated for 5 times project manpower with prevailing unskilled wage rate of Telangana State.	As per Detailed Project Report

Economic benefits due to compensatory afforestation	422.05	Calculated as per Standard Compensatory Afforestation Restoration Factor (SCARF) Adjustment Rate of Rs 0.65 Lakhs per ha for Dry Deciduous Forest Land for the proposed forest area to be diverted (based on Study Report by IIFM Bhopal)	Benefits from such compensatory afforestation accruing over next 50 years monetised and discounted to the present value should be included as benefits of compensatory afforestation. *For benefits of CA the guidelines of the Ministry for NPV estimation may be consulted.
TOTAL BENEFITS	456487.85		
<p>TOTAL BENEFITS 456487.85</p> <p>TOTAL LOSSES 22710.01</p> <p>COST : BENEFIT RATIO 1 : 20.10</p>			
Forest Divisional officer Kothagudem Division.		 General Manager, The Singareni Collieries Company Limited Kothagudem Area.	